

Arizona

Arizona's Instrument To Measure Standards

2006

Technical Report

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Foreword

The technical information herein is intended for use by those who evaluate tests, interpret scores, or use test results in making educational decisions. It is assumed that the reader has technical knowledge of test construction and measurement procedures, as stated in *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999).

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Part 1: Overview

This document provides information regarding processes and procedures implemented in the 2005 Fall and 2006 Spring Arizona Instrument to Measure Standards (AIMS) assessments for the development of tests, analysis of data, calibration, scoring, and scaling. This document also describes the results of the 2005 Fall and 2006 Spring AIMS assessments. The technical information in this report is intended for those who evaluate tests, interpret scores, or use test results in making educational decisions.

This document also provides information relevant to the *Standards for Educational and Psychological Testing* (American Education Research Association, American Psychological Association, National Council on Measurement in Education, 1999). Each part of this technical report addresses different standards. The standards addressed by each part are listed at the beginning of each part. Part 1 of the technical report addresses standards 2.7, 3.2, 3.3, 6.3, 6.4, 6.15, and 13.6.

The 2005 Fall AIMS assessments were administered in reading, writing, and mathematics to students in high school who were in grades 11 and 12 and had not yet obtained a passing score in at least one of the content areas. The 2006 Spring AIMS assessments were administered in reading, writing and mathematics to students in Grades 3-8 and high school. This was the second year that Grades 3-8 and high school were administered all content areas of the AIMS. Students in grades 3, 5, and 8 have been taking AIMS assessments since the 1999-2000 school year, and students in high school began taking AIMS (Form A) in reading, writing, and mathematics in 1999. The AIMS assessments are designed to measure Arizona students' performance on the Arizona content standards. All AIMS reading and mathematics tests are written to Arizona content standards adopted in March 2003. The AIMS writing tests are written to content standards adopted in June 2004.

The AIMS high school reading, writing, and mathematics tests are high school competency tests and passing scores are required to earn a diploma for students who graduated beginning in Spring 2006. Students in grade 10 have five opportunities to pass the test prior to graduation. The AIMS high school tests in reading and mathematics are multiple-choice, criterion-referenced tests. The AIMS high school test in writing consists of a single prompt essay which is scored using a six-trait analytic rubric.

The AIMS tests for Grades 3-8 are dual purpose assessments (DPA)—both criterion and norm-referenced scores are given based on performance on the AIMS tests. Each test consists of criterion-referenced items written by Arizona teachers and norm-referenced items from CTB/McGraw-Hill's norm-referenced test, *TerraNova, The Second Edition*® (*TerraNova*; CTB/McGraw-Hill, 2001). Some of the *TerraNova* items serve as both criterion-referenced items and norm-referenced items. This design eliminated the need for students to take two separate tests and was first implemented for the 2004-2005 testing period. The AIMS DPA tests include criterion-referenced tests in reading, writing, and mathematics as well as norm-referenced tests in reading, language, and mathematics. All reading, language, and mathematics tests consist of multiple choice items only. The writing tests are single prompt essay tests scored using a six-trait analytic rubric.

In addition to the scores for reading, writing, and mathematics, a composite score for language arts is also reported. The language arts composite is the mathematical average of the reading and writing scale scores. Given the language arts composite is based on separately scaled assessments, reliability information is provided separately for reading and writing.

Part 2: Involvement of Arizona Educators at all Levels

Part 2 of the technical report addresses the involvement of Arizona educators in test development and standard setting. This part of the technical report addresses standard 3.5 of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999).

Several committees met throughout the year in preparation for the 2005-2006 AIMS assessments. These committees included teachers, curriculum specialists, and administrators from across the state and were an integral part of the AIMS test development processes and AIMS results interpretation.

The committee meetings included:

- Item Specifications, in which educators developed detailed specifications which would guide future item writing;
- Passage Review, in which educators reviewed passages to ensure topics were appropriate and would not favor a particular gender or ethnic group;
- Item Writing, conducted in Spring 2005, in which educators wrote items aligned to standards for possible inclusion in the Spring 2006 tests as field test items;
- Content/Sensitivity Review, in which educators reviewed items to ensure content was appropriate to the standards being assessed and that the items would not favor a particular gender or ethnic group; and
- Item Selection, in which educators chose items from the pool of items administered in Spring 2005 to be included on the 2005-2006 assessments.

More information regarding the committee meetings is provided in Part 4 of this report. During all committee meetings testing materials were kept secure and committee members signed non-disclosure agreements.

Part 3: Test Design

Part 3 of the technical report provides information regarding test design. The following AERA/APA/NCME standards are addressed: 1.2, 1.6, 3.1, 3.2, 3.3, 3.11, 6.4, 6.15, 13.3, and 13.5.

3.1 Content Standards

The AIMS assessments are designed to measure performance on the Arizona content standards adopted in March 2003 for reading and mathematics and in June 2004 for writing. These standards are organized by strand, concept, and performance objective. The AIMS reading and mathematics test blueprints are based on the concepts and strands of the Arizona content standards, presented in figures 3.1.1-3.1.2. The AIMS writing tests are scored on the Six Trait Writing Rubric. Figure 3.1.3 presents the six traits.

Figure 3.1.1 Arizona Reading Concepts and Strands

Strand 1: Reading Process

Concept 1: Print Concepts

Concept 2: Phonics

Concept 3: Vocabulary

Concept 4: Comprehension Strategies

Strand 2: Comprehending Literary Text

Concept 1: Elements of Literature

Concept 2: Historical and Cultural Aspects

Strand 3: Comprehending Informational Text

Concept 1: Expository Text

Concept 2: Functional Text

Concept 3: Persuasive Text

Figure 3.1.2
Arizona Mathematics Concepts and Strands

Strand 1: Number Sense and Operations

Concept 1: Number Sense

Concept 2: Numerical Operations

Concept 3: Estimation

Strand 2: Data Analysis, Probability and Discrete Math

Concept 1: Data Analysis (Statistics)

Concept 2: Probability

Concept 3 and 4: Discrete Mathematics

Strand 3: Patterns, Algebra and Functions

Concept 1: Patterns

Concept 2: Functions and Relationships

Concept 3: Algebraic Representations

Concept 4: Analysis of Change

Strand 4: Geometry and Measurement

Concept 1: Geometric Properties

Concept 2: Transformation of Shapes

Concept 3: Coordinate Geometry

Concept 4: Measurement

Strand 5: Structure and Logic

Concept 1: Algorithms and Algorithmic Thinking

Concept 2: Logic and Reasoning

Figure 3.1.3
Arizona Writing Traits

Trait 1: Ideas and Content

Trait 2: Organization

Trait 3: Voice

Trait 4: Word Choice

Trait 5: Sentence Fluency

Trait 6: Conventions

3.2 Test Blueprints

A test blueprint designates the percentage of items that should measure each strand and concept. All AIMS assessments were designed in accordance with the following blueprints. Further discussion of item selection to match the blueprints is included in Part 4 of this report.

Table 3.2.1
AIMS blueprint for Reading

Spring 2004-2005 AIMS Reading Blueprint												
Grade		Strand 1						Strand 2		Strand 3		
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 1	Concept 2	Concept 1	Concept 2	Concept 3
3	% of test	7%	0%	9%	11%	0%	17%	22%	0%	11%	11%	11%
	% of strand on test	44%						22%		33%		
4	% of test	0%	0%	0%	7%	0%	15%	31%	0%	24%	11%	11%
	% of strand on test	22%						31%		48%		
6	% of test	0%	0%	0%	11%	0%	11%	31%	0%	24%	11%	11%
	% of strand on test	22%						31%		48%		
6	% of test	0%	0%	0%	11%	0%	11%	31%	0%	24%	11%	11%
	% of strand on test	23%						31%		48%		
7	% of test	0%	0%	0%	11%	0%	11%	24%	7%	22%	13%	11%
	% of strand on test	22%						31%		48%		
8	% of test	0%	0%	0%	7%	0%	9%	26%	7%	24%	15%	11%
	% of strand on test	17%						33%		60%		
HS	% of test	0%	0%	0%	7%	0%	7%	26%	7%	22%	15%	15%
	% of strand on test	16%						33%		62%		

January 2005

Source: <http://www.ade.az.gov/standards/aims/blueprints/ReadingBlueprint2004-200509-09-04.pdf>

Table 3.2.2
AIMS blueprint for Mathematics

Spring 2004-2005 AIMS Mathematics Blueprint																	
	Strand 1			Strand 2				Strand 3				Strand 4			Strand 5		
	C1	C2	C3	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2
Grade 3																	
% of Test by Concept	15%	14%	6%	6%	6%	6%		11%		11%		8%		13%			6%
% of Test by Strand	35%			17%				22%				21%			6%		
Grade 4																	
% of Test by Concept	13%	11%	6%	6%	6%	6%		12%		12%		10%		15%			6%
% of Test by Strand	30%			17%				23%				24%			6%		
Grade 5																	
% of Test by Concept	10%	13%	6%	6%	6%	6%		12%		12%		10%		13%			6%
% of Test by Strand	29%			18%				24%				24%			6%		
Grade 6																	
% of Test by Concept	6%	10%	6%	6%	6%	9%		12%		12%		12%		16%			6%
% of Test by Strand	22%			21%				24%				28%			6%		
Grade 7																	
% of Test by Concept	7%	9%	6%	9%	6%	6%		12%		12%		13%		14%			6%
% of Test by Strand	22%			21%				24%				28%			6%		
Grade 8																	
% of Test by Concept	6%	6%	6%	11%	6%	6%		6%	6%	15%		14%	6%	6%			6%
% of Test by Strand	18%			23%				27%				26%			6%		
H.S.																	
% of Test by Concept	5%	5%	5%	9%	5%	5%		5%	7%	14%	5%	9%	5%	7%	6%	5%	5%
% of Test by Strand	14%			19%				31%				27%			9%		

Source: <http://www.ade.az.gov/standards/aims/blueprints/RevisedAIMSMathematicsBlueprint09-07-04.pdf>

3.3 Description of AIMS 2006 Tests

The test blueprints were used with the processes described in detail in Part 4 to develop all AIMS tests administered in 2006. The resulting test configurations are as follows.

3.3.1 High School Reading (Criterion-referenced only)

The AIMS CRT high school reading test consisted of 54 multiple choice items developed by Arizona teachers. The raw scores ranged from 0-54 and scale scores were designed to range from 500 to 900. All items on the high school reading test reported to a criterion-referenced score. No norm-referenced items were included in the high school reading test.

3.3.2 High School Writing (Criterion-referenced only)

The AIMS CRT high school writing test consisted of one extended response writing prompt. Responses to the prompt were scored on the six-trait analytic rubric. Each trait received two ratings. Final scores for traits with adjacent ratings were derived by averaging the two ratings. The raw scores ranged from 0-36 and scale scores were designed to range from 500 to 900. There were two forms of the high school writing test, A and T. Form T was used as a make-up form administered the week after the operational window. No norm-referenced items were included in the high school writing test.

3.3.3 High School Mathematics (Criterion-referenced only)

The AIMS CRT high school mathematics test originally consisted of 85 multiple choice items developed by Arizona teachers. However, an item was dropped due to content considerations after test books were printed. Student test scores and all reports excluded the dropped item. The raw scores ranged from 0-84 and scale scores were designed to range from 500 to 900. All items on the high school mathematics test reported to a criterion-referenced score. No norm-referenced items were included in the high school mathematics test.

3.3.4 Grades 3-8 Reading and Language (Dual Purpose Assessment)

The AIMS reading tests for grades 3-8 consisted of both a criterion-referenced and a norm-referenced component to allow for both criterion-referenced and norm-referenced scores. Some items reported to CRT scores only, some items reported to NRT scores only, and some items reported to both CRT and NRT scores.

The AIMS CRT reading tests for grades 4-8 consisted of 39 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 54 items. The AIMS CRT reading test for grade 3 consisted of 42 items developed by Arizona teachers and 12 *TerraNova* items that map to the Arizona content standards for a total of 54 items. The raw scores on all tests ranged from 0-54. Detailed test structure information can be found in Table 3.3.1. Scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT reading is discussed in Part 7 of this technical report.

The AIMS NRT reading tests for grades 3-8 consisted of 25 *TerraNova* reading items from *TerraNova* Form D Complete Battery. The *TerraNova* items matched the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The difference in blueprint representation at the strand level exceeded 5% in only one strand in the grade 3 test. The difference in blueprint representation in all other strands in grades 3-8 did not exceed 3%. The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%. The *TerraNova* reading items were embedded within the AIMS DPA reading test. Scale scores are reported on the *TerraNova* reading NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30.

The AIMS NRT language tests for grades 3-8 consisted of 20 *TerraNova* language items from *TerraNova* Form D Complete Battery. The *TerraNova* items matched the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The difference in blueprint representation did not exceed 5% at the strand level with the exception of one strand in grade 4 and two strands in grade 8 where the differences were 6%, 6%, and 8%, respectively. The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%. The *TerraNova* language items were embedded within the AIMS DPA reading test. Scale scores are reported on the *TerraNova* language NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30. Tables 3.3.3 and 3.3.4 present more detailed information about the blueprint representation of *TerraNova* Form D Complete Battery and the AIMS NRT tests.

3.3.5 Grades 3-8 Writing

The AIMS writing tests for grades 3-8 consisted of one extended response writing prompt per administration reporting to a criterion-referenced score only. Responses to the prompt were scored on the six-trait analytic rubric. Each trait received one rating. The raw scores ranged from 0-36. Scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT writing is discussed in Part 7 of this technical report.

3.3.6 Grades 3-8 Mathematics (Dual Purpose Assessment)

The AIMS mathematics tests for grades 3-8 consisted of both a criterion-referenced and norm-referenced component to allow for both criterion-referenced and norm-referenced scores. Some items reported to CRT scores only, some items reported to NRT scores only, and some items reported to both CRT and NRT scores.

The AIMS CRT mathematics tests for grades 3 consisted of 57 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 72 items. The AIMS CRT mathematics tests for grades 4 consisted of 55 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 70 items. The AIMS CRT mathematics tests for grades 5 through 7 consisted of 53 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 68 items. The AIMS CRT mathematics test for grade 8 consisted of 53 items developed by Arizona teachers and 13 TN items that map to the Arizona content standards for a total of 66 items. Detailed test structure information can be found in Tables 3.3.2. The raw score and scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT mathematics is discussed in Part 7 of this technical report.

The AIMS NRT mathematics tests for grades 3-8 consisted of 25 *TerraNova* mathematics items from *TerraNova* Form D Complete Battery. The *TerraNova* items matched the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The difference in blueprint representation at the strand level did not exceed 5% with the exception of one strand in grade 6 (7%), one strand in grade 7 (9%), and one strand in grade 8 (6%). The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%. The *TerraNova* mathematics items were embedded within the AIMS DPA mathematics test. Scale scores are reported on the *TerraNova* mathematics NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30. Table 3.3.5 presents more detailed information about the blueprint representation of *TerraNova* Form D Complete Battery and the AIMS NRT tests.

3.3.7 Language Arts Composite

A language arts composite score was also computed. This composite is the mathematical average of the reading and writing scale scores. The language arts score is not reported to students, parents, or teachers. This composite score is provided to ADE in the electronic data only for calculating and reporting annual yearly progress under NCLB legislation.

Table 3.3.1 Spring 2006 AIMS Test Structure Reading and Language

Grade	Embedded Field Test Items	RD CRT only	RD NRT /CRT	RD NRT only	RD CRT TOTAL (CRT + NRT/CRT)	RD NRT TOTAL	LA NRT only	LA NRT TOTAL	TOTAL ITEMS ON TEST
3	10	42	12	13	54	25	20	20	97
4	10	39	15	10	54	25	20	20	94
5	10	39	15	10	54	25	20	20	94
6	10	39	15	10	54	25	20	20	94
7	10	39	15	10	54	25	20	20	94
8	10	39	15	10	54	25	20	20	94
HS*	10	54			54				64

* High School test has 10 field test forms, for a total of 150 field test items across forms.

Table 3.3.2 Spring 2006 AIMS Test Structure Math

Grade	Embedded Field Test Items	MA CRT only	MA NRT /CRT	MA NRT only	MA CRT TOTAL (CRT + NRT/CRT)	MA NRT TOTAL	TOTAL ITEMS ON TEST
3	10	57	15	10	72	25	92
4	10	55	15	10	70	25	90
5	10	53	15	10	68	25	88
6	10	53	15	10	68	25	88
7	10	53	15	10	68	25	88
8	10	53	13	12	66	25	88
HS*	15	85			85		100

* High School test has 15 field test forms, for a total of 225 field test items across forms.

Table 3.3.3 TerraNova and AIMS NRT Blueprint Representation Reading

Grade	<i>TerraNova</i> Strand				Total
	02 Basic Understanding	03 Analyze Text	04 Evaluate and Extend Meaning	05 Identify Reading Strategies	
3					
N items TN CB	14	10	8	10	42
% items TN CB	33%	24%	19%	24%	100%
N items AIMS NRT	8	8	4	5	25
% items AIMS NRT	32%	32%	16%	20%	100%
4					
N items TN CB	18	19	7	6	50
% items TN CB	36%	38%	14%	12%	100%
N items AIMS NRT	9	9	4	3	25
% items AIMS NRT	36%	36%	16%	12%	100%
5					
N items TN CB	14	15	8	9	46
% items TN CB	30%	33%	17%	20%	100%
N items AIMS NRT	8	8	4	5	25
% items AIMS NRT	32%	32%	16%	20%	100%
6					
N items TN CB	16	12	5	9	42
% items TN CB	38%	29%	12%	21%	100%
N items AIMS NRT	9	8	3	5	25
% items AIMS NRT	36%	32%	12%	20%	100%
7					
N items TN CB	13	18	12	7	50
% items TN CB	26%	36%	24%	14%	100%
N items AIMS NRT	6	9	6	4	25
% items AIMS NRT	24%	36%	24%	16%	100%
8					
N items TN CB	16	17	9	6	48
% items TN CB	33%	35%	19%	13%	100%
N items AIMS NRT	8	9	5	3	25
% items AIMS NRT	32%	36%	20%	12%	100%

Note. TN CB= *TerraNova* Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

Table 3.3.4 TerraNova and AIMS NRT Blueprint Representation Language

Grade	TerraNova Strand			Total	
	07 Sentence Structure	08 Writing Strategies	09 Editing Skills		
3					
	N items TN CB	7	8	13	28
	% items TN CB	25%	29%	46%	100%
	N items AIMS NRT	5	5	10	20
	% items AIMS NRT	25%	25%	50%	100%
4					
	N items TN CB	7	8	15	30
	% items TN CB	23%	27%	50%	100%
	N items AIMS NRT	3	6	11	20
	% items AIMS NRT	15%	30%	55%	100%
5					
	N items TN CB	11	13	10	34
	% items TN CB	32%	38%	29%	100%
	N items AIMS NRT	6	8	6	20
	% items AIMS NRT	30%	40%	30%	100%
6					
	N items TN CB	10	16	12	38
	% items TN CB	26%	42%	32%	100%
	N items AIMS NRT	5	8	7	20
	% items AIMS NRT	25%	40%	35%	100%
7					
	N items TN CB	13	10	7	30
	% items TN CB	43%	33%	23%	100%
	N items AIMS NRT	8	7	5	20
	% items AIMS NRT	40%	35%	25%	100%
8					
	N items TN CB	8	13	11	32
	% items TN CB	25%	41%	34%	100%
	N items AIMS NRT	5	7	8	20
	% items AIMS NRT	25%	35%	40%	100%

Note. TN CB= *TerraNova* Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

Table 3.3.5 TerraNova and AIMS NRT Blueprint Representation Mathematics

Grade	TerraNova Strand								Total
	10 Number and Number Relations	11 Computation and Numerical Estimation	12 Operation Concepts	13 Measurement	14 Geometry and Spatial Sense	15 Data Analysis, Statistics, and Probability	16 Patterns, Functions, Algebra	17 Problem Solving and Reasoning	
3									
N items TN CB	8	12	4	6	6	6	4	4	50
% items TN CB	16%	24%	8%	12%	12%	12%	8%	8%	100%
N items AIMS NRT	4	5	2	2	3	3	3	3	25
% items AIMS NRT	16%	20%	8%	8%	12%	12%	12%	12%	100%
4									
N items TN CB	7	15	7	7	6	7	3	5	57
% items TN CB	12%	26%	12%	12%	11%	12%	5%	9%	100%
N items AIMS NRT	3	6	4	3	3	3	1	2	25
% items AIMS NRT	12%	24%	16%	12%	12%	12%	4%	8%	100%
5									
N items TN CB	11	12	5	6	6	9	4	4	57
% items TN CB	19%	21%	9%	11%	11%	16%	7%	7%	100%
N items AIMS NRT	4	5	2	3	4	3	2	2	25
% items AIMS NRT	16%	20%	8%	12%	16%	12%	8%	8%	100%
6									
N items TN CB	11	13	3	6	5	7	7	4	56
% items TN CB	20%	23%	5%	11%	9%	13%	13%	7%	100%
N items AIMS NRT	5	4	2	3	3	2	4	2	25
% items AIMS NRT	20%	16%	8%	12%	12%	8%	16%	8%	100%
7									
N items TN CB	10	12	2	6	7	10	6	4	57
% items TN CB	18%	21%	4%	11%	12%	18%	11%	7%	100%
N items AIMS NRT	5	3	2	3	3	4	3	2	25
% items AIMS NRT	20%	12%	8%	12%	12%	16%	12%	8%	100%
8									
N items TN CB	11	10	1	5	7	10	8	4	56
% items TN CB	20%	18%	2%	9%	13%	18%	14%	7%	100%
N items AIMS NRT	5	3	1	2	3	4	4	3	25
% items AIMS NRT	20%	12%	4%	8%	12%	16%	16%	12%	100%

Note. TN CB= TerraNova Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

Table 3.3.6
Raw Score and Scale Score ranges of AIMS 2006 CRT Assessments

Content	Grade	Raw Score range	Scale Score range
Reading	3	0-54	200-640
	4	0-54	220-660
	5	0-54	240-675
	6	0-54	250-690
	7	0-54	260-720
	8	0-54	270-800
	HS ^a	0-54	500-900
	Writing	3	0-36
4		0-36	230-700
5		0-36	255-740
6		0-36	275-760
7		0-36	290-770
8		0-36	300-800
HS ^a		0-36	500-900
Mathematics		3	0-72
	4	0-70	230-675
	5	0-68	255-700
	6	0-68	270-725
	7	0-68	290-740
	8	0-66	300-800
	HS ^a	0-84 ^b	500-900

^aHS tests are not on the same scale as G3-8 tests. Scale scores are therefore not comparable between the HS and G3-8 tests. See Part 7 for information regarding the scaling of the AIMS assessment.

^bNote that the HS assessment originally included 85 items. However, an item was dropped due to content considerations after test books were printed. Student test scores and all reports exclude the dropped item.

Part 4: Test Development

Part 4 of the technical report provides a summary of the test development activities that occurred during the 2005-2006 contract year. Information is provided relating to the following topics as they pertain to AIMS:

- a discussion of the AIMS test book creation and editing process;
- a description of the process employed to create the AIMS item specifications;
- a description of the AIMS passage development and review procedures;
- a description of the AIMS item writing procedures;
- a description of content/sensitivity review procedures for AIMS items; and
- a description of the AIMS item selection committee meetings.

A comprehensive, multi-segment development process guides the development of assessment materials. The following section outlines this process in general terms. The remainder of Part 4 provides details of how these processes were implemented in Arizona. This section of the technical report addresses the following AERA/APA/NCME standards: 1.6, 3.1, 3.5, 3.6, 3.7, 3.9, 3.11, 3.16, 6.4, 6.15, 7.3, 7.4, 7.7, 13.3, and 13.5.

4.1 AIMS Test Book Creation and Editing Process

4.1.1 Test Design

Test development for the 2006 test administration began with a comprehensive test design. During this phase, the test design document was created which defined all of the project deliverables, such as test books, answer documents, test administration manuals, test coordinator manuals, test interpretation guides, and materials to support special accommodations, including Braille and large print test books. The test design was shared and discussed among all functional areas to ensure that each functional area understood the scope of work for the coming year.

4.1.2 Documents and Materials Development

Following agreement of the test design, the Development team gathered, investigated, and studied documents and materials necessary to guide development of the assessment materials, including blueprints, item specifications, and the style guide. Even though efforts were made to maintain continuity of team members from 2005, there were some staffing changes. New members were given the opportunity to study all existing AIMS-related materials. They studied AZ content standards and discussed them with experienced content development staff in order to gain an understanding of what students should know and be able to do. Before proceeding, all development staff members possessed detailed knowledge of the intent and expectations of the strands, concepts, and performance objectives (POs).

4.1.3 Item Development and Editing

The development of quality test items requires content and assessment expertise and the ability to be creative while adhering to the test blueprint, detailed item specifications, and content limits. The test blueprint and item specifications provide clear direction as items for each performance objective are written and edited. Test items are developed by Arizona teachers using a template designed by ADE to capture all requirements and supporting information such as strand, concept,

performance objective, score points, and content reference documentation. Test items were edited and revised by in-house content editors, style editors, art specialists, hand scoring staff, and research scientists before being presented to AZ teachers and state-level administrators for review and approval.

4.1.4 Quality Reviews

A smooth test administration requires that all test materials, including test books, answer documents, and directions to students and test coordinators align with each other. All sample items, page numbers, and administration times must be accurate in all components of the test program. Therefore, to help ensure that all documents required for the administration of a test are in alignment with each other, a materials integration review (MIR) was conducted prior to moving the materials on to the Quality Assurance (QA) Department.

During the MIR, a proctor simulated the test administration experience by administering the test to three test takers for each grade and content area using the Test Administration Directions (TAD) and appropriate answer documents developed specifically for AIMS. The purpose of this review was twofold: to ensure that the test materials were in alignment with each other and to verify that the answer keys were correct. A side benefit of this review was the possible revision of any unclear items prior to submission to Quality Assurance and the creation of camera copy, thus reducing the number of blue line changes required. The goal of this work module was to ensure that all test components were precisely coordinated and free of errors and ambiguities. Clear and error-free materials ensure a smooth test administration.

The purpose of the QA review was to ensure that all publishable products met the high quality standards and expectations of the AZ customer and assure that assessments had been developed that produce valid test scores. This QA review came at the end of the process to augment the internal reviews that took place at each stage of the publishing cycle. It was QA's job to find any problems that had been overlooked by the project team.

4.2 Pool of Items Used for Test Construction

4.2.1 Item Specifications

Prior to item writing for the 2005-06 testing year, an item specification workshop was conducted in February 2005. The workshop was facilitated by CTB Content Development staff and attended by a large group of AZ educators who represented all grade levels and geographic regions of the state. The purpose of the workshop was to provide clarity for how AIMS will measure students' understanding of the standards. Participants defined what is being tested by each Performance Objective (PO) by clarifying the PO statements, setting content limits, and describing stimulus and response attributes. Taken together, these details help to inform instruction by explaining in detail what each PO means at each grade level and by describing how each PO is to be tested.

Each committee was provided with a bound booklet of their grades' content standards. Rooms were equipped with computers and projection devices that made it possible for the facilitator to guide the group and record the decisions electronically while a participant recorded the decisions on a master copy of the bound booklet.

Taking one PO at a time, participants provided a clarifying statement and grade level specific content limits. Together, these two entries could eliminate the vague nature of some of the POs, making them much more useful and meaningful.

Once the PO was clarified and the content limits described for a particular grade level, participants discussed ways the PO could be tested. Even though this was dependent upon the verb used in the PO statement, the committee was charged with developing creative ways to test each PO in a multiple choice, paper-and-pencil format. The group described the passage, graphic, or item stem that would appropriately test the PO and described the content and appearance of answer choices. Together, the descriptions of the stimulus materials and associated answer choice information provided guidance for participants to create their own items. Finally, many of the PO's in the booklet had an illustrative sample item. Participants considered these samples and judged them appropriate (or not) and provided suggestions for changes, as needed.

For each pair of grades for which POs were being examined in the same room (Grades 3 & 4; Grades 5 & 6; and Grades 7 & 8), efforts were made to make sure the clarification statements and content limits of the higher grade was supported by and built upon those of the lower grade. It was also necessary to assure that consistency was being built across the grade groupings working in different rooms. Periodically throughout the three day meeting, representatives from adjacent grade pairs met to compare the POs they had in common and ensure a smooth continuity across grades.

In order to assure that the end product of the committee in each room resulted in one unified set, ADE staff and CTB Content Development leadership decided on consistent wording and formatting conventions. CTB Content Development staff reviewed each page for adherence to these conventions and delivered a draft of the documents within two weeks of the completion of the meeting. The drafts were used during item writing, and refined as needed. At the same time, ADE staff reviewed the drafts and offered input. The resulting documents were used during item writing in March. Refinements and inputs were incorporated into the drafts, resulting in a working draft of item specifications, content limits, and stimulus/response attributes that was delivered in late May of 2005. During item writing, it became clear that the item specifications would continue to require clarification and refinement in order to assure varied PO coverage within the test blueprint each year. Illustrative samples for each PO need to be created that truly reflect the item specification components and clearly test the PO. These item specifications should continue to be refined as needed.

4.2.2 Passage Development and Review

Passages to support the reading assessment were commissioned by the contractor. Passage authors included AZ educators, professional writers, and freelance writers. The types of passages commissioned reflected the kinds of reading required by the AZ Reading Standards. Table 4.2.1 shows the kinds of passages commissioned to support the 2005-06 assessment.

Upon receiving newly-written passages, the contractor reviewed them to be sure:

- all were well-written;
- all were rich in content and subject matter;
- all were age and grade appropriate;
- all avoided stereotyping and controversial, confusing, or emotionally-charged topics;
- together they reflected a range of multi-cultural content;
- some reflected the diversity of Arizona and the Southwest region; and
- all were written in such a way that no group would have an advantage or disadvantage.

Table 4.2.1
Types of Passages Commissioned

Passage Types	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	HS
Fiction	√	√	√	√	√	√	√
Non-fiction			√	√			√
Poetry	√	√	√	√	√	√	√
Functional	√	√			√	√	
Instructional/Informational	√	√			√	√	√
Persuasive	√	√			√	√	√
Technical/Workplace							√

In all, of the 110 passages that were commissioned, 97 (88%) were deemed acceptable by the contractor after applying the above guidelines. Of the 97, approximately one-third were set aside for possible use the following year, resulting in 68 passages prepared for Passage Review. Those 68 passages were prepared for review in Passage Review Books. Each grade level review book contained the passages for that grade. Each passage was on a template that included the word count, genre, and the POs for which items could be written. The template also included space for reviewers to indicate their acceptance or rejection of the passage based on two back-to-back reviews: one for content and one for sensitivity issues. During a general session, all reviewers were provided with the review criteria for each type of review. Content criteria included:

- Prior Knowledge/Audience/Appropriateness – Subject matter should be grade appropriate and not require specialized knowledge or background on the part of the reader.
- Interest – The material should engage the student. Students should find the topic interesting
- Coherence/Cohesiveness – The passage should provide clear links between sentences and paragraphs. Antecedent reference should be clear and unambiguous.
- Writing Style/Passage Structure – The writing style should be consistent throughout the passage. Ideas should be presented in logical order.
- Unity/Purpose – Ideas should flow in a unified direction. The passage should have a clear purpose.
- Conceptual Density – Passage should place reasonable conceptual demands on the reader. New, unusual, or difficult terms should be explained using vocabulary familiar to the reader.
- Explication – Nonfiction passages should provide a balance between information that is stated directly and information that requires the reader to make inferences.
- Representation/Accuracy – Passages must represent their genre and contain factual information. Facts should be documented from reliable sources.
- Organizational Aids – Organizational aids, such as headings, diagrams, or introductions should be included where applicable.
- Story Structure – Passages should contain sufficient structure to support a variety of questions.

Sensitivity issues included:

- Passages should be free of specific references to or descriptions of events of extreme sadness or adversity; acts of physical or psychological violence; alcohol or drug abuse; vulgar language; or sex.

- Religious, political, social, or psychological issues should be presented so that more than one point of view is expressed; factual accuracy is maintained; controversial contemporary issues are avoided; and stereotypical descriptions of beliefs or customs are avoided.
- Offensive, disturbing, inappropriate language or content is not used.
- There should be no evidence of stereotyping based on gender, race, ethnicity, religion, socioeconomic status, age, regional or geographic area, disability, or occupation.
- Passages should be free of differential familiarity for any group based on language, socioeconomic status, regional or geographic area, or prior knowledge or experiences unrelated to the subject matter being tested.

Reviewers who represented all grade levels and Arizona's rich ethnic and cultural diversity read each passage, discussed its content, and either accepted passages as they were or suggested revisions which were incorporated during the review sessions. A laptop connected to a projector allowed participants to revise passages on the spot. Because there were more passages reviewed than actually needed, the committees ranked the passages and selected the passages for which items would be written. Accepted passages were available for item writing the following week. Table 4.2.2 shows the number of passages originally commissioned, the number brought to passage review, and the number accepted. Of the 68 passages taken to Passage Review, 63 (approximately 93%) were accepted for use during item writing workshops the following week.

Table 4.2.2
Number of Passages Commissioned, Reviewed, and Accepted

Grade	Total Passages Commissioned	Total Passages	
		Accepted by Contractor	Total Passages Taken to Passage Review
3	12	12	6
4	12	7	6
5	12	11	6
6	12	11	6
7	12	10	6
8	15	12	7
HS	35	34	31
TOTAL	110	97	68

4.2.3 Item Writing

Items for the AIMS CRT tests are written by Arizona teachers and facilitated by the testing contractor. Item writing workshops were conducting in AZ on March 16-18 and March 21-23, 2005. In addition to representing all grade levels and geographic regions of the state, writers were selected on the basis of the criteria already established for item writers by ADE. Their task was to write sufficient items to bring to Content/Sensitivity review and still have the number of items needed, after attrition, to support the Spring 2006 assessments. For DPA, that meant writing enough items to field test one form per grade. For High School, that meant writing enough items to support 15 forms. Item writing teams were arranged by grade level bands with their work spread over two three-day sessions. Table 4.2.3 shows the team arrangement, number of items they were expected to produce, and the time allotted for their task. Appendix B contains the item writer selection criteria.

Table 4.2.3
Item Writing Plan

Content Area	Grade	Items per grade	Days
Reading	3 & 4	48 (96)	3
	5 & 6	48 (96)	3
	7 & 8	48 (96)	3
	HS	250	3
Math	3 & 4	20 (40)	3
	5 & 6	20 (40)	3
	7 & 8	20 (40)	3
	HS	350	6

Assignments were created to result in a set of items that would span the blueprints and enhance the item pool. Each group was given copies of the item specifications (see section 4.2.1), style guides, vocabulary word lists, and checklists to guide their writing. Writers worked in pairs to draft their items on templates. Facilitators entered the items electronically and projected them onto a screen during group editing sessions throughout each day. Together, the group reviewed each item to be sure the content, difficulty, and vocabulary were appropriate for the grade level; that the context, if any, was appealing and plausible; that distractors represented errors students would make; and confirmed that the intended PO was being assessed. They offered suggestions for revisions and rewrote items to everyone's satisfaction.

The contractor took the resulting items through another careful content review and style edited the items in preparation for Content/Sensitivity Review. Acceptance rates during Content/Sensitivity Review were extremely high making attrition extremely low (see section 4.2.4). Items not chosen for field testing in Spring 2006 were retained for consideration the following year.

4.2.4 Content/Sensitivity Review

Content and Sensitivity Reviews were conducted on each item by Arizona educators and facilitated by the contractor in June 2005. The purposes of the Content Review meetings were to verify the accuracy, difficulty range, depth of knowledge, and grade-appropriateness of potential test items and to verify their alignment to the intended Performance Objective (PO). The purposes of the Sensitivity Review meetings were to verify the items were free of stereotypes or other sources of bias and to confirm that they reflected community standards. Participants were selected on the basis of their ability to represent their grade level and to assure ethnic, racial, and gender representation. At the conclusion of the reviews, participants selected the passages and items that would be field tested in Spring 2006.

During a general session, participants received training in what to check during their Content Review, including ensuring that the content of each item:

- is targeted to assess only one PO (unless specifications indicate otherwise);
- deals with material that is important in testing the targeted PO;
- uses grade-appropriate content;
- uses appropriate thinking skills (application, analysis, conclusions, extending);
- is presented at a reading level suitable for the grade level being tested;

- is accurate and documented against reliable, up-to-date sources;
- has a stem that facilitates answering the question or completing the statement without looking at the answer choices;
- has a stem that does not present clues to the correct answer choice;
- has answer choices that are plausible and attractive to the student who has not mastered the objective or skill;
- is conceptually, grammatically, and syntactically consistent—between the stem and answer choices, and among the answer choices;
- has mutually exclusive distractors; and
- has one and only one correct answer choice.

During a general session, participants received training in what to check during their Sensitivity Review, including ensuring that each item:

- is free of offensive, disturbing, or inappropriate language or content;
- is free of stereotyping based on gender, race, ethnicity, religion, socioeconomic status, age, regional or geographic area, disability, and occupation;
- demonstrates sensitivity to historical representation of groups; and
- is free of differential familiarity for any group based on language, socioeconomic status, regional or geographic area, and prior knowledge or experiences unrelated to the subject matter being tested.

Participants were also asked to ensure that the content of each item was free of explicit references to or descriptions of events involving extreme sadness or adversity; acts of physical or psychological violence; alcohol or drug abuse; vulgar language; or sex.

Throughout the Sensitivity Review, participants were asked to ensure that more than one point of view is expressed when any religious, political, social, or philosophical issues are addressed; beliefs or biases do not interfere with factual accuracy; contemporary issues that have already been proven to be controversial are absent; and stereotypic descriptions of beliefs or customs are absent.

During the reviews, participants were frequently encouraged to discuss each item and to make revisions that would bring the item into compliance with the above conditions. As they worked, participants were asked to classify the items two separate ways—one for content and one for sensitivity. Participants were also asked to place the items into the following categories: Accept as Is, Accept with Minor Revisions, Accept with Major Revisions, or Reject.

Overall, the acceptance rates were very high. Across all grade levels, the content of 95% of the items reviewed were accepted either as is or with revisions. Across all grade levels, 97% of the items reviewed were accepted either as is or with revisions to correct sensitivity issues. Table 4.2.4 shows the number and portion of items classified into each category during Content Review by grade level and content area. Table 4.2.5 shows the same information for the Sensitivity Review.

Any item that was rejected either for content or for sensitivity issues was removed from consideration for field testing. In order to ultimately contribute to an item bank of items that measure and support the curriculum and state content standards, selection of the field test items was guided by the test blueprints. The goal was to select an additional 10 items for Grades 3 through 8 per content area (reading and mathematics), 10 items for high school reading per form, and 15 items for high school mathematics per form so that item data could be collected. Field test item selection was

performed by Content/Sensitivity Review participants. Selections were subject to approval by ADE staff. Table 4.2.6 shows that in all, 495 field test items were selected for inclusion in field test books.

Table 4.2.4
Content Review Results

Content Area	Grade	Content Review								
		Items Reviewed	Accepted As Is	Accepted with Minor Revisions		Accepted with Major Revisions		Rejected		
Reading										
	3	57	11	19%	36	63%	7	12%	3	5%
	4	56	27	48%	25	45%	1	2%	3	5%
	5	58	18	31%	36	62%	0	0%	4	7%
	6	65	24	37%	29	45%	0	0%	5	8%
	7	55	40	73%	5	9%	7	13%	3	5%
	8	48	27	56%	9	19%	2	4%	0	0%
	HS	240	152	63%	64	27%	17	7%	7	3%
Reading Total		579	299	52%	204	35%	34	6%	25	4%
Math										
	3	19	6	32%	11	58%	2	11%	0	0%
	4	19	7	37%	10	53%	1	5%	1	5%
	5	22	4	18%	14	64%	3	14%	1	5%
	6	26	6	23%	12	46%	8	31%	0	0%
	7	34	15	44%	18	53%	1	3%	0	0%
	8	24	16	67%	8	33%	0	0%	0	0%
	HS	308	80	26%	202	66%	1	0%	25	8%
Math Total		452	134	30%	275	61%	16	4%	27	6%
GRAND TOTAL		1031	433	42%	479	46%	50	5%	52	5%

Table 4.2.5
Sensitivity Review Results

Content Area	Grade	Sensitivity Review								
		Items Reviewed	Accepted As Is	Accepted with Minor Revisions		Accepted with Major Revisions		Rejected		
Reading										
	3	57	11	19%	36	63%	7	12%	3	5%
	4	56	53	95%	0	0%	0	0%	3	5%
	5	58	18	31%	36	62%	0	0%	4	7%
	6	58	24	41%	29	50%	0	0%	5	9%
	7	55	40	73%	5	9%	7	13%	3	5%
	8	38	27	71%	9	24%	2	5%	0	0%
	HS	240	152	63%	64	27%	17	7%	7	3%
Reading Total		562	325	58%	179	32%	33	6%	25	4%
Math										
	3	19	16	84%	3	16%	0	0%	0	0%
	4	19	16	84%	2	11%	0	0%	1	5%
	5	22	20	91%	2	9%	0	0%	0	0%
	6	26	21	81%	5	19%	0	0%	0	0%
	7	34	32	94%	2	6%	0	0%	0	0%
	8	24	24	100%	0	0%	0	0%	0	0%
	HS	292	280	96%	7	2%	0	0%	5	2%
Math Total		436	409	94%	21	5%	0	0%	6	1%
GRAND TOTAL		998	734	74%	200	20%	33	3%	31	3%

Table 4.2.6
Number of Field Test Items Selected

Content Area	Number of Grades	Number of Forms	Number of Items Selected
Reading	6 (Gr3 through 8)	6	60
Reading	1 (HS)	15	150
Math	6 (Gr3 through 8)	6	60
Math	1 (HS)	15	225
TOTAL		42	495

4.2.5 AIMS CRT Item Selection

AIMS CRT Item Selection was conducted from August 2-3, 2005. A team of eleven experienced test developers from CTB facilitated the item selection meeting. Arizona participants included five to seven teachers per grade for each of grades 3 through 8 and high school. The primary purpose of the Item Selection meeting was to have Arizona educators select valid and reliable test forms for the 2006 Spring AIMS assessments for grades 3 through 8 and high school for reading and mathematics using items from the 2005 test administration. Two sets of criteria guided the selection of AIMS items: content representation and statistical requirements.

All of the items administered in Spring 2005 were available as hard copy item cards. Each item card contained an image of the item, content alignment information (Strand, Concept, Performance Objective), and selected statistical information about that item (p-value, Rasch difficulty value, the test book in which the item was piloted, item number in the Spring 2005 test book, the count of students who took the item, point biserial, and differential item functioning summary flags). Participants were given training to interpret these statistics and were given a written interpretation guide, thus combining data analysis and item selection into one workshop. The interpretation guide also contained statistical guidelines for test selection. These guidelines included a target difficulty level for each test. Specifically, a target mean and standard deviation of selected item p-values, as well as a suggested distribution for the item p-values was provided for each grade/subject combination. Careful adherence to the specified distribution of p-values guaranteed students a reasonable opportunity to do well on a test that would be neither too easy nor too hard.

In addition to selecting items within specific p-values ranges, staff members were also asked to select items with item discriminations that indicate that getting the item correct is reasonably correlated with performance on the entire test (i.e., preferably item correlations greater than 0.3) and do not exhibit the potential for item bias (i.e., the items should not be flagged using various differential item functioning statistics). Though the committees were not provided with Rasch model fit statistics, internal approval procedures just after item selections were completed further ensured that the selected items would be well estimated in the item calibration analyses.

Content considerations were addressed by the test blueprints. Careful adherence to the blueprints guaranteed the tests would validly measure the ‘construct’ of math and reading as represented in the Arizona state content standards, maintain consistency, link to instruction, and allow for selection of items from different performance objectives within each concept. Substantial variance from the test blueprint could alter the test alignment and thus the validity of the scores being reported. Items were selected to represent the significant content categories specified in the test blueprint in the same proportion as the content categories represented in the test blueprint.

Of the approximately 2350 items field tested in 2005, between 250 and 400 items were available for selection at each grade level. These items formed the pool for item selection. To facilitate the selection process and to guarantee that the proper number and proportion of items would be selected, participants were provided with Item Availability Tables. The sample shown in Table 4.2.7 is a portion of the Item Availability Table used by the participants to study their replacement options for Grade 3 Mathematics. This table shows the portion relevant to Strand 1 Concept 1 only. The entire table included all strands and concepts. The information in the top four rows shows the blueprint requirements for Strand 1, Concept 1 – 15% of the 72 Operational items (i.e., 11 items) should be covered by items from Strand 1, Concept 1 in the Grade 3 Mathematics test. The next two rows show that two of those 11 items are covered by *TerraNova* NRT/CRT items, leaving 9 slots to be filled with AZ items. Similar columns were provided for each element of the blueprint, guaranteeing exact adherence to the blueprint.

The following rows include all of the AZ items covering Strand 1 Concept 1 that were in the Spring 2005 test. Highlighted rows indicate items designated as drift anchors. The participants’ task was to replace these highlighted items. The bottom set of items shows the items available from the Spring 2005 test administration that could be considered as replacements. Committees selecting reading items were also given Item Availability Tables. On theirs, however, the items were arranged by passage. This arrangement served to assure exact blueprint coverage while guaranteeing passage efficiency. As the participants considered each option based on content and difficulty, they could

refer to their item cards to see the item and determine if the other statistical considerations were being met.

As selections were made, they were recorded on Item Replacement Tables. These tables were loaded onto computers and projected for group discussion. These tables provided a running record of the selections and further helped to guarantee blueprint coverage.

Table 4.2.8 shows a portion of the Item Replacement Table created to record the Grade 3 Mathematics selections. This table shows the portion relevant to Strand 1 Concept 1 only. The entire table included all strands and concepts. The first five columns reiterated the blueprint information on the Item Availability Table. The middle set of columns shows the items currently in the Spring 2005 test with the items highlighted for replacement. The final set of columns shows the replacements made and the items to be carried over from Spring 2005 to Spring 2006. These tables were completed for all selections and were subject to approval by both ADE and CTB/McGraw-Hill's Research department.

Table 4.2.7
Sample Grade 3 Mathematics Item Availability Table

Strand and Concept	Strand 1				
	Concept 1				
% of test	15%				
target number of OP items (72)	11				
number of OP TN items in test	2				
number of items needed	9				
yellow background = item to be replaced	PO	Item Number	ID	p-value	Rasch
	1.1.3	35	3148275	0.85	-0.85
	1.1.4	69	3148310	0.71	0.12
	1.1.4	61	3148311	0.79	-0.37
	1.1.7	90	3148314	0.58	0.85
	1.1.9	74	3157143	0.66	0.42
	1.1.15	11	3015074	0.79	-0.4
	1.1.18	56	3148288	0.76	-0.2
Current AZ items in Spring 05 Test	1.1.19	82	3148306	0.66	0.43
	1.1.20	66	3148308	0.64	0.54
	1.1.1	21	3258383	0.8	-0.72
	1.1.2	45	3260723	0.84	-0.8
	1.1.3	48	3258387	0.9	-1.53
	1.1.4	45	3258393	0.9	-1.46
	1.1.5	21	3258395	0.92	-1.74
	1.1.6	45	3258423	0.91	-1.69
	1.1.7	46	3258426	0.72	0.01
	1.1.8	21	3258429	0.84	-0.87
	1.1.9	18	3258431	0.69	0.14
	1.1.9	21	3258433	0.52	1.07
	1.1.10	44	3258436	0.95	-2.21
	1.1.11	44	3258438	0.78	-0.34
	1.1.12	20	3306285	0.6	0.64
	1.1.13	19	3258441	0.71	0.02
	1.1.14	45	3258469	0.76	-0.21
	1.1.15	46	3258470	0.81	-0.69
	1.1.16	46	3258472	0.66	0.39
	1.1.16	19	3260674	0.87	-1.27
	1.1.17	44	3260676	0.7	0.16
	1.1.18	18	3258480	0.74	-0.16
	1.1.19	45	3258443	0.45	1.48
	1.1.19	20	3258444	0.73	-0.09
	1.1.20	22	3260648	0.17	3.15
Available in Field Test Pool	1.1.21	47	3260650	0.92	-1.73

Table 4.2.8
Sample Grade 3 Mathematics Item Replacement Table

# of Items Required per Blueprint					Spring 05 - Operational Items					Spring 06 - New Operational Items				
					Actual # of AZ Items in					Selections				
# of TN Items in Test	# of AZ Items needed	Strand	Concept	Actual # of AZ Items in Spring 05	Item #	CID	P-VALUE	RASCH	Actual # of AZ Items in Spring 06	Item #	CID	P-VALUE	RASCH	
11	2	9	1	1	9	35	3148275	0.85	-0.85	9	35	3148275	0.85	-0.85
			1	1		69	3148310	0.71	0.12		19	3258441	0.71	0.02
			1	1		61	3148311	0.79	-0.37		61	3148311	0.79	-0.37
			1	1		90	3148314	0.58	0.85		46	3258472	0.66	0.39
			1	1		74	3157143	0.66	0.42		21	3258383	0.8	-0.72
			1	1		11	3015074	0.79	-0.4		18	3258431	0.69	0.14
			1	1		56	3148288	0.76	-0.2		56	3148288	0.76	-0.2
			1	1		82	3148306	0.66	0.43		45	3258443	0.45	1.48
			1	1		66	3148308	0.64	0.54		66	3148308	0.64	0.54

Table 4.2.9 shows the number of AIMS items that were selected for each grade. All selections were approved by CTB research staff and ADE staff.

Table 4.2.9
Number of Items Selected by Committee

Content Area	Grade	Number Selected
Reading	3	22
	4	20
	5	20
	6	16
	7	23
	8	20
	HS	31
Math	3	20
	4	20
	5	21
	6	25
	7	20
	8	19
	HS	45
Total		322

4.2.6 AIMS NRT Item Selection

The *TerraNova* component of the 2005 AIMS assessment was replicated in the 2006 AIMS administration. Specifically, the *TerraNova* items that yield the NRT scores for the 2006 AIMS assessment and the subset of *TerraNova* items that contributed to the CRT portion of the 2006 AIMS were identical to those on the 2005 AIMS administration. The 2005 AIMS Technical Report contains more information about how the *TerraNova* items were selected in 2005. Copies of the 2005 AIMS Technical Report are available from Arizona Department of Education at the following web address: <http://www.ade.az.gov/standards/aims/Administering/AIMSTechReport2005.pdf>.

4.3 Customer Approvals

Approvals from ADE staff were obtained during several phases of development: during selection of the CRT items, after second pages were created, at the completion of the QA reviews, and when pre-press test books were available. Each is described below.

4.3.1 Item Selection Approval

Since the item selection was conducted in AZ, item selection approvals were obtained on site at the end of each day. ADE staff members were given the Item Replacement Tables and the item cards. Content was the main focus of this review. Approval was verbal. The item selection tables were then sent electronically to the contract's Research Scientist for approval. Psychometric evaluation of the test selection was the main focus of this review. Recommended changes were discussed with and approved by ADE.

4.3.2 Second Pages Approvals

At the second pages phase of development, items had been arranged into test book format. That is, they were no longer treated as individual items, but appeared in page layouts as they would appear in the final, printed test books. By this point, all content issues should have been resolved. That is, the focus of the approval was on format and presentation issues, rather than on content issues. Formal approval was given. Desired changes were communicated verbally or via email. Formal sign-off of second pages by ADE was achieved via a Request for ADE Approval (RAA) document.

4.3.3 FTP Site

A secure FTP site has been established for transfer of electronic documents (annotated test books, test book reviews, confirming copies, etc.) that need to be reviewed by ADE staff. After careful review by ADE staff, corrections and edits are transmitted to CTB for inclusion/revision of the test documents.

4.3.4 Materials Integration Review (MIR)

The MIR review provides an opportunity for CTB staff members who have not previously seen the test materials to review them. This review also helps assure that test books, answer documents, and test administration directions all work in concert. A MIR summary lists any anomalies found.

4.3.5 Quality Assurance (QA) Review (CTB)

The QA review provides another opportunity for CTB staff members who have not previously seen the test materials to review them. This review focuses on detecting errors, inconsistencies, and cosmetic errors. A QA summary lists any problems found.

4.3.6 ADE Quality Review

After CTB has had an opportunity to review and edit test documents, ADE staff conduct a final review of “second pages” and “confirming copies” to determine if all edits have been accomplished properly.

4.3.7 Final Sign-off

A final, formal approval (blueline stage) is given as test books became available for printing. ADE staff members are provided with a test map of item numbers that comprise the operational items and field test items in each form. A copy of the test book is sent for ADE to review and keep. A formal approval document (RAA) is also included to be signed and returned.

Part 5: Test Administration

Part 5 of the technical report describes administration procedures, including accommodations, security, and written procedures available to test administrators and school personnel. The following AERA/APA/NCME standards are addressed: 1.13, 3.3, 3.19, 3.20, 3.21, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6.11, 6.15, 9.1, 10.1, and 10.2.

5.1 Accommodations

The same accommodations were made available for all of the Fall 2005 and Spring 2006 AIMS tests, including AIMS HS and AIMS DPA. In addition, in Grades 2 and 9, students were assessed in reading, language arts, and mathematics using *TerraNova*, a norm-referenced test published by CTB/McGraw-Hill. *TerraNova* was normed in 2000. The norming group included students with disabilities who received accommodations and students identified as English Learners. Therefore, all of the AIMS HS, AIMS DPA, and *TerraNova* assessments allow the same accommodations and include students who have received accommodations.

Students with disabilities who have an Individualized Education Program (IEP), or who have a 504 plan, may be considered for standard accommodations (described in section 5.1.1). Also, students identified as Limited English Proficient (LEP) and students who have been identified as Fluent English Proficient (FEP) for no more than two years may be considered for standard accommodations.

For the purposes of assessment, a Special Education student is eligible to receive services under the Individuals with Disabilities Education Act – 1997 and has an Individualized Education Program (IEP); and a 504 student is eligible under Section 504 of the Rehabilitation Act of 1973 and has a 504 Accommodation Plan.

An English Language Learner (ELL) is a student whose native language is other than English and is learning English as a second language. Limited English Proficient (LEP) is a term used to refer to a student whose English proficiency is still developing. Fluent English Proficient (FEP) is a term that is used to refer to a student that scores at the proficient level of the state mandated English language proficiency assessment. The AZELLA, a language proficiency assessment, is given to determine a student's proficiency in English and respective instructional placement.

Detailed information about testing accommodations was included in the document, *Testing Accommodations: Guidelines for 2005-2006* on the ADE website. This document was posted at the following location: www.ade.az.gov/standards/urgent/aimsalertarchive/2004-2005/fall2005.asp. Additional information on accommodations can be found at www.ade.az.gov/AIMS/FAQs/ESS.asp.

5.1.1 Standard Accommodations

Standard accommodations are provisions made for students that are intended to improve how a student accesses and demonstrates learning. These should not substantially change the instructional level, the content, construct, or the performance criteria of the given test. The changes are made in order to provide a student equal access to learning and equal opportunity to demonstrate what is known. Standard testing accommodations are changes in the routine conditions under which students take assessments, and involve changes in:

- Timing or scheduling of the test (i.e., administration of the test in short intervals or at a time of day that takes into account a student's medical needs);

- Test setting (i.e., administration of the test individually or in a small group setting, under special lighting, or using special furniture);
- Test presentation (i.e., test questions presented in large print or Braille, repeated directions, or explanation of directions); or
- How the student responds to test questions (i.e., the student points to answers or records answers in the test booklet instead of the answer booklet).

A standard accommodation that is available to English Learners is limited oral translation in the student's native language. When this accommodation is provided on state assessments only the verbal directions stated by the Test Administrator and the written directions that the student is expected to read may be orally translated into the student's native language. The translation must be an exact translation which is as close to verbatim as possible, and translation is to be provided on an as needed basis only. Translating any test item or translations that paraphrase, simplify, or clarify directions, or written translations are not permitted.

Table 5.1.1 describes in detail all standard accommodations made available for the Fall 2005 and Spring 2006 AIMS assessments. An "A" indicates that the accommodation was available for all categories of students who receive accommodations; a "1" indicates that the accommodation was available for students with an IEP; a "2" indicates that the accommodation was available for students with a 504 Plan; and a "3" indicates that the accommodation was available for LEP or FEP students. This list of standard accommodations was made available to test administrators as a list of examples and is in no way exhaustive.

Table 5.1.1
2005 Fall and 2006 Spring AIMS Standard Accommodations

Standard Accommodation	AIMS HS	AIMS DPA	TERRA NOVA
Change in timing or scheduling of test			
Extended testing time (same day)	A	A	A
More Breaks	A	A	A
Administer in several shorter sessions	A	A	A
Change in test setting			
Administer in separate location, separate room, or study carrel	A	A	A
Administer the test in a small group	A	A	A
One on one testing	A	A	A
Student given preferential seating	A	A	A
Administer the test under special lighting	A	A	A
Student wears noise buffers (after directions)	A	A	A
Student uses special furniture	A	A	A
Changes in test presentation			
Familiar test administrator	A	A	A
Repeat directions	A	A	A
Clarify or simplify language in directions in English	A	A	A
Read or sign directions	A	A	A
Exact sign language interpretation of math/writing	A	A	A
Use amplification equipment	A	A	A
Use place marker	A	A	A
Use color overlay	A	A	A
Use of magnification device	A	A	A
Exact oral translation of directions as needed upon student request	A	A	A
Read items for math or writing in English	A	A	A
Provide translation dictionary	3	3	3
Administer large-print edition of test	A	A	A
Administer Braille edition of the test	1, 2	1, 2	1, 2
Use of an abacus on math portion by a student who is blind	1	1	1
Changes in response to test questions			
Braille writers	1, 2	1, 2	1, 2
Record or dictate responses to a scribe orally-- reading/math only. Scribe may not alter student responses in any way--must record word for word	1, 2	1, 2	1, 2
Answers recorded or typed by student using assistive technology -- spell check and grammar check turned off and predict ahead functions turned off	1, 2	1, 2	1, 2

Note. 1 = student with IEP, 2 = student with 504, 3 = LEP student or FEP student (2 or fewer years),
A = all categories of students who receive accommodations.

5.1.2 Alternate Accommodations

Alternate accommodations reflect changes in the test administration that affect standardization and, thus, the comparability of scores, and may also involve substantial changes in what a student is expected to learn and/or in the way that learning is demonstrated. Such changes are made to provide a student with meaningful and productive learning experiences, environments, and assessments based on individual needs and abilities. IEP teams should exercise caution in considering whether a student requires an alternate accommodation in order to access the test. Given that alternate accommodations involve substantial changes in what a student is expected to learn and to demonstrate, students considered for these accommodations should receive at least part of their instruction in special education.

Alternate accommodations may not provide verbal or other clues or suggestions that hint at or give away the correct response to the student. Therefore, it is not permissible to simplify, paraphrase, explain, or eliminate any test item, prompt, or multiple-choice option.

Students with disabilities who have an Individualized Education Program (IEP) may be considered for alternate accommodations. Under unusual circumstances, a student with a 504 plan may need alternate accommodations. This decision must be approved by the Assessment Section of ADE. If an alternate accommodation was used, parents were notified and the provided accommodation explained.

Table 5.1.2 describes alternate accommodations available during the Fall 2005 and Spring 2006 AIMS tests. This list of alternate accommodations was made available to test administrators as a list of examples and is in no way exhaustive.

Table 5.1.2
Fall 2005 and Spring 2006 AIMS Alternate Accommodations

Non-standard Accommodation	AIMS HS	AIMS DPA	TerraNova
Auditory presentation of the Reading content area	1	1	1
Interpreting through sign language systems the reading portion	1	1	1
Dictate writing to a scribe orally or to a recording device--scribe may not alter student responses in any way--must record word for word--(student must provide spelling, grammar, and language conventions) - writing section must be transcribed onto the answer document	1	1	1
Use assistive technology with spell/grammar check or predict-ahead function - writing section must be transcribed onto the answer document	1	1	1
Use of a calculator, number chart, arithmetic tables, manipulatives, or abacus on Mathematics portion of test	1	1	1

Note. 1 = student with IEP, 2 = student with 504, 3 = LEP student or FEP student (2 or fewer years),
A = all categories of students who receive accommodations.

5.1.3 Reporting Results of Assessments Taken with Accommodations

Scores of assessments taken with standard accommodations are included with the results of students who took these tests under standard conditions at the school, district, and state level. Scores of assessments taken with alternate accommodations are not included in aggregate results at the school, district, and state level.

ADE is obligated to closely monitor schools and districts to ensure the proper use of alternate accommodations and provides technical assistance to those schools with excessive usage. The goal of ADE will be to work with those schools having high numbers of non-standard accommodations to determine why this is occurring and how best to remedy the situation.

5.2 Test Security

All AIMS tests were administered under secure testing conditions. Figure 5.2.1 includes the security agreement signed by personnel involved with testing administration.

5.3 Test Administration

In order to ensure standardized testing administration for all students, a Test Coordinator's manual was made available to all test coordinators for the Fall 2005 and Spring 2006 administrations (ADE, 2005, 2006). The manual included the following topics:

- Test Security
- Schedule of Important Dates
- District/Charter Holder Test Coordinator's Responsibilities
- Scheduling Test Administration
- Test Setting and Test Administrators
- Students to be Tested
- Data Grid
- Test Materials
- Receiving Test Materials
- Inventorying Test Materials
- Procedures During Test Administration
- Procedures Following Test Administration
- Returning Materials to CTB/McGraw-Hill
- Test Security Agreement

In addition, Test Administration Directions (ADE, 2005 & 2006) were made available to all test administrators for the Fall 2005 and Spring 2006 assessments. They included the following:

- Arrangements Prior to Test Administration
- Test Materials and Testing Schedule
- Test Administration Guidelines
- Student Identification Information
- Detailed Scripts for Administration of Each Part of Each Test
- Procedures Following Test Administration

For specific information related to test administration, refer to the Test Coordinator's Manual and/or the Test Administration Directions.

Figure 5.2.1
2006 Spring AIMS Test security agreement

Arizona Instrument to Measure Standards
AIMS HS/AIMS DPA
Test Security Agreement

The user (state agency, school district, charter holder and/or school professional staff) acknowledges that AIMS DPA (Dual Purpose Assessment) and High School AIMS are secure tests and agrees to the following conditions of use to ensure the test's security of the tests:

1.
 - a) The user will take all necessary precautions to safeguard all test materials by limiting access to persons with the school district or agency with a responsible, professional interest in the test's security.
 - b) The names of all persons having access to the materials will be kept on file by the user.
 - c) All persons having access to the materials (other than students to whom the test is administered) will sign a security affidavit, which will be kept on file.
 - i. School Principals will maintain signed agreements of building staff.
 - ii. District will maintain signed agreements of building administrators.
 - iii. Superintendent/charter holder will sign for district and submit security agreement to ADE.
 - iv. ADE will maintain signed agreements of superintendents/charter holders.
2.
 - a) The user will keep the test materials under lock and key, except on actual testing dates, limiting access to those responsible for their security.
 - b) Secure test materials, including test books and directions, will be delivered to examiners no sooner than the date of testing, unless logistics dictate an earlier delivery date.
 - c) Test materials will be kept secure until they are actually distributed to students.
 - d) In no case will students be permitted to remove test material from the room where testing takes place except under supervision of staff (students completing test).
3.
 - a) The user will not examine the test to determine the content beyond the requirements to administer the test.
 - b) The user will not disclose or allow to be disclosed the content of the test.
4. Upon completion of testing, the user will return all test materials to the designated testing coordinator of the school/district.
5. The user will develop, distribute, and enforce disciplinary procedures for the violation of test security by district or agency staff.
6. The user will follow the guidelines approved by the State Board of Education in January 2003 in the document *Test Preparation and Administration Practices*

By signing my name to this document, I am assuring the ADE that I and anyone having access to the test materials will abide by the above conditions.

BY: _____

PRINTED NAME: _____

TITLE: _____

DATE: _____

SCHOOL/DISTRICT/
CHARTERHOLDER: _____

ADDRESS: _____

CITY: _____

FAX Superintendent/Charter Holder signature to: 602-542-5467

Part 6: Data for Operational Analysis

Part 6 of the technical report describes the data that were used for calibration and scaling of the 2006 Spring AIMS. This part also presents classical test statistics and item analysis statistics for each content area and grade level (CRT and NRT) computed with the data used for calibration and scaling. Addressed in this part of the technical report are the following AERA/APA/NCME standards: 1.5, 1.13, 2.4, 2.8, 3.18, 6.5, and 7.1. (See Appendix A for this information for the 2006 Fall AIMS administration.)

6.1 Data

Arizona had two test windows for operational testing in Spring 2006. The high school reading and writing tests were administered on February 28 and March 1. High school math and grades 3-8 reading, writing, and math were administered between April 3 and April 21. Live calibration with census data was used for operational analysis of reading and mathematics tests; pre-equated scoring tables were used for analysis of writing tests. (See Appendix C for details on the development of these pre-equated scoring tables.)

6.2 Ensuring Valid Records in Calibration Sample

In order to ensure valid calibration results, several data cleaning steps occurred upon receipt of raw data from the scanning and scoring processes. These steps allowed for calibration to be conducted on valid student responses at the targeted grade level. Records for students taking all forms of the tests were included.

The cleaning process removed the following records from the calibration datasets for each content area and grade level:

- Records with invalid tests noted by all response options to the first six items in each section marked;
- Records with non-valid attempts noted by less than one response in any of the test sessions;
- Records for Bureau of Indian Affairs schools, juvenile corrections centers, state hospital schools, private schools, and home schools;
- Records where a student indicated they had already met expectations (high school tests only);
- Records for students in cohorts other than 08 (high school tests only);
- Records which indicated the student took a test other than their grade level test;
- Records marked as taken with alternate accommodations; and
- Duplicate records.

More details on calibration are included in Part 7 Calibration and Scaling.

6.3 Descriptive Statistics by Test

Table 6.3.1 presents descriptive statistics by test (content area and grade level) computed with the calibration samples in reading and mathematics and census data in writing. Shown in the table are the number of students (N), the maximum obtained raw score (Max RS), the raw score mean (RS M), the raw score standard deviation (RS SD), the average p-value (P-value M), the average adjusted item to total correlation (Adj r M), and KR 20 as a measure of internal consistency. The item to total

correlation is computed as a point biserial correlation for dichotomous items and as a Pearson product-moment correlation for polytomous items.

Note that internal consistency is not reported for the writing tests. This is because, although Cronbach's alpha could be used as a measure of internal consistency for the 2006 Spring AIMS CRT writing tests, this measure would likely overestimate the coefficient because the trait scores are based on the same response. Furthermore, split-half reliability for a single prompt test may not be a valid estimate of reliability for a single prompt test.

Table 6.3.1
2006 Spring AIMS Classical Test Analysis Statistics

Test	N	Max RS Obtained	RS M	RS SD	P-value M	Adj r M	Internal Consistency
CRT							
Math							
03	78996	72	49.80	12.98	0.69	0.38	0.93
04	79253	70	49.79	12.90	0.71	0.40	0.93
05	78306	68	46.89	13.69	0.69	0.43	0.94
06	78334	68	45.96	13.66	0.68	0.42	0.94
07	77382	68	47.04	13.65	0.69	0.43	0.94
08	77312	66	43.21	12.96	0.65	0.41	0.93
HS	69377	84	55.24	16.62	0.66	0.41	0.95
Reading							
03	78422	54	36.74	10.61	0.68	0.43	0.93
04	78792	54	37.98	11.30	0.70	0.45	0.94
05	78000	54	36.52	10.85	0.68	0.41	0.92
06	78508	54	36.45	10.55	0.67	0.41	0.92
07	77881	54	35.36	11.00	0.65	0.41	0.92
08	78065	54	35.20	10.27	0.65	0.38	0.91
HS	71923	54	35.47	10.48	0.66	0.39	0.92
Writing							
03	78218	36	17.10	5.29	0.48	0.80	--
04	78863	35	18.58	4.71	0.52	0.79	--
05	78027	35	19.35	5.26	0.54	0.77	--
06	78352	36	21.79	4.98	0.61	0.80	--
07	77742	35	21.04	4.58	0.58	0.78	--
08	77855	35	21.04	4.30	0.58	0.77	--
HS-A	67862	71	42.00	9.67	0.58	0.84	--
HS-T	2104	69	39.06	11.61	0.54	0.90	--
NRT							
Math							
03	78996	25	18.44	4.41	0.74	0.36	0.82
04	79253	25	18.20	4.75	0.73	0.38	0.84
05	78306	25	17.35	5.15	0.69	0.40	0.85
06	78334	25	16.92	5.53	0.68	0.42	0.87
07	77382	25	14.79	5.40	0.59	0.39	0.85
08	77312	25	15.63	5.03	0.63	0.36	0.83
Reading							
03	78422	25	16.20	5.09	0.65	0.38	0.84
04	78792	25	18.03	5.22	0.72	0.42	0.86
05	78000	25	16.86	4.96	0.67	0.38	0.83
06	78508	25	17.13	4.89	0.69	0.37	0.83
07	77881	25	15.78	5.71	0.63	0.43	0.87
08	78065	25	17.61	4.83	0.70	0.37	0.83
Language							
03	78422	20	12.74	4.01	0.64	0.29	0.79
04	78792	20	13.27	4.08	0.66	0.28	0.80
05	78000	20	12.62	4.67	0.63	0.31	0.84
06	78508	20	12.54	4.52	0.63	0.29	0.82
07	77881	20	13.45	4.27	0.67	0.30	0.81
08	78065	20	12.79	3.99	0.64	0.27	0.79

Note. CRT= Criterion-referenced test, NRT= Norm-referenced test, HS-A= High School Prompt A, HS-T= High School Prompt T. High school writing tests have a maximum raw score of 72 because 6 traits were scored by two raters each, treated in analysis as 12 6-point items. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

6.4 Classical Item Analysis

Classical item analysis was conducted for all grades and content areas. Tables 6.4.1—6.4.22 present item statistics for the CRT tests. Note that operational CRT items are reported in sequence without embedded field test and non-dual purpose NRT/CRT items. Tables 6.4.23—6.4.40 presents item statistics for the NRT tests. The tables show the number of students (N), the item difficulty (P-Value), adjusted point biserial ($Adj r_{pb}$) for dichotomous items, adjusted item to total Pearson product-moment correlation ($Adj r$) for polytomous items, percentage of students who omitted the item (% Omit), and the percentage of students responding to and point biserial for the key and each distractor.

Table 6.4.1
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78996	0.77	0.41	0.31	76.56	14.37	-0.31	6.69	-0.17	2.06	-0.16
2	78996	0.75	0.35	0.24	74.93	5.86	-0.22	9.33	-0.26	9.63	-0.07
3	78996	0.71	0.29	0.33	70.73	10.71	-0.14	6.50	-0.20	11.72	-0.11
4	78996	0.70	0.35	0.44	70.04	10.47	-0.15	8.24	-0.19	10.80	-0.19
5	78996	0.62	0.35	0.52	61.69	20.65	-0.13	3.48	-0.23	13.66	-0.21
6	78996	0.64	0.55	1.00	64.18	20.74	-0.38	9.78	-0.24	4.28	-0.15
7	78996	0.99	0.17	0.33	98.62	0.24	-0.08	0.36	-0.10	0.45	-0.10
8	78996	0.68	0.36	0.51	67.62	10.15	-0.23	12.91	-0.18	8.77	-0.12
9	78996	0.73	0.45	1.10	72.95	5.23	-0.27	3.61	-0.26	17.11	-0.24
10	78996	0.56	0.43	0.42	56.31	3.48	-0.25	5.15	-0.27	34.56	-0.22
11	78996	0.75	0.46	0.45	75.04	16.14	-0.27	4.73	-0.27	3.62	-0.21
12	78996	0.70	0.46	0.55	70.14	14.12	-0.17	9.51	-0.29	5.66	-0.27
13	78996	0.76	0.44	0.63	75.60	15.41	-0.34	6.81	-0.17	1.53	-0.16
14	78996	0.77	0.43	0.70	77.01	1.56	-0.19	13.63	-0.18	7.09	-0.35
15	78996	0.44	0.29	1.29	44.26	21.59	-0.09	16.15	-0.17	16.67	-0.08
16	78996	0.82	0.31	0.83	82.13	2.11	-0.15	11.52	-0.20	3.38	-0.18
17	78996	0.94	0.27	0.55	94.42	2.29	-0.17	1.62	-0.15	1.04	-0.13
18	78996	0.82	0.36	0.59	82.38	10.20	-0.26	3.02	-0.19	3.81	-0.12
19	78996	0.75	0.48	0.98	75.05	10.51	-0.29	9.40	-0.27	4.04	-0.18
20	78996	0.60	0.46	0.40	60.34	2.87	-0.09	7.40	-0.12	28.87	-0.38
21	78996	0.58	0.61	0.56	58.00	27.48	-0.53	9.77	-0.21	4.14	0.01
22	78996	0.77	0.55	0.47	77.22	7.54	-0.25	8.35	-0.33	6.39	-0.29
23	78996	0.66	0.27	0.37	65.75	16.61	-0.13	7.97	-0.09	4.65	-0.15
24	78996	0.60	0.47	0.57	60.26	16.25	-0.21	10.11	-0.24	12.79	-0.22
25	78996	0.75	0.52	0.09	74.93	2.04	-0.21	19.56	-0.37	3.37	-0.25
26	78996	0.69	0.31	0.49	68.99	3.12	-0.21	2.14	-0.20	25.24	-0.18
27	78996	0.94	0.35	0.70	93.86	1.47	-0.18	1.42	-0.21	2.55	-0.22
28	78996	0.83	0.31	0.15	82.79	1.27	-0.19	13.08	-0.16	2.71	-0.24
29	78996	0.69	0.23	0.24	68.81	8.66	-0.20	11.97	-0.08	10.26	-0.07
30	78996	0.55	0.36	0.58	55.21	13.56	-0.10	15.87	-0.21	14.77	-0.17
31	78996	0.82	0.31	0.56	82.38	9.63	-0.19	4.87	-0.17	2.55	-0.14
32	78996	0.38	0.28	0.50	38.14	26.23	0.09	33.00	-0.33	2.12	-0.15
33	78996	0.83	0.37	0.45	82.55	6.66	-0.18	2.48	-0.20	7.79	-0.24
34	78996	0.64	0.45	0.77	63.69	12.86	-0.19	9.59	-0.19	13.07	-0.27
35	78996	0.76	0.38	0.48	76.15	6.23	-0.13	3.00	-0.21	14.13	-0.27
36	78996	0.84	0.42	0.66	83.62	4.25	-0.25	3.12	-0.24	8.34	-0.21
37	78996	0.63	0.55	1.68	63.25	9.18	-0.25	22.16	-0.38	3.72	-0.16
38	78996	0.73	0.43	1.80	72.98	7.33	-0.20	4.97	-0.23	12.91	-0.25
39	78996	0.48	0.22	0.56	47.65	5.39	-0.25	9.36	-0.24	37.03	0.04
40	78996	0.42	0.33	0.37	41.98	23.94	-0.13	13.82	-0.11	19.88	-0.17

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.1 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	78996	0.47	0.43	0.32	47.26	28.88	-0.24	10.97	-0.09	12.56	-0.22
42	78996	0.85	0.48	0.26	84.96	6.18	-0.30	4.51	-0.25	4.09	-0.23
43	78996	0.76	0.37	0.29	76.36	6.82	-0.20	10.86	-0.18	5.67	-0.22
44	78996	0.77	0.40	0.62	76.76	11.95	-0.22	5.75	-0.21	4.90	-0.20
45	78996	0.84	0.31	0.54	84.47	7.41	-0.18	4.47	-0.14	3.08	-0.18
46	78996	0.82	0.45	0.34	82.08	6.88	-0.25	4.77	-0.26	5.93	-0.22
47	78996	0.51	0.37	1.17	50.53	33.30	-0.11	10.57	-0.36	4.43	-0.08
48	78996	0.88	0.39	0.15	88.47	3.28	-0.25	6.29	-0.22	1.80	-0.18
49	78996	0.84	0.48	0.13	83.74	5.22	-0.28	8.35	-0.29	2.55	-0.20
50	78996	0.60	0.30	0.20	59.76	17.93	-0.12	12.55	-0.15	8.26	-0.13
51	78996	0.87	0.18	0.29	87.11	2.47	-0.13	7.18	-0.08	2.90	-0.10
52	78996	0.65	0.41	0.54	64.84	17.70	-0.16	11.34	-0.24	5.58	-0.24
53	78996	0.51	0.36	0.30	50.94	19.79	-0.08	12.29	-0.19	16.68	-0.23
54	78996	0.65	0.46	0.76	64.77	10.62	-0.24	12.76	-0.15	11.09	-0.30
55	78996	0.85	0.40	0.67	85.11	3.47	-0.21	6.07	-0.24	4.67	-0.21
56	78996	0.50	0.46	0.43	50.10	13.75	-0.24	12.22	-0.21	23.47	-0.18
57	78996	0.78	0.53	1.49	77.90	11.12	-0.38	1.61	-0.19	7.87	-0.27
58	78996	0.69	0.26	0.24	68.85	23.46	-0.16	5.28	-0.13	2.17	-0.16
59	78996	0.86	0.35	0.69	86.33	4.73	-0.23	5.17	-0.18	3.07	-0.15
60	78996	0.58	0.43	0.94	58.08	12.97	-0.21	21.76	-0.21	6.22	-0.22
61	78996	0.71	0.22	1.31	71.41	18.92	0.01	5.00	-0.26	3.35	-0.23
62	78996	0.53	0.42	3.03	53.26	8.24	-0.26	21.90	-0.19	13.55	-0.15
63	78996	0.44	0.46	0.70	43.66	34.68	-0.25	15.56	-0.16	5.38	-0.23
64	78996	0.89	0.41	0.91	88.56	2.24	-0.21	4.22	-0.22	4.07	-0.26
65	78996	0.77	0.44	0.21	77.16	7.65	-0.25	8.43	-0.27	6.52	-0.17
66	78996	0.39	0.29	0.41	39.18	15.34	-0.22	6.30	-0.16	38.61	-0.03
67	78996	0.41	0.38	0.57	41.25	16.32	-0.24	9.66	-0.32	32.19	0.00
68	78996	0.70	0.38	0.18	69.86	7.58	-0.16	14.83	-0.25	7.42	-0.16
69	78996	0.72	0.29	0.20	72.49	2.32	-0.25	23.46	-0.16	1.51	-0.17
70	78996	0.76	0.44	0.52	76.37	12.30	-0.22	7.22	-0.26	3.58	-0.24
71	78996	0.58	0.44	0.31	58.48	6.85	-0.16	11.03	0.03	23.33	-0.44
72	78996	0.52	0.28	0.84	51.51	15.18	0.11	5.49	-0.11	26.97	-0.33

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.2
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	79253	0.73	0.51	0.04	73.00	21.95	-0.39	3.20	-0.24	1.80	-0.17
2	79253	0.72	0.33	0.05	71.54	15.96	-0.28	7.42	-0.07	5.02	-0.12
3	79253	0.90	0.25	0.03	89.57	4.61	-0.11	3.59	-0.15	2.19	-0.16
4	79253	0.80	0.49	0.12	79.70	6.92	-0.23	5.04	-0.23	8.21	-0.32
5	79253	0.63	0.34	0.05	62.79	26.16	-0.19	5.77	-0.17	5.22	-0.18
6	79253	0.86	0.43	0.05	86.34	5.70	-0.23	4.77	-0.25	3.13	-0.24
7	79253	0.63	0.44	0.10	62.90	19.56	-0.26	7.17	-0.20	10.23	-0.19
8	79253	0.87	0.37	0.05	86.56	1.22	-0.18	3.07	-0.23	9.08	-0.22
9	79253	0.60	0.38	0.08	59.55	3.75	-0.24	32.16	-0.20	4.40	-0.22
10	79253	0.64	0.46	0.14	64.33	16.35	-0.34	10.79	-0.20	8.39	-0.13
11	79253	0.48	0.37	0.11	48.35	14.52	-0.21	16.70	-0.11	20.29	-0.17
12	79253	0.67	0.45	0.10	67.23	7.09	-0.19	8.24	-0.19	17.33	-0.29
13	79253	0.78	0.37	0.12	77.62	10.27	-0.18	5.84	-0.20	6.12	-0.21
14	79253	0.83	0.46	0.09	83.36	6.35	-0.26	4.80	-0.27	5.38	-0.21
15	79253	0.68	0.38	0.08	68.21	7.87	-0.23	20.21	-0.18	3.60	-0.23
16	79253	0.83	0.56	0.09	82.52	5.42	-0.31	5.66	-0.28	6.29	-0.31
17	79253	0.59	0.38	0.10	59.03	33.39	-0.27	4.66	-0.15	2.81	-0.19
18	79253	0.86	0.40	0.07	85.82	6.84	-0.20	3.36	-0.25	3.90	-0.22
19	79253	0.60	0.41	0.11	60.44	8.76	-0.17	16.19	-0.22	14.49	-0.20
20	79253	0.56	0.34	0.15	56.45	4.52	-0.22	9.54	-0.22	29.30	-0.12
21	79253	0.85	0.45	0.13	85.13	3.48	-0.27	6.26	-0.22	4.98	-0.25
22	79253	0.84	0.35	0.13	84.35	3.25	-0.22	6.75	-0.18	5.49	-0.18
23	79253	0.41	0.38	0.14	40.53	17.69	-0.08	38.64	-0.24	2.99	-0.22
24	79253	0.81	0.22	0.10	80.56	1.31	-0.16	16.74	-0.15	1.28	-0.11
25	79253	0.70	0.52	0.27	69.75	6.54	-0.18	10.29	-0.25	13.14	-0.35
26	79253	0.85	0.33	0.02	84.94	4.62	-0.18	7.00	-0.19	3.42	-0.18
27	79253	0.63	0.41	0.05	62.68	12.30	-0.27	8.30	-0.18	16.65	-0.16
28	79253	0.76	0.51	0.04	75.81	10.36	-0.27	9.17	-0.28	4.60	-0.27
29	79253	0.60	0.52	0.07	59.99	14.42	-0.10	14.15	-0.37	11.35	-0.28
30	79253	0.88	0.46	0.15	87.62	3.68	-0.24	4.92	-0.28	3.60	-0.23
31	79253	0.66	0.56	0.07	66.29	11.80	-0.33	10.77	-0.31	11.05	-0.19
32	79253	0.76	0.45	0.11	75.93	2.69	-0.24	8.66	-0.23	12.60	-0.27
33	79253	0.77	0.51	0.08	76.82	15.09	-0.38	3.90	-0.24	4.07	-0.15
34	79253	0.78	0.45	0.10	77.63	4.48	-0.25	12.39	-0.25	5.38	-0.23
35	79253	0.88	0.30	0.10	87.90	3.49	-0.17	5.57	-0.18	2.93	-0.15
36	79253	0.93	0.34	0.10	93.30	2.03	-0.21	3.06	-0.19	1.49	-0.18
37	79253	0.84	0.46	0.05	83.87	5.54	-0.29	5.05	-0.25	5.48	-0.21
38	79253	0.71	0.40	0.08	70.64	3.14	-0.22	4.43	-0.26	21.70	-0.22
39	79253	0.88	0.42	0.07	87.88	2.96	-0.22	3.69	-0.23	5.38	-0.25
40	79253	0.59	0.32	0.06	58.81	7.40	-0.24	5.15	-0.20	28.54	-0.11

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.2 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	79253	0.44	0.29	0.14	43.89	21.72	-0.19	18.47	-0.11	15.76	-0.05
42	79253	0.82	0.34	0.08	81.56	4.98	-0.27	10.60	-0.14	2.76	-0.19
43	79253	0.68	0.45	0.13	67.86	5.42	-0.21	14.32	-0.14	12.26	-0.34
44	79253	0.68	0.31	0.11	67.62	13.95	-0.12	9.84	-0.17	8.45	-0.19
45	79253	0.59	0.48	0.10	59.26	27.69	-0.36	6.60	-0.15	6.33	-0.15
46	79253	0.73	0.45	0.11	72.77	15.57	-0.24	7.30	-0.23	4.22	-0.26
47	79253	0.50	0.39	0.19	50.24	3.36	-0.26	36.69	-0.13	9.51	-0.29
48	79253	0.62	0.55	0.32	62.35	12.36	-0.27	10.71	-0.21	14.23	-0.31
49	79253	0.80	0.21	0.03	79.91	5.94	-0.10	7.73	-0.12	6.37	-0.12
50	79253	0.71	0.27	0.03	70.83	1.23	-0.18	1.95	-0.18	25.94	-0.18
51	79253	0.73	0.40	0.05	72.97	6.24	-0.25	9.67	-0.31	11.03	-0.08
52	79253	0.85	0.31	0.09	85.44	2.85	-0.21	7.29	-0.14	4.30	-0.19
53	79253	0.75	0.42	0.13	74.80	10.20	-0.23	7.66	-0.20	7.19	-0.22
54	79253	0.74	0.62	0.02	73.60	14.49	-0.42	5.79	-0.28	6.09	-0.26
55	79253	0.86	0.38	0.05	85.85	2.20	-0.24	9.01	-0.23	2.87	-0.20
56	79253	0.77	0.52	0.09	76.59	11.13	-0.34	6.33	-0.26	5.84	-0.21
57	79253	0.75	0.54	0.07	74.97	10.83	-0.35	6.41	-0.31	7.69	-0.19
58	79253	0.78	0.41	0.07	77.65	3.90	-0.23	11.86	-0.20	6.47	-0.24
59	79253	0.55	0.49	0.08	54.72	21.10	-0.26	16.38	-0.23	7.71	-0.19
60	79253	0.55	0.22	0.05	54.92	28.33	0.08	9.56	-0.32	7.13	-0.21
61	79253	0.77	0.37	0.11	77.16	6.31	-0.19	5.68	-0.25	10.71	-0.17
62	79253	0.90	0.32	0.07	90.42	3.38	-0.20	3.54	-0.16	2.54	-0.17
63	79253	0.54	0.48	0.09	53.91	15.26	-0.21	21.37	-0.21	9.32	-0.27
64	79253	0.78	0.37	0.08	78.16	14.59	-0.21	4.38	-0.21	2.75	-0.21
65	79253	0.56	0.41	0.12	56.30	13.37	-0.14	19.73	-0.21	10.44	-0.24
66	79253	0.56	0.28	0.07	55.88	17.62	-0.15	9.25	-0.12	17.15	-0.11
67	79253	0.41	0.34	0.10	40.79	14.74	-0.34	39.54	-0.01	4.80	-0.17
68	79253	0.49	0.25	0.17	48.94	28.41	-0.11	14.12	-0.10	8.33	-0.15
69	79253	0.91	0.36	0.22	90.74	2.72	-0.20	3.72	-0.20	2.59	-0.21
70	79253	0.63	0.28	0.57	62.69	8.35	-0.13	16.67	-0.10	11.71	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.3
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78306	0.69	0.32	0.06	68.98	14.30	-0.24	2.78	-0.20	13.89	-0.09
2	78306	0.72	0.24	0.03	72.28	2.80	-0.17	18.08	-0.15	6.80	-0.09
3	78306	0.71	0.37	0.05	70.91	17.11	-0.21	7.48	-0.21	4.43	-0.17
4	78306	0.85	0.41	0.07	85.27	4.62	-0.23	5.31	-0.23	4.73	-0.20
5	78306	0.74	0.53	0.03	73.60	13.84	-0.31	5.25	-0.29	7.28	-0.23
6	78306	0.85	0.48	0.06	85.37	5.26	-0.27	4.79	-0.29	4.50	-0.21
7	78306	0.63	0.33	0.05	63.02	6.16	-0.20	10.29	-0.06	20.47	-0.23
8	78306	0.86	0.30	0.04	86.06	5.22	-0.18	6.43	-0.17	2.24	-0.15
9	78306	0.67	0.47	0.12	67.31	10.45	-0.26	9.29	-0.25	12.83	-0.21
10	78306	0.70	0.35	0.08	70.14	2.84	-0.23	13.26	-0.21	13.69	-0.15
11	78306	0.82	0.29	0.07	81.89	8.27	-0.15	5.34	-0.17	4.41	-0.16
12	78306	0.76	0.38	0.09	75.78	10.33	-0.19	9.02	-0.16	4.78	-0.26
13	78306	0.79	0.40	0.07	79.42	9.08	-0.16	6.35	-0.24	5.08	-0.25
14	78306	0.78	0.27	0.09	77.50	18.17	-0.16	2.53	-0.19	1.70	-0.16
15	78306	0.56	0.53	0.10	56.31	25.73	-0.27	12.55	-0.34	5.30	-0.13
16	78306	0.66	0.56	0.08	65.61	12.41	-0.31	14.80	-0.33	7.07	-0.17
17	78306	0.88	0.42	0.12	88.11	2.72	-0.23	4.99	-0.25	4.04	-0.22
18	78306	0.73	0.38	0.10	72.61	21.11	-0.23	2.62	-0.19	3.54	-0.24
19	78306	0.50	0.54	0.20	49.90	22.58	-0.32	13.79	-0.25	13.53	-0.15
20	78306	0.69	0.35	0.07	69.35	13.74	-0.20	9.33	-0.20	7.50	-0.13
21	78306	0.82	0.54	0.02	81.82	8.91	-0.37	4.51	-0.27	4.73	-0.22
22	78306	0.75	0.39	0.07	74.81	11.81	-0.18	8.22	-0.23	5.09	-0.21
23	78306	0.73	0.43	0.06	73.40	6.40	-0.28	6.66	-0.28	13.46	-0.15
24	78306	0.70	0.58	0.02	69.68	9.06	-0.30	4.24	-0.22	16.99	-0.36
25	78306	0.58	0.49	0.06	58.36	12.74	-0.14	21.62	-0.37	7.21	-0.16
26	78306	0.68	0.43	0.06	68.41	21.25	-0.32	6.86	-0.09	3.40	-0.24
27	78306	0.82	0.44	0.03	81.98	3.61	-0.23	11.69	-0.26	2.68	-0.26
28	78306	0.80	0.55	0.08	79.63	7.49	-0.28	8.04	-0.29	4.76	-0.30
29	78306	0.92	0.23	0.02	92.08	2.55	-0.13	3.25	-0.13	2.09	-0.13
30	78306	0.67	0.42	0.06	66.81	8.19	-0.26	8.69	-0.24	16.22	-0.17
31	78306	0.64	0.39	0.05	63.60	11.61	-0.24	13.94	-0.10	10.76	-0.25
32	78306	0.40	0.36	0.10	39.68	17.07	-0.12	29.35	-0.18	13.79	-0.14
33	78306	0.73	0.41	0.07	72.69	4.24	-0.24	5.12	-0.29	17.86	-0.19
34	78306	0.83	0.20	0.04	82.63	9.48	-0.10	3.40	-0.12	4.44	-0.11
35	78306	0.66	0.51	0.05	65.82	11.84	-0.26	7.28	-0.28	15.00	-0.24
36	78306	0.88	0.45	0.07	87.68	4.38	-0.27	4.59	-0.26	3.27	-0.21
37	78306	0.81	0.51	0.06	80.75	7.34	-0.28	6.32	-0.22	5.51	-0.33
38	78306	0.70	0.48	0.10	70.35	6.24	-0.22	11.97	-0.25	11.32	-0.26
39	78306	0.62	0.47	0.08	62.09	21.69	-0.21	11.05	-0.29	5.09	-0.23
40	78306	0.65	0.53	0.09	64.97	14.16	-0.38	12.47	-0.24	8.30	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.3 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	78306	0.78	0.46	0.08	77.69	3.08	-0.21	14.04	-0.28	5.09	-0.25
42	78306	0.60	0.47	0.12	59.94	24.06	-0.22	8.33	-0.25	7.55	-0.24
43	78306	0.72	0.32	0.02	71.58	17.21	-0.25	8.82	-0.09	2.33	-0.16
44	78306	0.50	0.24	0.05	50.44	18.61	-0.27	5.42	-0.18	25.46	0.07
45	78306	0.40	0.41	0.07	39.79	21.02	0.02	15.23	-0.14	23.86	-0.37
46	78306	0.58	0.38	0.04	58.45	6.40	-0.20	25.48	-0.13	9.62	-0.27
47	78306	0.76	0.49	0.05	76.30	10.14	-0.27	7.30	-0.27	6.18	-0.24
48	78306	0.58	0.39	0.08	57.67	14.40	-0.29	15.17	-0.19	12.66	-0.06
49	78306	0.60	0.55	0.07	59.53	6.01	-0.12	13.48	-0.22	20.89	-0.41
50	78306	0.87	0.37	0.02	87.45	4.76	-0.24	3.40	-0.19	4.36	-0.17
51	78306	0.66	0.60	0.04	66.01	2.67	-0.21	16.24	-0.39	15.02	-0.30
52	78306	0.55	0.46	0.14	55.06	15.38	-0.20	19.79	-0.22	9.61	-0.22
53	78306	0.57	0.59	0.05	56.85	10.85	-0.16	26.63	-0.44	5.61	-0.21
54	78306	0.61	0.41	0.07	60.58	26.58	-0.26	5.99	-0.22	6.77	-0.14
55	78306	0.71	0.43	0.03	71.01	9.77	-0.23	14.30	-0.23	4.89	-0.23
56	78306	0.60	0.49	0.05	59.83	23.13	-0.17	8.24	-0.28	8.74	-0.31
57	78306	0.81	0.49	0.05	80.94	7.43	-0.22	8.91	-0.33	2.66	-0.24
58	78306	0.91	0.38	0.05	91.48	3.17	-0.24	3.31	-0.20	1.96	-0.19
59	78306	0.60	0.52	0.07	59.93	8.27	-0.26	13.92	-0.28	17.80	-0.22
60	78306	0.86	0.42	0.04	85.50	3.57	-0.23	4.79	-0.27	6.09	-0.19
61	78306	0.77	0.44	0.08	76.69	4.92	-0.25	13.28	-0.24	5.00	-0.24
62	78306	0.57	0.36	0.06	56.69	17.88	-0.24	14.18	-0.12	11.17	-0.13
63	78306	0.60	0.43	0.10	60.03	18.87	-0.18	12.25	-0.28	8.74	-0.17
64	78306	0.40	0.37	0.11	39.68	11.38	-0.20	31.05	-0.06	17.76	-0.24
65	78306	0.54	0.56	0.10	54.14	25.99	-0.40	11.72	-0.21	8.03	-0.14
66	78306	0.61	0.39	0.14	61.08	20.05	-0.17	11.21	-0.24	7.48	-0.17
67	78306	0.56	0.37	0.09	56.22	6.82	-0.18	15.05	-0.17	21.78	-0.19
68	78306	0.62	0.43	0.21	62.28	11.67	-0.20	10.66	-0.18	15.18	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.4
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78334	0.37	0.37	0.33	36.91	13.62	-0.20	21.19	-0.14	27.90	-0.11
2	78334	0.66	0.35	0.10	65.73	16.81	-0.18	12.40	-0.21	4.90	-0.12
3	78334	0.68	0.30	0.14	68.04	15.45	-0.09	8.26	-0.21	8.06	-0.18
4	78334	0.72	0.33	0.04	71.75	10.36	-0.21	8.00	-0.15	9.81	-0.14
5	78334	0.76	0.36	0.05	75.68	11.61	-0.23	9.35	-0.15	3.30	-0.20
6	78334	0.90	0.34	0.03	90.02	5.19	-0.21	2.71	-0.16	2.04	-0.20
7	78334	0.62	0.51	0.07	62.38	3.85	-0.18	30.89	-0.40	2.80	-0.18
8	78334	0.66	0.49	0.04	65.62	16.24	-0.32	3.70	-0.14	14.40	-0.26
9	78334	0.31	0.34	0.07	31.13	18.15	-0.37	11.78	-0.24	38.86	0.13
10	78334	0.73	0.34	0.06	73.50	8.18	-0.17	9.22	-0.14	9.04	-0.22
11	78334	0.76	0.47	0.07	75.62	8.63	-0.27	7.93	-0.27	7.73	-0.20
12	78334	0.73	0.46	0.08	72.90	6.82	-0.21	11.13	-0.31	9.05	-0.18
13	78334	0.71	0.39	0.09	71.44	6.32	-0.22	7.21	-0.31	14.94	-0.12
14	78334	0.76	0.49	0.06	75.55	6.07	-0.26	7.41	-0.22	10.91	-0.28
15	78334	0.55	0.43	0.10	55.49	17.98	-0.27	16.56	-0.17	9.85	-0.15
16	78334	0.60	0.49	0.07	59.51	6.76	-0.32	23.63	-0.22	10.00	-0.22
17	78334	0.62	0.49	0.11	61.80	16.95	-0.25	12.17	-0.22	8.96	-0.27
18	78334	0.60	0.47	0.15	60.41	14.45	-0.22	18.03	-0.26	6.95	-0.20
19	78334	0.65	0.48	0.08	65.15	27.36	-0.34	4.80	-0.25	2.60	-0.14
20	78334	0.57	0.40	0.14	57.48	15.68	-0.18	12.36	-0.20	14.33	-0.20
21	78334	0.80	0.49	0.04	79.86	6.85	-0.30	8.36	-0.29	4.89	-0.19
22	78334	0.93	0.35	0.01	92.81	1.24	-0.13	1.33	-0.17	4.59	-0.26
23	78334	0.76	0.44	0.04	75.77	15.24	-0.25	5.67	-0.27	3.25	-0.21
24	78334	0.71	0.44	0.07	71.46	3.25	-0.21	5.22	-0.21	20.00	-0.28
25	78334	0.80	0.45	0.03	80.48	1.76	-0.18	5.01	-0.19	12.71	-0.33
26	78334	0.72	0.40	0.06	72.50	9.76	-0.21	11.19	-0.23	6.47	-0.17
27	78334	0.69	0.31	0.02	69.42	1.43	-0.16	25.51	-0.20	3.60	-0.20
28	78334	0.53	0.39	0.10	52.51	22.95	-0.22	11.19	-0.17	13.24	-0.14
29	78334	0.74	0.50	0.07	74.11	11.48	-0.27	7.21	-0.27	7.12	-0.25
30	78334	0.79	0.37	0.03	78.52	6.15	-0.26	11.28	-0.14	4.02	-0.23
31	78334	0.88	0.42	0.04	87.60	5.17	-0.25	4.22	-0.23	2.97	-0.21
32	78334	0.62	0.42	0.07	61.93	11.18	-0.25	14.57	-0.16	12.24	-0.22
33	78334	0.67	0.46	0.14	66.58	8.55	-0.24	16.34	-0.19	8.37	-0.28
34	78334	0.71	0.44	0.05	71.33	9.33	-0.23	5.82	-0.22	13.45	-0.24
35	78334	0.48	0.36	0.08	47.73	21.22	-0.20	20.15	-0.10	10.80	-0.18
36	78334	0.67	0.48	0.06	67.32	14.56	-0.17	9.11	-0.29	8.92	-0.28
37	78334	0.72	0.42	0.08	72.28	13.68	-0.18	9.65	-0.26	4.30	-0.23
38	78334	0.74	0.52	0.06	73.61	8.73	-0.29	10.89	-0.28	6.71	-0.24
39	78334	0.61	0.45	0.05	60.68	9.94	-0.33	23.11	-0.23	6.21	-0.11
40	78334	0.70	0.38	0.07	70.14	16.93	-0.11	5.50	-0.23	7.35	-0.30

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.4 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	78334	0.86	0.24	0.05	85.80	8.55	-0.12	3.20	-0.15	2.40	-0.14
42	78334	0.60	0.51	0.03	60.13	7.46	-0.34	28.39	-0.30	3.98	-0.13
43	78334	0.69	0.54	0.05	69.24	12.42	-0.33	15.72	-0.28	2.57	-0.25
44	78334	0.61	0.36	0.10	60.68	16.77	-0.11	11.20	-0.19	11.24	-0.24
45	78334	0.64	0.40	0.06	64.29	17.93	-0.34	9.26	-0.10	8.45	-0.11
46	78334	0.61	0.43	0.06	60.62	10.59	-0.31	22.87	-0.19	5.85	-0.13
47	78334	0.76	0.53	0.07	76.21	6.81	-0.21	6.62	-0.28	10.28	-0.34
48	78334	0.54	0.41	0.09	53.62	23.37	-0.25	12.11	-0.12	10.79	-0.18
49	78334	0.85	0.44	0.08	85.30	4.96	-0.21	6.55	-0.26	3.10	-0.24
50	78334	0.48	0.30	0.04	47.88	13.23	-0.26	8.65	-0.30	30.18	0.05
51	78334	0.73	0.42	0.08	73.07	13.25	-0.26	5.21	-0.21	8.38	-0.18
52	78334	0.87	0.30	0.03	87.47	9.50	-0.20	1.65	-0.17	1.33	-0.16
53	78334	0.67	0.37	0.05	67.26	9.59	-0.13	20.16	-0.29	2.91	-0.12
54	78334	0.68	0.45	0.04	67.60	26.40	-0.35	3.48	-0.18	2.47	-0.17
55	78334	0.86	0.30	0.06	86.08	8.10	-0.12	3.15	-0.21	2.59	-0.21
56	78334	0.43	0.25	0.06	43.05	31.82	-0.03	12.83	-0.18	12.22	-0.16
57	78334	0.73	0.53	0.06	72.58	9.47	-0.26	9.73	-0.30	8.14	-0.26
58	78334	0.68	0.39	0.08	67.79	6.54	-0.25	19.82	-0.18	5.77	-0.21
59	78334	0.56	0.46	0.04	55.65	10.43	-0.27	13.54	-0.22	20.32	-0.18
60	78334	0.70	0.42	0.06	70.36	16.28	-0.24	6.97	-0.27	6.32	-0.14
61	78334	0.67	0.46	0.09	67.08	18.96	-0.17	7.60	-0.31	6.25	-0.28
62	78334	0.58	0.53	0.09	58.26	15.60	-0.28	5.95	-0.21	20.08	-0.27
63	78334	0.71	0.55	0.09	70.97	10.91	-0.26	9.32	-0.28	8.69	-0.31
64	78334	0.48	0.45	0.07	48.15	30.57	-0.24	14.91	-0.23	6.28	-0.13
65	78334	0.67	0.41	0.08	67.39	14.23	-0.22	7.70	-0.25	10.59	-0.15
66	78334	0.75	0.35	0.06	75.11	4.10	-0.18	6.65	-0.14	14.04	-0.23
67	78334	0.80	0.45	0.07	80.43	4.15	-0.21	5.98	-0.22	9.36	-0.28
68	78334	0.51	0.37	0.12	50.92	13.77	-0.19	17.41	-0.17	17.77	-0.15

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.5
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 7

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	77382	0.88	0.44	0.03	87.94	3.62	-0.18	2.27	-0.20	6.14	-0.33
2	77382	0.54	0.33	0.10	54.35	12.99	-0.21	17.71	-0.22	14.85	-0.02
3	77382	0.70	0.35	0.08	69.86	16.06	-0.06	5.68	-0.23	8.32	-0.31
4	77382	0.79	0.40	0.09	79.03	5.16	-0.21	13.88	-0.26	1.82	-0.18
5	77382	0.76	0.30	0.03	75.51	3.87	-0.21	6.15	-0.22	14.42	-0.09
6	77382	0.71	0.42	0.06	71.12	17.86	-0.25	6.03	-0.25	4.92	-0.16
7	77382	0.86	0.38	0.07	86.28	3.14	-0.19	7.81	-0.27	2.68	-0.15
8	77382	0.70	0.40	0.05	69.53	5.27	-0.16	13.46	-0.20	11.69	-0.25
9	77382	0.61	0.42	0.11	61.33	7.32	-0.17	24.29	-0.30	6.94	-0.12
10	77382	0.76	0.35	0.07	75.51	4.23	-0.14	4.14	-0.19	16.05	-0.23
11	77382	0.85	0.41	0.04	84.51	7.69	-0.22	5.45	-0.25	2.31	-0.20
12	77382	0.56	0.53	0.07	56.06	7.27	-0.21	15.64	-0.29	20.95	-0.26
13	77382	0.68	0.41	0.08	67.89	5.73	-0.24	8.37	-0.23	17.93	-0.18
14	77382	0.47	0.33	0.09	47.12	11.17	-0.20	25.66	-0.08	15.96	-0.17
15	77382	0.83	0.43	0.05	82.54	4.83	-0.26	6.39	-0.18	6.20	-0.25
16	77382	0.54	0.46	0.07	54.10	7.41	-0.36	17.60	-0.32	20.80	-0.02
17	77382	0.40	0.32	0.11	39.96	12.62	-0.19	31.17	-0.03	16.14	-0.21
18	77382	0.53	0.41	0.11	52.65	11.61	-0.08	25.82	-0.19	9.80	-0.31
19	77382	0.85	0.45	0.08	85.11	4.95	-0.31	4.66	-0.24	5.19	-0.19
20	77382	0.68	0.47	0.20	68.19	15.75	-0.37	6.17	-0.21	9.67	-0.11
21	77382	0.60	0.39	0.10	60.23	11.03	-0.22	14.15	-0.27	14.48	-0.08
22	77382	0.74	0.51	0.10	73.82	9.50	-0.25	8.80	-0.29	7.77	-0.26
23	77382	0.78	0.40	0.03	77.56	15.75	-0.17	1.96	-0.23	4.70	-0.34
24	77382	0.63	0.50	0.06	62.61	9.28	-0.17	14.33	-0.23	13.71	-0.33
25	77382	0.50	0.41	0.08	49.58	19.38	-0.21	26.67	-0.19	4.28	-0.19
26	77382	0.86	0.39	0.06	85.54	6.92	-0.19	3.25	-0.25	4.22	-0.22
27	77382	0.83	0.49	0.03	83.39	3.69	-0.17	4.94	-0.29	7.94	-0.32
28	77382	0.79	0.43	0.05	79.12	9.21	-0.17	5.71	-0.26	5.90	-0.26
29	77382	0.75	0.47	0.08	75.00	2.26	-0.20	12.51	-0.19	10.15	-0.37
30	77382	0.59	0.50	0.08	59.07	27.98	-0.35	9.22	-0.20	3.65	-0.15
31	77382	0.77	0.47	0.04	76.97	7.55	-0.28	7.76	-0.27	7.67	-0.20
32	77382	0.63	0.47	0.07	63.02	6.83	-0.24	12.63	-0.32	17.44	-0.16
33	77382	0.75	0.50	0.08	75.44	8.35	-0.24	6.06	-0.29	10.06	-0.27
34	77382	0.67	0.40	0.10	66.97	20.44	-0.16	6.37	-0.26	6.10	-0.26
35	77382	0.80	0.42	0.04	80.03	10.80	-0.24	5.70	-0.20	3.42	-0.26
36	77382	0.70	0.45	0.08	69.88	7.19	-0.14	13.57	-0.25	9.28	-0.29
37	77382	0.70	0.52	0.08	70.20	11.10	-0.24	13.03	-0.31	5.57	-0.25
38	77382	0.82	0.50	0.07	82.38	7.72	-0.29	5.90	-0.26	3.91	-0.25
39	77382	0.70	0.49	0.10	69.51	13.22	-0.29	7.74	-0.28	9.43	-0.17
40	77382	0.40	0.42	0.08	39.63	22.65	-0.21	21.39	-0.21	16.23	-0.09

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.5 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 7

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	77382	0.70	0.56	0.07	70.32	11.45	-0.29	10.39	-0.28	7.75	-0.30
42	77382	0.63	0.40	0.07	63.11	19.25	-0.20	11.35	-0.21	6.19	-0.21
43	77382	0.76	0.46	0.06	75.95	9.85	-0.19	10.55	-0.33	3.57	-0.19
44	77382	0.36	0.30	0.08	36.38	7.36	-0.11	46.62	-0.16	9.54	-0.13
45	77382	0.53	0.32	0.03	53.47	13.65	-0.21	26.98	-0.12	5.87	-0.16
46	77382	0.75	0.48	0.03	75.08	9.04	-0.30	10.42	-0.24	5.42	-0.21
47	77382	0.73	0.38	0.04	72.66	12.42	-0.24	4.63	-0.26	10.22	-0.12
48	77382	0.68	0.42	0.09	67.65	8.37	-0.19	17.71	-0.27	6.16	-0.15
49	77382	0.89	0.41	0.03	89.48	3.11	-0.23	3.47	-0.22	3.90	-0.23
50	77382	0.73	0.51	0.08	73.24	10.99	-0.21	10.22	-0.33	5.46	-0.28
51	77382	0.58	0.55	0.07	57.98	8.45	-0.34	24.17	-0.26	9.33	-0.22
52	77382	0.81	0.35	0.05	80.83	3.99	-0.25	3.76	-0.28	11.36	-0.10
53	77382	0.87	0.34	0.04	86.95	2.82	-0.21	6.13	-0.19	4.05	-0.17
54	77382	0.83	0.53	0.06	83.13	6.18	-0.30	4.26	-0.27	6.35	-0.28
55	77382	0.63	0.49	0.07	63.01	8.98	-0.35	13.98	-0.26	13.95	-0.13
56	77382	0.73	0.49	0.08	73.25	5.27	-0.27	14.14	-0.30	7.25	-0.20
57	77382	0.64	0.53	0.06	64.04	8.71	-0.34	12.87	-0.28	14.31	-0.19
58	77382	0.50	0.31	0.09	50.43	15.85	-0.16	17.85	-0.15	15.76	-0.11
59	77382	0.69	0.52	0.10	68.89	18.72	-0.30	7.52	-0.27	4.76	-0.23
60	77382	0.62	0.33	0.08	62.48	11.03	-0.20	10.48	-0.24	15.93	-0.07
61	77382	0.66	0.22	0.06	66.17	19.85	-0.11	8.55	-0.15	5.36	-0.08
62	77382	0.77	0.46	0.07	76.78	13.25	-0.27	5.94	-0.26	3.95	-0.22
63	77382	0.74	0.35	0.10	73.55	7.38	-0.21	15.76	-0.16	3.20	-0.21
64	77382	0.56	0.49	0.08	56.16	9.89	-0.22	17.86	-0.21	16.01	-0.26
65	77382	0.77	0.48	0.08	76.50	7.67	-0.27	11.55	-0.27	4.18	-0.22
66	77382	0.86	0.38	0.08	86.33	3.42	-0.23	6.15	-0.18	4.01	-0.23
67	77382	0.76	0.52	0.09	75.70	9.17	-0.27	8.94	-0.29	6.08	-0.25
68	77382	0.56	0.36	0.12	55.79	19.34	-0.16	13.62	-0.11	11.12	-0.23

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.6
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	77312	0.53	0.43	0.05	53.49	5.72	-0.23	6.33	-0.15	34.40	-0.26
2	77312	0.63	0.43	0.10	62.57	5.64	-0.17	22.53	-0.20	9.17	-0.28
3	77312	0.88	0.38	0.03	88.13	5.22	-0.20	4.72	-0.25	1.89	-0.17
4	77312	0.69	0.46	0.09	69.02	11.39	-0.36	8.08	-0.22	11.42	-0.11
5	77312	0.54	0.39	0.13	54.08	14.11	-0.16	23.85	-0.24	7.82	-0.12
6	77312	0.83	0.44	0.04	82.64	7.18	-0.27	7.28	-0.23	2.85	-0.23
7	77312	0.81	0.39	0.03	81.12	6.58	-0.22	4.55	-0.20	7.72	-0.21
8	77312	0.64	0.41	0.08	63.66	6.42	-0.19	5.74	-0.24	24.09	-0.22
9	77312	0.85	0.44	0.07	85.22	5.71	-0.26	5.52	-0.23	3.47	-0.23
10	77312	0.73	0.38	0.05	73.34	4.10	-0.20	12.46	-0.17	10.05	-0.23
11	77312	0.50	0.43	0.06	50.27	11.79	-0.14	26.72	-0.20	11.16	-0.26
12	77312	0.65	0.44	0.05	65.09	8.27	-0.24	16.47	-0.19	10.12	-0.24
13	77312	0.81	0.40	0.06	80.56	4.72	-0.12	6.47	-0.28	8.20	-0.23
14	77312	0.82	0.36	0.05	81.97	8.44	-0.21	5.77	-0.23	3.75	-0.15
15	77312	0.58	0.37	0.05	58.19	18.00	-0.29	20.89	-0.08	2.86	-0.21
16	77312	0.81	0.39	0.06	80.62	2.91	-0.20	7.58	-0.21	8.83	-0.22
17	77312	0.78	0.49	0.04	77.63	7.42	-0.30	7.39	-0.27	7.52	-0.21
18	77312	0.56	0.32	0.04	56.07	14.46	-0.14	16.10	-0.17	13.32	-0.13
19	77312	0.58	0.55	0.06	57.93	8.63	-0.23	19.07	-0.36	14.29	-0.18
20	77312	0.64	0.57	0.08	63.53	10.29	-0.25	9.66	-0.28	16.42	-0.31
21	77312	0.72	0.46	0.06	72.13	11.86	-0.30	10.99	-0.26	4.96	-0.14
22	77312	0.74	0.45	0.06	74.10	5.84	-0.24	8.75	-0.26	11.24	-0.21
23	77312	0.82	0.38	0.03	81.93	1.61	-0.15	13.26	-0.27	3.16	-0.20
24	77312	0.79	0.47	0.07	79.12	4.92	-0.23	10.53	-0.31	5.35	-0.20
25	77312	0.63	0.40	0.04	63.43	5.46	-0.22	12.03	-0.17	19.03	-0.23
26	77312	0.69	0.52	0.07	69.33	13.18	-0.28	10.25	-0.28	7.16	-0.24
27	77312	0.68	0.50	0.06	67.97	8.24	-0.25	10.10	-0.24	13.62	-0.27
28	77312	0.86	0.42	0.03	85.78	4.11	-0.28	3.77	-0.24	6.30	-0.19
29	77312	0.40	0.23	0.06	40.10	4.37	-0.25	23.68	-0.03	31.79	-0.09
30	77312	0.37	0.39	0.13	37.22	41.16	-0.06	8.52	-0.26	12.95	-0.25
31	77312	0.59	0.44	0.06	59.18	7.52	-0.22	6.66	-0.22	26.57	-0.23
32	77312	0.79	0.39	0.04	78.66	12.13	-0.20	4.75	-0.21	4.41	-0.23
33	77312	0.48	0.35	0.08	47.63	24.27	-0.11	17.65	-0.21	10.36	-0.15
34	77312	0.76	0.46	0.04	75.86	6.13	-0.24	9.19	-0.27	8.77	-0.21
35	77312	0.35	0.33	0.05	35.03	49.65	-0.05	7.19	-0.28	8.06	-0.21
36	77312	0.34	0.30	0.08	33.95	26.84	-0.26	34.65	-0.02	4.46	-0.08
37	77312	0.76	0.35	0.06	75.79	7.03	-0.21	11.24	-0.10	5.87	-0.26
38	77312	0.58	0.46	0.06	57.60	16.81	-0.23	15.64	-0.18	9.88	-0.24
39	77312	0.73	0.31	0.06	73.43	3.40	-0.16	15.69	-0.14	7.41	-0.21
40	77312	0.45	0.38	0.08	45.47	14.93	-0.16	23.66	-0.14	15.85	-0.20

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.6 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	77312	0.68	0.16	0.25	68.36	7.73	-0.13	18.79	-0.04	4.86	-0.11
42	77312	0.90	0.38	0.00	90.45	1.74	-0.19	1.84	-0.22	5.96	-0.24
43	77312	0.39	0.38	0.23	39.15	9.63	-0.17	26.36	-0.13	24.62	-0.18
44	77312	0.56	0.45	0.07	55.53	4.91	-0.25	34.91	-0.29	4.57	-0.15
45	77312	0.66	0.56	0.04	66.17	10.47	-0.29	13.12	-0.38	10.19	-0.16
46	77312	0.50	0.43	0.10	50.47	19.26	-0.38	14.05	-0.20	16.11	0.02
47	77312	0.71	0.39	0.04	71.09	10.10	-0.23	3.38	-0.21	15.37	-0.20
48	77312	0.70	0.40	0.06	70.22	12.23	-0.20	13.23	-0.23	4.25	-0.21
49	77312	0.60	0.47	0.07	60.41	7.05	-0.22	17.04	-0.32	15.41	-0.14
50	77312	0.64	0.39	0.06	63.84	11.73	-0.17	17.47	-0.23	6.89	-0.18
51	77312	0.84	0.53	0.03	84.29	4.43	-0.25	9.41	-0.39	1.84	-0.20
52	77312	0.64	0.44	0.08	63.88	18.02	-0.18	11.25	-0.27	6.76	-0.21
53	77312	0.35	0.32	0.09	35.39	35.09	-0.25	17.75	-0.11	11.67	0.03
54	77312	0.49	0.34	0.06	49.48	19.18	-0.12	16.26	-0.20	15.00	-0.14
55	77312	0.68	0.40	0.04	67.70	11.67	-0.19	12.86	-0.21	7.72	-0.20
56	77312	0.78	0.51	0.07	77.64	10.59	-0.40	5.67	-0.20	6.02	-0.18
57	77312	0.86	0.35	0.03	85.69	4.06	-0.22	2.77	-0.20	7.44	-0.18
58	77312	0.73	0.40	0.05	72.51	5.48	-0.32	17.57	-0.17	4.38	-0.20
59	77312	0.67	0.45	0.03	67.36	6.74	-0.14	12.73	-0.25	13.13	-0.28
60	77312	0.67	0.42	0.06	67.20	6.70	-0.23	10.43	-0.26	15.62	-0.17
61	77312	0.76	0.27	0.05	75.65	3.27	-0.20	16.84	-0.12	4.17	-0.18
62	77312	0.62	0.36	0.05	61.77	11.96	-0.18	17.27	-0.19	8.94	-0.15
63	77312	0.32	0.26	0.05	32.20	11.34	-0.07	30.57	-0.04	25.84	-0.19
64	77312	0.77	0.48	0.05	77.24	9.72	-0.30	8.78	-0.27	4.19	-0.19
65	77312	0.56	0.50	0.05	56.12	14.63	-0.30	15.57	-0.20	13.63	-0.19
66	77312	0.72	0.47	0.08	72.43	4.27	-0.24	12.13	-0.25	11.08	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.7
2006 Spring AIMS Classical Item Analysis
Mathematics CRT High School

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	69377	0.97	0.17	0.00	97.09	1.55	-0.09	0.57	-0.10	0.79	-0.10
2	69377	0.72	0.45	0.12	72.47	9.12	-0.22	11.88	-0.32	6.41	-0.13
3	69377	0.75	0.46	0.12	75.17	8.69	-0.18	7.27	-0.25	8.75	-0.29
4	69377	0.91	0.27	0.02	90.90	3.83	-0.19	4.50	-0.16	0.75	-0.09
5	69377	0.91	0.34	0.03	91.25	3.08	-0.15	3.69	-0.25	1.95	-0.15
6	69377	0.71	0.52	0.09	71.45	8.45	-0.25	11.20	-0.30	8.80	-0.25
7	69377	0.67	0.48	0.16	67.40	14.87	-0.28	12.90	-0.24	4.67	-0.19
8	69377	0.82	0.29	0.05	81.54	1.29	-0.14	13.95	-0.25	3.17	-0.04
9	69377	0.54	0.46	0.19	53.84	20.36	-0.13	16.19	-0.33	9.41	-0.19
10	69377	0.49	0.41	0.09	48.63	31.78	-0.27	11.36	-0.16	8.14	-0.10
11	69377	0.77	0.46	0.11	77.08	9.94	-0.26	5.89	-0.24	6.97	-0.23
12	69377	0.57	0.35	0.04	56.98	11.00	-0.19	11.69	-0.19	20.28	-0.14
13	69377	0.50	0.49	0.11	50.28	22.89	-0.21	10.30	-0.17	16.41	-0.29
14	69377	0.70	0.36	0.07	69.69	4.02	-0.19	3.88	-0.13	22.33	-0.24
15	69377	0.62	0.45	0.06	61.88	14.94	-0.32	16.69	-0.17	6.42	-0.15
16	69377	0.86	0.46	0.07	86.25	3.25	-0.21	5.02	-0.27	5.41	-0.28
17	69377	0.76	0.35	0.02	75.51	5.20	-0.14	14.63	-0.22	4.63	-0.20
18	69377	0.51	0.37	0.21	50.78	12.33	-0.15	28.02	-0.21	8.65	-0.15
19	69377	0.48	0.40	0.09	48.17	14.29	-0.26	17.87	-0.30	19.58	0.02
20	69377	0.83	0.48	0.03	82.77	2.31	-0.23	10.48	-0.33	4.40	-0.23
21	69377	0.63	0.35	0.08	63.08	13.80	-0.16	14.83	-0.15	8.19	-0.22
22	69377	0.32	0.14	0.09	32.35	10.81	-0.21	13.30	-0.21	43.44	0.14
23	69377	0.57	0.38	0.07	57.23	26.82	-0.12	10.21	-0.32	5.66	-0.16
24	69377	0.69	0.43	0.06	69.17	13.48	-0.15	12.81	-0.30	4.48	-0.22
25	69377	0.48	0.36	0.20	47.54	19.09	-0.19	23.72	-0.18	9.44	-0.10
26	69377	0.91	0.34	0.05	90.88	2.59	-0.17	4.32	-0.20	2.15	-0.20
27	69377	0.85	0.44	0.04	85.00	4.06	-0.21	4.00	-0.26	6.90	-0.25
28	69377	0.58	0.56	0.08	58.13	26.20	-0.43	11.89	-0.21	3.70	-0.11
29	69377	0.81	0.45	0.08	81.43	8.57	-0.23	5.60	-0.27	4.33	-0.25
30	69377	0.72	0.54	0.08	72.22	9.23	-0.29	8.13	-0.29	10.34	-0.25
31	69377	0.66	0.36	0.08	65.98	10.59	-0.18	13.89	-0.22	9.46	-0.14
32	69377	0.74	0.37	0.04	73.54	5.43	-0.14	12.18	-0.25	8.79	-0.18
33	69377	0.59	0.44	0.08	58.55	20.63	-0.19	11.80	-0.28	8.94	-0.17
34	69377	0.91	0.34	0.03	90.86	1.83	-0.20	5.67	-0.23	1.60	-0.14
35	69377	0.60	0.41	0.09	59.60	9.91	-0.13	22.17	-0.27	8.21	-0.18
36	69377	0.46	0.39	0.05	46.46	9.17	-0.12	40.94	-0.30	3.37	-0.06
37	69377	0.59	0.39	0.09	59.40	21.33	-0.14	13.26	-0.22	5.91	-0.24
38	69377	0.74	0.42	0.10	74.35	9.63	-0.13	10.00	-0.31	5.92	-0.22
39	69377	0.57	0.41	0.07	57.40	13.51	-0.29	21.11	-0.15	7.90	-0.16
40	69377	0.80	0.48	0.06	79.50	9.47	-0.29	5.88	-0.27	5.07	-0.20
41	69377	0.59	0.52	0.09	59.01	20.62	-0.20	11.72	-0.29	8.55	-0.29
42	69377	0.73	0.52	0.08	73.17	16.28	-0.32	6.64	-0.32	3.83	-0.17
43	69377	0.72	0.44	0.06	72.33	11.71	-0.27	13.20	-0.28	2.70	-0.09

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.7 (continued)
2006 Spring AIMS Classical Item Analysis
Mathematics CRT High School

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
44	69377	0.50	0.37	0.24	50.38	23.01	-0.20	17.01	-0.19	9.36	-0.10
45	69377	0.88	0.40	0.03	88.12	4.48	-0.23	3.54	-0.21	3.83	-0.22
46	69377	0.56	0.50	0.08	56.28	16.55	-0.15	19.29	-0.31	7.78	-0.25
47	69377	0.70	0.31	0.09	70.21	7.98	-0.09	11.74	-0.22	9.98	-0.16
48	69377	0.53	0.30	0.10	53.43	20.57	-0.19	9.06	-0.24	16.82	0.00
49	69377	0.78	0.53	0.09	78.11	8.09	-0.29	7.76	-0.29	5.93	-0.26
50	69377	0.72	0.38	0.08	72.06	13.16	-0.09	5.18	-0.26	9.52	-0.27
51	69377	0.44	0.54	0.21	43.69	23.34	-0.30	13.28	-0.22	19.47	-0.16
52	69377	0.62	0.47	0.08	62.42	12.94	-0.20	11.03	-0.27	13.53	-0.22
53	69377	0.60	0.28	0.05	60.35	26.64	-0.10	7.79	-0.21	5.15	-0.17
54	69377	0.73	0.41	0.08	73.10	17.60	-0.23	5.91	-0.24	3.28	-0.21
55	69377	0.45	0.58	0.20	45.45	14.00	-0.27	17.53	-0.25	22.81	-0.24
56	69377	0.76	0.32	0.08	76.02	5.51	-0.16	13.68	-0.22	4.66	-0.11
57	69377	0.82	0.40	0.08	82.36	4.55	-0.19	10.69	-0.27	2.31	-0.20
58	69377	0.72	0.55	0.05	72.47	12.64	-0.34	11.77	-0.27	3.05	-0.25
59	69377	0.84	0.48	0.07	83.98	6.94	-0.32	4.29	-0.26	4.71	-0.18
60	69377	0.65	0.56	0.04	65.40	14.59	-0.35	12.85	-0.28	7.11	-0.20
61	69377	0.53	0.52	0.10	52.63	17.08	-0.18	23.10	-0.31	7.07	-0.23
62	69377	0.59	0.49	0.07	58.90	28.37	-0.21	5.40	-0.30	7.23	-0.29
63	69377	0.62	0.51	0.17	62.11	10.27	-0.21	22.31	-0.35	5.14	-0.18
64	69377	0.61	0.42	0.24	60.83	15.14	-0.22	16.21	-0.21	7.58	-0.18
65	69377	0.65	0.42	0.09	64.75	18.80	-0.19	11.95	-0.24	4.39	-0.23
66	69377	0.52	0.18	0.13	52.24	19.95	0.02	12.90	-0.18	14.77	-0.11
67	69377	0.58	0.29	0.08	57.94	18.08	-0.17	19.23	-0.07	4.65	-0.22
68	69377	0.50	0.45	0.14	50.23	14.22	-0.22	13.55	-0.21	21.83	-0.18
69	69377	0.85	0.41	0.07	85.04	4.23	-0.23	4.35	-0.28	6.30	-0.17
70	69377	0.50	0.34	0.13	49.88	10.44	-0.18	22.14	-0.13	17.39	-0.15
71	69377	0.34	0.27	0.11	34.41	26.93	0.04	18.31	-0.23	20.23	-0.14
72	69377	0.78	0.46	0.10	77.62	10.21	-0.23	6.59	-0.29	5.48	-0.20
73	69377	0.55	0.49	0.13	54.75	15.01	-0.23	18.39	-0.33	11.72	-0.11
74	69377	0.68	0.47	0.11	68.26	6.56	-0.24	15.02	-0.31	10.05	-0.17
75	69377	0.66	0.24	0.09	66.36	12.54	-0.14	6.38	-0.23	14.61	-0.03
76	69377	0.75	0.53	0.09	75.24	13.67	-0.32	5.52	-0.29	5.47	-0.23
77	69377	0.63	0.44	0.11	62.75	14.95	-0.17	13.51	-0.24	8.66	-0.24
78	69377	0.59	0.36	0.11	58.95	13.29	-0.23	18.75	-0.11	8.88	-0.19
79	69377	0.66	0.49	0.21	66.05	7.45	-0.26	21.60	-0.29	4.67	-0.19
80	69377	0.68	0.60	0.10	68.33	9.81	-0.30	11.75	-0.34	10.00	-0.27
81	69377	0.57	0.31	0.14	56.55	12.51	-0.13	22.83	-0.17	7.96	-0.13
82	69377	0.58	0.45	0.13	57.74	8.69	-0.24	10.11	-0.21	23.30	-0.21
83	69377	0.40	0.44	0.11	40.41	43.97	-0.22	7.65	-0.20	7.84	-0.19
84	69377	0.72	0.41	0.12	72.29	12.62	-0.18	8.83	-0.22	6.12	-0.25

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.8
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78422	0.93	0.40	0.16	93.00	5.30	-0.31	1.54	-0.25	0.00	0.00
2	78422	0.85	0.37	0.22	84.52	4.86	-0.25	10.39	-0.26	0.00	0.00
3	78422	0.93	0.37	0.30	93.32	2.94	-0.28	3.43	-0.24	0.00	0.00
4	78422	0.80	0.41	0.34	80.22	9.20	-0.29	10.23	-0.26	0.00	0.00
5	78422	0.82	0.48	0.25	81.80	9.12	-0.20	4.75	-0.31	4.07	-0.29
6	78422	0.89	0.40	0.29	89.12	6.41	-0.22	2.00	-0.23	2.18	-0.24
7	78422	0.86	0.52	0.34	86.24	5.15	-0.29	3.22	-0.25	5.05	-0.31
8	78422	0.88	0.53	0.17	88.44	6.34	-0.37	2.48	-0.26	2.57	-0.23
9	78422	0.79	0.45	0.48	78.64	10.31	-0.16	6.24	-0.33	4.33	-0.28
10	78422	0.62	0.37	0.27	62.26	13.39	-0.16	18.20	-0.14	5.87	-0.27
11	78422	0.60	0.45	0.39	59.71	26.51	-0.17	6.64	-0.27	6.74	-0.29
12	78422	0.78	0.53	0.45	78.32	5.14	-0.30	4.69	-0.31	11.39	-0.26
13	78422	0.38	0.33	0.38	38.31	31.85	-0.02	19.49	-0.20	9.97	-0.23
14	78422	0.50	0.37	0.98	50.11	8.50	-0.16	11.17	-0.41	29.23	-0.02
15	78422	0.31	0.31	2.25	31.25	10.79	-0.26	31.98	0.04	23.71	-0.15
16	78422	0.55	0.12	0.22	54.84	5.84	-0.23	27.01	0.12	12.09	-0.17
17	78422	0.74	0.50	0.26	74.18	6.54	-0.28	11.86	-0.24	7.17	-0.28
18	78422	0.54	0.38	0.48	54.25	7.63	-0.22	11.57	-0.21	26.06	-0.14
19	78422	0.80	0.53	0.25	80.07	6.88	-0.38	9.34	-0.22	3.45	-0.26
20	78422	0.59	0.20	0.27	59.28	8.88	-0.29	11.11	-0.13	20.45	0.07
21	78422	0.79	0.47	0.64	78.88	5.14	-0.31	5.48	-0.25	9.86	-0.22
22	78422	0.37	0.17	0.24	37.38	12.27	-0.21	21.05	-0.03	29.05	0.01
23	78422	0.64	0.48	0.32	63.74	20.72	-0.31	6.75	-0.30	8.46	-0.11
24	78422	0.75	0.45	0.63	74.67	5.95	-0.25	7.17	-0.31	11.58	-0.17
25	78422	0.58	0.44	1.00	58.07	11.50	-0.18	10.62	-0.33	18.81	-0.14
26	78422	0.77	0.53	0.39	76.57	9.46	-0.32	5.38	-0.30	8.20	-0.21
27	78422	0.71	0.55	0.47	70.91	5.54	-0.31	7.09	-0.26	15.98	-0.29
28	78422	0.71	0.52	0.36	71.33	9.10	-0.28	10.68	-0.28	8.52	-0.24
29	78422	0.92	0.49	0.08	91.59	2.71	-0.28	3.08	-0.29	2.54	-0.25
30	78422	0.78	0.51	0.15	78.17	7.65	-0.29	10.53	-0.26	3.50	-0.29
31	78422	0.65	0.36	0.32	65.46	14.43	-0.21	7.95	-0.29	11.84	-0.07
32	78422	0.86	0.43	0.24	86.41	3.05	-0.28	7.39	-0.23	2.90	-0.21
33	78422	0.73	0.36	0.32	72.66	6.48	-0.17	5.14	-0.19	15.39	-0.20
34	78422	0.84	0.53	0.48	84.21	5.67	-0.27	5.54	-0.33	4.09	-0.26
35	78422	0.69	0.48	1.26	68.60	10.86	-0.26	11.50	-0.27	7.78	-0.16
36	78422	0.84	0.50	0.22	83.95	6.27	-0.32	5.02	-0.23	4.52	-0.26
37	78422	0.68	0.48	0.54	67.82	6.95	-0.30	13.94	-0.19	10.74	-0.26
38	78422	0.71	0.35	0.82	71.47	6.95	-0.27	7.46	-0.27	13.30	-0.06
39	78422	0.49	0.47	1.25	49.48	6.17	-0.25	29.44	-0.19	13.64	-0.25
40	78422	0.59	0.37	1.67	58.84	19.50	-0.12	13.08	-0.25	6.89	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.8 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
41	78422	0.69	0.53	1.21	69.02	6.73	-0.28	12.21	-0.29	10.82	-0.22
42	78422	0.74	0.35	0.37	74.17	10.13	-0.32	2.27	-0.27	13.03	-0.04
43	78422	0.41	0.27	0.67	40.58	9.42	-0.18	8.18	-0.20	41.15	-0.05
44	78422	0.60	0.35	0.92	59.69	6.32	-0.22	12.83	-0.26	20.22	-0.06
45	78422	0.45	0.46	0.89	44.84	17.01	-0.37	21.67	-0.07	15.60	-0.15
46	78422	0.61	0.49	1.61	60.81	7.75	-0.27	18.28	-0.23	11.54	-0.23
47	78422	0.50	0.36	0.60	49.71	16.91	-0.04	20.16	-0.31	12.60	-0.12
48	78422	0.48	0.28	0.32	48.03	4.70	-0.26	9.07	-0.17	37.87	-0.07
49	78422	0.51	0.42	0.42	51.33	18.55	-0.32	21.89	-0.09	7.79	-0.17
50	78422	0.68	0.56	1.15	68.08	11.24	-0.26	8.29	-0.33	11.23	-0.26
51	78422	0.77	0.56	0.33	76.75	7.25	-0.35	9.57	-0.33	6.10	-0.19
52	78422	0.82	0.53	0.44	82.41	8.48	-0.33	4.85	-0.26	3.80	-0.27
53	78422	0.37	0.31	0.63	37.38	34.55	-0.04	14.81	-0.17	12.62	-0.20
54	78422	0.83	0.54	0.73	82.87	6.43	-0.32	4.99	-0.28	4.98	-0.28

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.9
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78792	0.85	0.45	0.06	85.01	10.22	-0.33	1.77	-0.20	2.91	-0.20
2	78792	0.70	0.29	0.05	70.44	19.93	-0.08	5.63	-0.26	3.95	-0.20
3	78792	0.63	0.48	0.08	63.24	18.79	-0.22	4.10	-0.26	13.78	-0.27
4	78792	0.55	0.28	0.12	54.82	9.32	-0.18	30.25	-0.08	5.47	-0.20
5	78792	0.79	0.51	0.09	78.80	5.77	-0.30	8.77	-0.24	6.56	-0.29
6	78792	0.69	0.33	0.10	69.01	14.04	-0.11	5.25	-0.22	11.61	-0.20
7	78792	0.61	0.44	0.17	61.18	15.54	-0.21	12.99	-0.15	10.10	-0.29
8	78792	0.31	0.18	0.08	30.55	24.23	-0.08	30.79	-0.06	14.34	-0.05
9	78792	0.67	0.31	0.08	66.69	4.10	-0.26	4.71	-0.27	24.40	-0.09
10	78792	0.42	0.04	0.09	42.06	4.32	-0.25	45.22	0.23	8.30	-0.30
11	78792	0.74	0.52	0.11	74.14	5.93	-0.26	11.13	-0.27	8.67	-0.27
12	78792	0.76	0.38	0.13	75.78	5.16	-0.28	3.96	-0.30	14.96	-0.12
13	78792	0.68	0.44	0.14	67.62	12.33	-0.26	4.36	-0.28	15.54	-0.17
14	78792	0.62	0.36	0.11	62.22	18.64	-0.14	5.13	-0.32	13.89	-0.14
15	78792	0.85	0.52	0.15	85.34	4.41	-0.31	5.29	-0.29	4.80	-0.26
16	78792	0.77	0.49	0.14	77.26	11.28	-0.26	4.37	-0.26	6.92	-0.27
17	78792	0.76	0.43	0.16	75.63	14.12	-0.18	5.44	-0.28	4.63	-0.25
18	78792	0.89	0.49	0.18	88.91	2.77	-0.27	4.22	-0.24	3.90	-0.31
19	78792	0.53	0.39	0.38	52.82	10.47	-0.20	17.50	-0.24	18.80	-0.10
20	78792	0.75	0.47	0.02	75.07	7.83	-0.24	12.87	-0.27	4.20	-0.23
21	78792	0.86	0.44	0.04	85.65	3.48	-0.22	4.53	-0.26	6.28	-0.25
22	78792	0.79	0.46	0.05	78.56	5.71	-0.22	10.89	-0.25	4.75	-0.28
23	78792	0.57	0.39	0.11	56.98	22.08	-0.18	8.86	-0.25	11.95	-0.14
24	78792	0.64	0.44	0.08	64.08	12.52	-0.16	7.22	-0.17	16.08	-0.31
25	78792	0.77	0.36	0.04	77.07	6.29	-0.28	13.36	-0.12	3.23	-0.23
26	78792	0.73	0.58	0.09	72.98	10.16	-0.25	9.41	-0.33	7.35	-0.33
27	78792	0.79	0.40	0.12	78.70	10.31	-0.22	7.32	-0.21	3.54	-0.23
28	78792	0.74	0.56	0.13	73.80	9.71	-0.26	5.94	-0.32	10.41	-0.31
29	78792	0.63	0.56	0.10	63.27	7.34	-0.38	19.54	-0.28	9.74	-0.20
30	78792	0.81	0.45	0.04	81.19	8.12	-0.27	6.78	-0.27	3.85	-0.17
31	78792	0.70	0.53	0.04	69.84	10.68	-0.25	7.70	-0.24	11.71	-0.31
32	78792	0.75	0.54	0.07	74.71	10.12	-0.28	7.64	-0.28	7.41	-0.29
33	78792	0.75	0.50	0.11	75.44	8.84	-0.25	5.77	-0.23	9.79	-0.30
34	78792	0.65	0.50	0.08	64.82	12.08	-0.25	12.59	-0.22	10.40	-0.27
35	78792	0.64	0.48	0.04	63.56	10.29	-0.26	9.79	-0.22	16.32	-0.23
36	78792	0.75	0.51	0.05	74.88	7.58	-0.23	6.65	-0.30	10.83	-0.27
37	78792	0.77	0.55	0.06	77.37	4.71	-0.33	10.87	-0.32	6.97	-0.23
38	78792	0.63	0.42	0.09	63.28	11.96	-0.18	7.57	-0.28	17.07	-0.19
39	78792	0.73	0.53	0.10	73.30	6.70	-0.29	7.78	-0.27	12.06	-0.28
40	78792	0.58	0.52	0.08	58.46	8.88	-0.27	10.25	-0.29	22.30	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.9 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	78792	0.67	0.52	0.09	67.45	13.22	-0.27	8.02	-0.24	11.21	-0.27
42	78792	0.67	0.44	0.11	66.84	10.77	-0.28	7.31	-0.31	14.92	-0.10
43	78792	0.78	0.54	0.09	78.32	7.46	-0.27	9.07	-0.32	5.03	-0.27
44	78792	0.72	0.56	0.10	72.24	12.15	-0.30	7.42	-0.30	8.07	-0.27
45	78792	0.82	0.53	0.13	82.47	5.98	-0.29	6.31	-0.28	5.10	-0.29
46	78792	0.72	0.51	0.07	71.97	5.86	-0.30	17.75	-0.28	4.34	-0.25
47	78792	0.55	0.50	0.10	54.85	12.68	-0.27	11.76	-0.27	20.59	-0.18
48	78792	0.37	0.17	0.18	36.70	18.78	-0.11	18.91	-0.06	25.40	-0.03
49	78792	0.70	0.44	0.12	70.47	11.30	-0.23	10.75	-0.23	7.32	-0.21
50	78792	0.86	0.49	0.14	85.95	5.15	-0.27	4.41	-0.27	4.34	-0.26
51	78792	0.81	0.42	0.22	81.43	5.55	-0.30	8.38	-0.12	4.41	-0.28
52	78792	0.86	0.56	0.16	85.75	4.86	-0.30	6.02	-0.34	3.20	-0.27
53	78792	0.84	0.58	0.19	83.86	5.56	-0.33	5.82	-0.31	4.54	-0.30
54	78792	0.75	0.52	0.30	74.82	7.45	-0.33	13.07	-0.23	4.35	-0.27

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.10
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78000	0.78	0.43	0.02	77.63	6.22	-0.29	12.34	-0.20	3.79	-0.21
2	78000	0.92	0.33	0.02	92.11	3.12	-0.16	1.74	-0.16	3.01	-0.22
3	78000	0.80	0.44	0.07	80.34	3.48	-0.22	9.34	-0.26	6.76	-0.24
4	78000	0.57	0.19	0.05	56.63	13.83	-0.22	9.64	-0.18	19.83	0.09
5	78000	0.86	0.32	0.02	86.10	5.77	-0.15	4.57	-0.14	3.53	-0.24
6	78000	0.74	0.41	0.06	73.54	16.00	-0.25	3.68	-0.21	6.71	-0.18
7	78000	0.60	0.37	0.06	60.40	14.00	-0.24	4.29	-0.26	21.23	-0.11
8	78000	0.68	0.43	0.07	68.20	7.15	-0.25	7.95	-0.23	16.63	-0.19
9	78000	0.84	0.47	0.07	83.73	4.86	-0.27	5.68	-0.24	5.65	-0.26
10	78000	0.73	0.50	0.13	73.44	9.78	-0.28	9.73	-0.28	6.91	-0.21
11	78000	0.87	0.46	0.08	87.21	5.50	-0.26	4.03	-0.26	3.17	-0.23
12	78000	0.72	0.52	0.09	71.77	13.62	-0.23	5.28	-0.26	9.22	-0.34
13	78000	0.76	0.47	0.07	75.53	11.49	-0.25	7.56	-0.22	5.34	-0.29
14	78000	0.59	0.41	0.13	59.37	18.69	-0.28	16.07	-0.11	5.71	-0.23
15	78000	0.58	0.48	0.13	58.21	12.93	-0.23	12.82	-0.22	15.88	-0.23
16	78000	0.59	0.32	0.15	59.38	15.86	-0.12	11.25	-0.23	13.34	-0.12
17	78000	0.51	0.41	0.16	51.19	25.14	-0.10	11.07	-0.28	12.43	-0.22
18	78000	0.58	0.27	0.21	58.16	5.65	-0.29	18.38	-0.10	17.59	-0.07
19	78000	0.62	0.45	0.39	61.85	11.33	-0.27	15.83	-0.18	10.59	-0.21
20	78000	0.72	0.41	0.01	72.42	17.48	-0.27	3.15	-0.19	6.93	-0.19
21	78000	0.67	0.44	0.04	67.32	1.89	-0.21	24.49	-0.28	6.24	-0.24
22	78000	0.83	0.47	0.03	83.32	9.21	-0.39	3.79	-0.14	3.65	-0.19
23	78000	0.51	0.22	0.06	51.16	7.65	-0.15	9.83	-0.17	31.29	-0.04
24	78000	0.57	0.31	0.08	56.61	15.68	-0.14	7.79	-0.22	19.83	-0.11
25	78000	0.86	0.38	0.07	86.24	8.09	-0.20	2.98	-0.24	2.61	-0.21
26	78000	0.65	0.37	0.09	65.14	7.35	-0.17	17.81	-0.20	9.58	-0.18
27	78000	0.66	0.46	0.09	65.97	6.11	-0.25	5.46	-0.25	22.34	-0.25
28	78000	0.64	0.39	0.08	64.18	5.05	-0.26	24.21	-0.14	6.46	-0.28
29	78000	0.67	0.41	0.10	66.77	12.59	-0.27	14.01	-0.15	6.51	-0.22
30	78000	0.70	0.57	0.06	70.44	5.74	-0.27	18.65	-0.35	5.11	-0.27
31	78000	0.61	0.24	0.10	61.43	9.90	-0.10	22.07	-0.05	6.49	-0.26
32	78000	0.57	0.45	0.13	57.00	19.56	-0.14	7.91	-0.29	15.38	-0.25
33	78000	0.39	0.29	0.10	39.50	15.76	-0.16	19.66	-0.14	24.94	-0.06
34	78000	0.72	0.48	0.02	71.59	4.55	-0.15	11.96	-0.37	11.87	-0.21
35	78000	0.60	0.29	0.02	59.70	16.95	-0.25	13.60	-0.03	9.69	-0.13
36	78000	0.62	0.25	0.13	61.67	8.45	-0.13	10.46	-0.10	19.27	-0.14
37	78000	0.59	0.32	0.04	58.79	11.88	-0.13	8.56	-0.25	20.72	-0.11
38	78000	0.86	0.42	0.03	85.95	6.84	-0.23	3.60	-0.24	3.56	-0.22
39	78000	0.51	0.33	0.05	51.16	13.78	-0.19	10.85	-0.23	24.14	-0.06
40	78000	0.80	0.48	0.05	80.05	10.05	-0.25	3.91	-0.28	5.93	-0.27

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.10 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
41	78000	0.66	0.44	0.22	65.97	25.17	-0.21	4.82	-0.31	3.81	-0.24
42	78000	0.81	0.51	0.03	80.65	8.62	-0.28	5.65	-0.29	5.04	-0.25
43	78000	0.79	0.41	0.05	78.68	10.88	-0.15	5.90	-0.27	4.48	-0.27
44	78000	0.71	0.40	0.06	70.83	16.46	-0.11	5.37	-0.30	7.24	-0.27
45	78000	0.51	0.45	0.07	50.51	7.87	-0.30	15.28	-0.27	26.26	-0.10
46	78000	0.56	0.51	0.06	56.01	22.52	-0.21	9.62	-0.26	11.79	-0.27
47	78000	0.74	0.52	0.04	74.26	12.69	-0.27	8.05	-0.27	4.93	-0.28
48	78000	0.73	0.51	0.08	73.49	15.48	-0.29	6.28	-0.30	4.66	-0.22
49	78000	0.63	0.50	0.06	62.57	21.28	-0.28	8.32	-0.26	7.74	-0.21
50	78000	0.70	0.54	0.12	69.81	9.69	-0.32	7.45	-0.28	12.91	-0.23
51	78000	0.61	0.46	0.15	61.26	11.67	-0.29	12.71	-0.22	14.20	-0.15
52	78000	0.69	0.49	0.08	68.72	12.02	-0.26	12.73	-0.25	6.44	-0.23
53	78000	0.68	0.50	0.09	68.00	8.21	-0.25	8.09	-0.30	15.60	-0.22
54	78000	0.60	0.36	0.09	60.44	12.92	-0.23	9.16	-0.16	17.36	-0.13

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.11
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78508	0.69	0.41	0.02	69.04	7.68	-0.21	7.12	-0.27	16.14	-0.17
2	78508	0.91	0.44	0.02	91.43	2.72	-0.24	3.36	-0.27	2.48	-0.23
3	78508	0.79	0.50	0.04	79.04	6.86	-0.23	9.40	-0.35	4.65	-0.21
4	78508	0.84	0.53	0.04	83.54	4.03	-0.28	5.19	-0.27	7.19	-0.31
5	78508	0.67	0.37	0.07	67.15	6.42	-0.21	23.05	-0.18	3.32	-0.24
6	78508	0.88	0.38	0.05	87.72	3.75	-0.22	3.41	-0.23	5.05	-0.18
7	78508	0.71	0.45	0.11	70.81	6.68	-0.24	17.76	-0.23	4.62	-0.26
8	78508	0.81	0.43	0.03	81.17	9.22	-0.34	8.01	-0.19	1.57	-0.15
9	78508	0.87	0.35	0.04	86.84	3.36	-0.20	6.40	-0.17	3.35	-0.21
10	78508	0.79	0.33	0.05	78.82	2.66	-0.25	3.39	-0.17	15.07	-0.18
11	78508	0.92	0.37	0.09	91.62	3.27	-0.20	2.83	-0.22	2.18	-0.21
12	78508	0.85	0.48	0.06	85.48	4.25	-0.25	4.72	-0.25	5.49	-0.28
13	78508	0.69	0.48	0.10	69.33	10.70	-0.23	14.70	-0.28	5.16	-0.23
14	78508	0.73	0.56	0.08	73.25	9.08	-0.31	9.06	-0.27	8.51	-0.29
15	78508	0.57	0.39	0.10	56.77	8.35	-0.25	22.20	-0.09	12.55	-0.25
16	78508	0.69	0.49	0.09	69.32	14.01	-0.25	7.16	-0.29	9.42	-0.21
17	78508	0.63	0.46	0.08	62.88	19.78	-0.24	11.72	-0.22	5.53	-0.25
18	78508	0.61	0.46	0.10	61.42	8.11	-0.21	20.85	-0.22	9.51	-0.26
19	78508	0.73	0.34	0.11	72.90	15.42	-0.16	5.78	-0.26	5.79	-0.14
20	78508	0.75	0.51	0.10	74.59	12.76	-0.29	6.81	-0.27	5.72	-0.23
21	78508	0.42	0.35	0.12	42.28	40.47	-0.03	6.10	-0.30	11.01	-0.28
22	78508	0.58	0.37	0.15	57.95	6.48	-0.29	9.35	-0.25	26.06	-0.08
23	78508	0.67	0.30	0.03	66.56	19.41	-0.02	5.34	-0.23	8.64	-0.28
24	78508	0.79	0.38	0.08	78.66	6.22	-0.20	9.29	-0.21	5.73	-0.21
25	78508	0.88	0.44	0.13	87.53	2.86	-0.24	7.01	-0.26	2.47	-0.23
26	78508	0.81	0.42	0.02	80.65	8.98	-0.20	7.79	-0.28	2.55	-0.21
27	78508	0.68	0.49	0.04	67.63	13.55	-0.28	13.37	-0.26	5.40	-0.19
28	78508	0.62	0.31	0.06	61.74	10.18	-0.18	11.21	-0.19	16.81	-0.09
29	78508	0.63	0.50	0.06	63.33	12.75	-0.35	15.55	-0.18	8.30	-0.20
30	78508	0.52	0.35	0.08	52.00	29.42	-0.07	12.59	-0.24	5.89	-0.28
31	78508	0.64	0.50	0.08	64.35	7.46	-0.27	15.79	-0.25	12.30	-0.24
32	78508	0.71	0.41	0.07	70.58	11.06	-0.22	10.04	-0.21	8.25	-0.21
33	78508	0.68	0.44	0.03	68.47	6.61	-0.21	15.43	-0.19	9.45	-0.29
34	78508	0.68	0.24	0.05	68.01	5.56	-0.14	8.42	-0.28	17.93	0.00
35	78508	0.57	0.28	0.13	57.02	9.04	-0.25	19.03	-0.11	14.76	-0.07
36	78508	0.88	0.41	0.15	88.35	2.43	-0.24	5.66	-0.26	3.41	-0.18
37	78508	0.36	0.23	0.06	35.98	36.12	-0.11	11.96	-0.13	15.88	-0.04
38	78508	0.73	0.46	0.05	73.23	9.77	-0.20	9.68	-0.21	7.27	-0.31
39	78508	0.51	0.41	0.05	50.57	9.15	-0.25	20.68	-0.17	19.52	-0.16
40	78508	0.78	0.44	0.05	78.02	7.04	-0.24	9.35	-0.24	5.53	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.11 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
41	78508	0.65	0.46	0.10	64.52	21.10	-0.21	6.26	-0.26	8.00	-0.26
42	78508	0.64	0.40	0.05	64.36	12.80	-0.20	11.44	-0.22	11.35	-0.16
43	78508	0.55	0.44	0.07	54.70	18.10	-0.13	8.00	-0.30	19.10	-0.22
44	78508	0.45	0.29	0.07	44.78	8.50	-0.29	19.04	-0.16	27.58	0.01
45	78508	0.44	0.30	0.09	44.46	16.68	-0.13	15.78	-0.19	22.97	-0.07
46	78508	0.46	0.30	0.29	45.80	15.07	-0.17	9.57	-0.17	29.27	-0.08
47	78508	0.73	0.45	0.05	72.73	10.19	-0.24	9.41	-0.25	7.61	-0.21
48	78508	0.75	0.50	0.08	74.68	5.08	-0.27	11.50	-0.30	8.65	-0.22
49	78508	0.67	0.36	0.10	66.57	5.14	-0.25	23.19	-0.13	4.98	-0.27
50	78508	0.67	0.54	0.11	66.54	12.46	-0.29	10.78	-0.30	10.10	-0.22
51	78508	0.42	0.27	0.17	41.88	15.75	-0.15	21.39	-0.15	20.80	-0.04
52	78508	0.62	0.39	0.10	62.05	16.71	-0.17	9.61	-0.29	11.53	-0.12
53	78508	0.71	0.60	0.10	70.60	9.12	-0.28	9.19	-0.28	10.98	-0.36
54	78508	0.45	0.23	0.14	45.14	30.59	-0.07	18.58	-0.06	5.53	-0.27

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.12
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 7

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	77881	0.91	0.34	0.02	90.56	2.96	-0.14	2.36	-0.16	4.10	-0.25
2	77881	0.60	0.30	0.03	59.75	32.59	-0.13	5.17	-0.26	2.46	-0.19
3	77881	0.82	0.46	0.02	82.33	13.27	-0.34	1.79	-0.20	2.58	-0.22
4	77881	0.70	0.48	0.03	70.00	6.49	-0.28	8.10	-0.28	15.38	-0.20
5	77881	0.74	0.42	0.03	74.34	4.95	-0.24	15.59	-0.27	5.08	-0.16
6	77881	0.84	0.29	0.03	84.00	9.75	-0.15	1.71	-0.21	4.51	-0.16
7	77881	0.66	0.46	0.04	66.21	7.15	-0.24	6.48	-0.19	20.11	-0.27
8	77881	0.85	0.45	0.03	84.87	3.87	-0.27	4.00	-0.23	7.23	-0.24
9	77881	0.61	0.39	0.05	61.21	22.53	-0.16	9.02	-0.29	7.19	-0.16
10	77881	0.87	0.44	0.15	86.52	4.35	-0.27	3.29	-0.23	5.69	-0.22
11	77881	0.65	0.31	0.05	64.59	20.39	-0.17	9.46	-0.16	5.51	-0.13
12	77881	0.62	0.44	0.06	62.49	23.57	-0.13	7.33	-0.31	6.54	-0.30
13	77881	0.41	0.27	0.08	41.34	34.86	-0.10	7.93	-0.12	15.79	-0.14
14	77881	0.64	0.52	0.04	64.36	14.20	-0.22	12.99	-0.37	8.41	-0.18
15	77881	0.77	0.56	0.07	76.57	4.97	-0.28	5.78	-0.32	12.60	-0.31
16	77881	0.62	0.37	0.11	62.13	9.46	-0.18	22.82	-0.14	5.47	-0.28
17	77881	0.70	0.51	0.07	69.77	12.37	-0.29	14.00	-0.26	3.79	-0.26
18	77881	0.76	0.58	0.06	76.47	5.45	-0.27	6.48	-0.29	11.52	-0.35
19	77881	0.79	0.55	0.09	79.37	7.71	-0.33	5.04	-0.27	7.78	-0.28
20	77881	0.76	0.45	0.10	76.32	10.20	-0.26	4.95	-0.29	8.42	-0.17
21	77881	0.66	0.40	0.10	65.81	7.19	-0.21	16.66	-0.16	10.23	-0.24
22	77881	0.87	0.33	0.09	87.15	4.64	-0.17	3.40	-0.20	4.72	-0.18
23	77881	0.67	0.37	0.07	66.55	11.00	-0.22	5.57	-0.25	16.81	-0.12
24	77881	0.61	0.45	0.09	61.06	18.86	-0.22	12.19	-0.23	7.79	-0.20
25	77881	0.52	0.37	0.12	51.71	18.50	-0.14	13.42	-0.19	16.23	-0.17
26	77881	0.67	0.51	0.14	67.34	6.88	-0.26	16.29	-0.26	9.34	-0.26
27	77881	0.68	0.46	0.09	68.02	17.92	-0.16	8.00	-0.30	5.95	-0.30
28	77881	0.56	0.28	0.15	56.29	6.88	-0.23	25.87	-0.09	10.80	-0.13
29	77881	0.53	0.37	0.05	53.24	28.18	-0.15	6.39	-0.27	12.14	-0.16
30	77881	0.69	0.50	0.07	68.77	17.01	-0.21	8.49	-0.31	5.65	-0.28
31	77881	0.63	0.51	0.12	63.38	9.09	-0.26	6.83	-0.28	20.56	-0.25
32	77881	0.57	0.39	0.07	57.12	7.59	-0.31	10.00	-0.31	25.22	-0.03
33	77881	0.76	0.47	0.08	76.11	5.91	-0.27	12.12	-0.25	5.78	-0.24
34	77881	0.56	0.36	0.08	55.70	22.26	-0.09	11.36	-0.21	10.59	-0.24
35	77881	0.66	0.51	0.10	65.66	8.87	-0.31	18.28	-0.21	7.07	-0.28
36	77881	0.33	0.26	0.09	33.46	15.65	-0.23	17.89	-0.15	32.90	0.04
37	77881	0.49	0.20	0.06	48.85	17.07	0.02	13.13	-0.27	20.87	-0.04
38	77881	0.73	0.42	0.05	73.15	8.56	-0.20	8.80	-0.25	9.40	-0.21
39	77881	0.54	0.35	0.06	54.13	15.29	-0.15	8.84	-0.22	21.64	-0.14
40	77881	0.74	0.46	0.07	74.32	12.31	-0.28	8.86	-0.21	4.43	-0.23

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.12 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 7

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
41	77881	0.68	0.35	0.17	67.78	4.62	-0.24	20.30	-0.15	7.12	-0.18
42	77881	0.44	0.20	0.10	43.91	18.77	-0.10	20.47	-0.14	16.74	-0.01
43	77881	0.67	0.37	0.07	67.32	12.40	-0.16	12.07	-0.22	8.14	-0.18
44	77881	0.62	0.45	0.07	61.87	10.14	-0.21	5.86	-0.28	22.04	-0.21
45	77881	0.54	0.32	0.13	54.43	21.12	-0.11	19.67	-0.16	4.64	-0.23
46	77881	0.56	0.45	0.06	55.93	13.22	-0.21	13.30	-0.20	17.48	-0.22
47	77881	0.46	0.41	0.05	45.62	8.52	-0.31	15.77	-0.20	30.03	-0.09
48	77881	0.77	0.54	0.07	77.14	9.92	-0.29	7.91	-0.30	4.94	-0.26
49	77881	0.49	0.40	0.10	48.93	18.49	-0.23	19.73	-0.14	12.73	-0.15
50	77881	0.66	0.46	0.11	65.67	11.15	-0.24	15.78	-0.18	7.26	-0.29
51	77881	0.69	0.49	0.10	69.01	6.04	-0.29	11.58	-0.26	13.26	-0.21
52	77881	0.72	0.50	0.10	72.19	12.52	-0.30	8.84	-0.30	6.34	-0.16
53	77881	0.72	0.44	0.09	72.16	5.33	-0.28	11.11	-0.24	11.29	-0.19
54	77881	0.53	0.39	0.11	53.06	11.45	-0.26	13.13	-0.13	22.24	-0.15

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.13
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78065	0.88	0.31	0.02	87.63	1.11	-0.14	4.70	-0.12	6.54	-0.25
2	78065	0.63	0.28	0.02	62.66	5.03	-0.27	28.09	-0.09	4.20	-0.16
3	78065	0.67	0.43	0.05	66.82	13.88	-0.29	16.56	-0.22	2.69	-0.13
4	78065	0.74	0.39	0.06	74.39	9.74	-0.25	8.63	-0.09	7.17	-0.27
5	78065	0.81	0.42	0.05	80.71	4.44	-0.16	4.77	-0.25	10.03	-0.26
6	78065	0.73	0.38	0.04	72.52	4.33	-0.22	15.16	-0.20	7.95	-0.19
7	78065	0.81	0.32	0.04	80.82	10.51	-0.16	6.99	-0.22	1.64	-0.14
8	78065	0.56	0.22	0.11	56.14	15.52	-0.05	9.02	-0.24	19.21	-0.05
9	78065	0.68	0.34	0.06	67.54	20.71	-0.11	6.85	-0.23	4.83	-0.25
10	78065	0.72	0.46	0.05	72.12	9.01	-0.25	8.65	-0.25	10.16	-0.20
11	78065	0.63	0.43	0.08	62.72	14.83	-0.12	9.33	-0.29	13.03	-0.23
12	78065	0.59	0.42	0.08	59.05	33.05	-0.26	3.74	-0.26	4.08	-0.19
13	78065	0.55	0.38	0.06	54.86	18.75	-0.16	15.90	-0.17	10.42	-0.21
14	78065	0.80	0.46	0.05	79.85	5.67	-0.28	10.46	-0.25	3.96	-0.22
15	78065	0.63	0.37	0.12	62.92	18.85	-0.13	10.58	-0.23	7.53	-0.21
16	78065	0.70	0.38	0.17	70.43	5.09	-0.28	17.26	-0.14	7.04	-0.21
17	78065	0.65	0.52	0.09	65.24	13.39	-0.24	8.13	-0.30	13.16	-0.25
18	78065	0.81	0.36	0.09	81.01	9.45	-0.08	4.33	-0.26	5.11	-0.29
19	78065	0.55	0.44	0.12	54.98	29.14	-0.18	11.45	-0.26	4.30	-0.26
20	78065	0.54	0.35	0.11	54.39	12.72	-0.17	14.81	-0.20	17.95	-0.11
21	78065	0.55	0.25	0.12	54.50	12.98	-0.32	20.39	0.06	12.01	-0.11
22	78065	0.68	0.40	0.02	68.46	24.76	-0.23	4.09	-0.27	2.66	-0.22
23	78065	0.90	0.40	0.01	90.23	2.11	-0.21	5.06	-0.23	2.58	-0.24
24	78065	0.33	0.18	0.06	33.44	13.79	-0.07	7.70	-0.24	45.00	0.00
25	78065	0.39	0.25	0.08	39.16	28.76	-0.02	16.04	-0.17	15.95	-0.15
26	78065	0.85	0.38	0.12	85.03	6.00	-0.22	4.67	-0.22	4.17	-0.17
27	78065	0.53	0.32	0.04	53.15	9.24	-0.20	6.12	-0.23	31.45	-0.10
28	78065	0.72	0.32	0.11	71.81	8.89	-0.17	15.69	-0.18	3.48	-0.16
29	78065	0.76	0.39	0.03	76.20	4.61	-0.18	9.96	-0.21	9.19	-0.22
30	78065	0.73	0.54	0.06	72.72	8.70	-0.24	11.33	-0.32	7.17	-0.27
31	78065	0.71	0.41	0.06	71.10	10.55	-0.19	5.41	-0.22	12.89	-0.23
32	78065	0.67	0.28	0.11	67.24	18.52	-0.07	7.04	-0.25	7.08	-0.15
33	78065	0.65	0.45	0.06	64.78	20.38	-0.17	6.69	-0.27	8.08	-0.28
34	78065	0.54	0.24	0.07	54.46	20.29	0.00	12.87	-0.18	12.30	-0.17
35	78065	0.48	0.32	0.10	47.53	26.19	-0.09	16.85	-0.17	9.32	-0.19
36	78065	0.70	0.48	0.03	70.06	6.82	-0.23	14.46	-0.27	8.62	-0.24
37	78065	0.75	0.40	0.04	74.97	5.67	-0.29	10.79	-0.14	8.52	-0.22
38	78065	0.50	0.25	0.04	49.63	28.52	0.03	4.56	-0.18	17.23	-0.26
39	78065	0.41	0.26	0.03	40.64	7.68	-0.22	35.08	0.02	16.55	-0.20
40	78065	0.83	0.46	0.03	82.76	9.24	-0.27	3.42	-0.24	4.55	-0.26

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.13 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	
41	78065	0.55	0.41	0.09	55.25	9.13	-0.21	27.21	-0.14	8.30	-0.29
42	78065	0.83	0.41	0.06	83.39	4.84	-0.21	6.36	-0.22	5.33	-0.25
43	78065	0.42	0.30	0.05	42.21	13.47	-0.10	28.16	-0.14	16.10	-0.14
44	78065	0.58	0.37	0.25	57.95	12.14	-0.18	14.92	-0.26	14.73	-0.07
45	78065	0.55	0.24	0.05	54.64	4.82	-0.26	7.18	-0.20	33.30	-0.02
46	78065	0.69	0.43	0.06	68.72	10.24	-0.21	9.15	-0.30	11.81	-0.15
47	78065	0.68	0.50	0.07	67.72	10.00	-0.26	12.30	-0.25	9.90	-0.24
48	78065	0.53	0.42	0.11	52.92	9.81	-0.24	11.83	-0.26	25.32	-0.12
49	78065	0.74	0.48	0.09	74.33	6.84	-0.23	9.49	-0.24	9.22	-0.27
50	78065	0.62	0.46	0.05	62.25	16.34	-0.23	13.67	-0.24	7.68	-0.20
51	78065	0.68	0.50	0.07	67.64	7.69	-0.28	11.27	-0.26	13.32	-0.23
52	78065	0.67	0.46	0.07	66.96	6.96	-0.24	17.98	-0.23	8.01	-0.24
53	78065	0.63	0.48	0.08	62.76	11.77	-0.23	10.19	-0.29	15.19	-0.20
54	78065	0.68	0.42	0.09	68.14	10.53	-0.21	8.08	-0.25	13.15	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.14
2006 Spring AIMS Classical Item Analysis
Reading CRT High School

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	71923	0.70	0.44	0.09	70.07	11.23	-0.21	8.78	-0.24	9.83	-0.22
2	71923	0.67	0.35	0.05	67.07	14.37	-0.28	13.51	-0.06	5.00	-0.20
3	71923	0.83	0.33	0.03	82.54	9.19	-0.25	1.60	-0.16	6.64	-0.13
4	71923	0.73	0.39	0.03	72.66	4.87	-0.32	3.55	-0.17	18.88	-0.18
5	71923	0.65	0.31	0.07	65.13	16.70	-0.13	10.49	-0.18	7.60	-0.16
6	71923	0.87	0.36	0.05	87.18	6.56	-0.24	1.33	-0.17	4.87	-0.19
7	71923	0.78	0.35	0.05	77.91	13.88	-0.24	3.05	-0.24	5.10	-0.08
8	71923	0.43	0.37	0.07	42.96	6.09	-0.14	5.31	-0.20	45.58	-0.21
9	71923	0.77	0.42	0.07	76.99	11.84	-0.26	6.10	-0.22	4.99	-0.16
10	71923	0.63	0.32	0.04	62.57	24.85	-0.16	4.11	-0.18	8.42	-0.18
11	71923	0.57	0.29	0.04	56.78	30.47	-0.15	1.87	-0.12	10.84	-0.19
12	71923	0.81	0.42	0.07	80.64	11.21	-0.25	4.03	-0.25	4.05	-0.18
13	71923	0.69	0.33	0.08	68.71	8.12	-0.16	11.41	-0.27	11.68	-0.06
14	71923	0.76	0.49	0.06	76.40	12.30	-0.31	5.88	-0.25	5.36	-0.20
15	71923	0.82	0.47	0.06	81.57	2.51	-0.24	5.42	-0.27	10.43	-0.27
16	71923	0.35	0.18	0.11	35.11	16.03	-0.19	28.51	0.07	20.23	-0.12
17	71923	0.82	0.53	0.06	81.77	5.62	-0.30	6.38	-0.27	6.17	-0.29
18	71923	0.66	0.47	0.08	66.39	12.23	-0.27	9.91	-0.24	11.38	-0.20
19	71923	0.59	0.27	0.12	59.11	9.13	-0.21	19.14	-0.08	12.48	-0.11
20	71923	0.47	0.33	0.10	46.53	23.62	-0.10	22.44	-0.17	7.29	-0.19
21	71923	0.75	0.50	0.08	75.00	17.23	-0.32	3.93	-0.24	3.75	-0.26
22	71923	0.57	0.35	0.10	56.89	12.98	-0.19	26.22	-0.14	3.80	-0.25
23	71923	0.79	0.23	0.07	78.82	2.68	-0.20	16.51	-0.09	1.92	-0.20
24	71923	0.64	0.30	0.09	63.91	20.64	-0.06	11.41	-0.25	3.93	-0.22
25	71923	0.70	0.38	0.08	69.96	5.28	-0.20	5.05	-0.24	19.61	-0.19
26	71923	0.45	0.35	0.07	45.43	14.30	-0.22	36.42	-0.15	3.77	-0.13
27	71923	0.73	0.52	0.07	73.47	16.59	-0.50	6.29	-0.15	3.58	-0.02
28	71923	0.76	0.40	0.08	75.64	11.59	-0.28	4.26	-0.30	8.43	-0.07
29	71923	0.65	0.36	0.10	65.06	5.84	-0.30	5.11	-0.30	23.88	-0.07
30	71923	0.67	0.44	0.10	67.20	13.94	-0.33	15.58	-0.14	3.16	-0.25
31	71923	0.67	0.45	0.08	66.78	21.16	-0.28	9.67	-0.22	2.31	-0.21
32	71923	0.59	0.47	0.11	58.94	16.06	-0.19	10.35	-0.25	14.52	-0.23
33	71923	0.69	0.46	0.09	69.11	5.63	-0.23	14.08	-0.26	11.07	-0.21
34	71923	0.76	0.42	0.09	75.97	5.87	-0.26	3.17	-0.25	14.89	-0.20
35	71923	0.58	0.50	0.10	58.02	8.59	-0.19	15.16	-0.26	18.12	-0.26
36	71923	0.79	0.42	0.11	78.98	9.48	-0.24	5.04	-0.27	6.39	-0.16
37	71923	0.49	0.36	0.13	48.77	11.29	-0.14	6.81	-0.28	32.99	-0.13
38	71923	0.90	0.42	0.07	89.82	5.09	-0.29	3.73	-0.22	1.29	-0.16
39	71923	0.87	0.46	0.09	86.81	4.90	-0.23	5.11	-0.29	3.09	-0.23
40	71923	0.70	0.53	0.18	70.10	12.15	-0.29	9.02	-0.33	8.55	-0.18

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

Table 6.4.14 (continued)
2006 Spring AIMS Classical Item Analysis
Reading CRT High School

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
41	71923	0.59	0.45	0.12	59.37	6.81	-0.23	27.38	-0.20	6.31	-0.30
42	71923	0.53	0.39	0.17	53.45	10.76	-0.26	18.16	-0.17	17.44	-0.13
43	71923	0.75	0.49	0.26	74.96	4.04	-0.27	8.51	-0.26	12.21	-0.25
44	71923	0.43	0.33	0.12	42.65	8.29	-0.15	13.74	-0.21	35.19	-0.10
45	71923	0.32	0.35	0.17	31.84	30.10	-0.12	18.36	-0.21	19.52	-0.07
46	71923	0.59	0.39	0.14	59.04	22.76	-0.14	9.13	-0.19	8.92	-0.27
47	71923	0.74	0.55	0.14	74.36	7.10	-0.26	9.43	-0.31	8.96	-0.28
48	71923	0.43	0.24	0.13	43.48	6.69	-0.22	7.92	-0.21	41.77	-0.01
49	71923	0.61	0.37	0.13	60.89	14.83	-0.29	3.94	-0.27	20.20	-0.07
50	71923	0.66	0.39	0.14	65.66	15.24	-0.18	5.99	-0.31	12.97	-0.13
51	71923	0.54	0.28	0.15	53.79	26.06	-0.12	6.91	-0.27	13.08	-0.03
52	71923	0.67	0.44	0.13	66.54	19.88	-0.14	6.55	-0.32	6.89	-0.27
53	71923	0.47	0.42	0.14	47.04	12.06	-0.23	34.71	-0.19	6.03	-0.19
54	71923	0.81	0.45	0.19	80.93	4.75	-0.27	5.98	-0.27	8.15	-0.20

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.15
2006 Spring AIMS Classical Item Analysis
Writing CRT Grade 3

Trait	N	P-Value	Adj <i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79528	0.42	0.79	1.65	2.83	7.81	34.84	38.47	12.68	1.57	0.14	0.00
2	79528	0.48	0.82	1.65	2.83	3.37	17.04	49.92	22.68	2.23	0.27	0.00
3	79528	0.51	0.81	1.65	2.83	4.07	15.46	40.24	30.94	4.33	0.48	0.00
4	79528	0.45	0.82	1.65	2.83	6.95	24.66	44.50	16.66	2.62	0.13	0.00
5	79528	0.46	0.78	1.65	2.83	6.41	22.66	43.78	18.36	3.43	0.89	0.00
6	79528	0.48	0.80	1.65	2.83	5.65	21.88	39.71	24.64	3.35	0.29	0.00

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.16
2006 Spring AIMS Classical Item Analysis
Writing CRT Grade 4

Trait	N	P-Value	Adj <i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79997	0.52	0.79	1.38	1.68	1.77	10.12	52.35	29.83	2.68	0.14	0.04
2	79997	0.49	0.80	1.38	1.68	2.54	19.22	48.68	23.55	2.70	0.22	0.04
3	79997	0.54	0.81	1.38	1.68	2.03	9.26	45.66	35.44	4.03	0.49	0.04
4	79997	0.51	0.79	1.38	1.68	3.02	14.91	47.91	26.16	4.31	0.60	0.04
5	79997	0.50	0.81	1.38	1.68	3.01	16.52	49.40	25.26	2.52	0.19	0.04
6	79997	0.49	0.76	1.38	1.68	5.07	18.36	42.39	29.06	1.90	0.13	0.04

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.17
2006 Spring AIMS Classical Item Analysis
Writing CRT Grade 5

Trait	N	P-Value	Adj <i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79103	0.53	0.73	1.27	2.69	2.83	13.11	38.57	33.91	6.47	1.06	0.09
2	79103	0.52	0.79	1.27	2.69	2.58	13.12	44.76	31.04	4.04	0.40	0.09
3	79103	0.54	0.75	1.27	2.69	1.91	10.06	40.59	36.12	6.84	0.42	0.09
4	79103	0.55	0.79	1.27	2.69	3.40	10.42	35.07	38.54	7.42	1.10	0.09
5	79103	0.52	0.78	1.27	2.69	4.15	12.04	43.86	30.27	5.05	0.57	0.09
6	79103	0.53	0.77	1.27	2.69	3.76	12.21	35.54	39.25	4.93	0.26	0.09

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.18
2006 Spring AIMS Classical Item Analysis
Writing CRT Grade 6

Trait	N	P-Value	Adj <i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79504	0.56	0.79	1.43	1.58	2.32	10.27	33.21	40.98	8.96	1.24	0.02
2	79504	0.59	0.81	1.43	1.58	1.13	4.39	30.96	53.99	6.32	0.18	0.02
3	79504	0.62	0.79	1.43	1.58	1.63	5.07	21.74	50.41	16.19	1.95	0.02
4	79504	0.59	0.78	1.43	1.58	0.91	5.30	36.78	41.87	9.70	2.43	0.02
5	79504	0.61	0.78	1.43	1.58	1.59	5.26	24.19	53.01	10.66	2.26	0.02
6	79504	0.62	0.81	1.43	1.58	1.07	3.73	22.28	55.96	12.12	1.80	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.19
2006 Spring AIMS Classical Item Analysis
Writing CRT Grade 7

Trait	N	P-Value	Adj <i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79011	0.55	0.76	1.60	1.66	1.39	6.96	42.85	41.46	3.92	0.15	0.00
2	79011	0.60	0.80	1.60	1.66	1.02	5.34	19.10	64.39	6.27	0.62	0.00
3	79011	0.59	0.79	1.60	1.66	1.86	6.37	22.94	57.24	7.78	0.54	0.00
4	79011	0.56	0.78	1.60	1.66	1.33	7.87	37.80	45.79	3.76	0.18	0.00
5	79011	0.56	0.76	1.60	1.66	2.18	9.84	34.66	42.31	6.70	1.06	0.00
6	79011	0.59	0.79	1.60	1.66	1.11	4.61	24.10	62.04	4.77	0.12	0.00

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.20
2006 Spring AIMS Classical Item Analysis
Writing CRT Grade 8

Trait	N	P-Value	Adj <i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79122	0.56	0.76	1.60	1.05	0.97	6.67	41.97	43.06	4.49	0.19	0.00
2	79122	0.58	0.77	1.60	1.05	0.82	4.71	35.72	47.90	7.37	0.83	0.00
3	79122	0.57	0.78	1.60	1.05	1.32	6.50	34.65	49.86	4.70	0.32	0.00
4	79122	0.59	0.78	1.60	1.05	0.88	4.36	33.59	50.19	7.66	0.66	0.00
5	79122	0.57	0.76	1.60	1.05	1.19	7.16	35.65	47.87	5.19	0.30	0.00
6	79122	0.58	0.76	1.60	1.05	1.44	6.08	36.62	44.82	7.46	0.93	0.00

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.21
2006 Spring AIMS Classical Item Analysis
Writing CRT High School Prompt A

Trait	N	P-Value	Adj <i>r</i>	Percentages													
				Omit	at 0	at 1	at 1.5	at 2	at 2.5	at 3	at 3.5	at 4	at 4.5	at 5	at 5.5	at 6	Invalid
1	68092	0.64	0.85	0.32	1.86	0.55	0.62	2.14	3.69	10.16	17.26	36.86	14.19	7.11	3.24	1.98	0.02
2	68092	0.63	0.87	0.32	1.86	0.69	0.59	2.17	3.07	11.37	16.40	42.61	11.96	5.91	2.14	0.88	0.02
3	68092	0.52	0.80	0.32	1.86	2.06	2.87	8.45	14.67	23.79	20.94	15.39	5.61	2.80	0.85	0.36	0.02
4	68092	0.54	0.85	0.32	1.86	0.96	1.22	3.09	8.26	32.97	24.42	19.41	5.07	1.71	0.54	0.16	0.02
5	68092	0.57	0.85	0.32	1.86	0.65	0.88	3.98	7.20	23.77	24.07	24.69	8.11	3.35	0.82	0.27	0.02
6	68092	0.59	0.82	0.32	1.86	0.52	0.78	2.67	5.93	16.07	22.72	38.45	7.60	2.09	0.72	0.27	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.22
2006 Spring AIMS Classical Item Analysis
Writing CRT High School Prompt T

Trait	N	P-Value	Adj <i>r</i>	Percentages													
				Omit	at 0	at 1	at 1.5	at 2	at 2.5	at 3	at 3.5	at 4	at 4.5	at 5	at 5.5	at 6	Invalid
1	2156	0.53	0.92	2.41	2.69	3.06	0.51	9.46	3.39	29.92	7.05	31.73	3.39	4.87	0.70	0.83	0.00
2	2156	0.57	0.91	2.41	2.69	2.92	0.93	5.33	2.83	19.85	8.40	41.09	6.40	5.84	0.70	0.60	0.00
3	2156	0.50	0.91	2.41	2.69	3.39	2.13	8.07	10.06	27.23	19.20	15.54	6.03	2.37	0.51	0.37	0.00
4	2156	0.51	0.88	2.41	2.69	2.88	2.46	7.84	13.36	21.34	20.13	15.96	6.49	2.78	1.11	0.56	0.00
5	2156	0.53	0.90	2.41	2.69	2.09	1.58	7.47	9.00	22.87	19.06	22.40	6.63	2.37	0.88	0.56	0.00
6	2156	0.53	0.89	2.41	2.69	1.30	2.04	6.49	7.61	26.30	19.34	21.29	7.19	2.09	0.97	0.28	0.00

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

Table 6.4.23
2006 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
1	78996	0.99	0.17	0.33	98.62	0.24	-0.09	0.36	-0.11	0.45	-0.10
2	78996	0.68	0.35	0.51	67.62	10.15	-0.23	12.91	-0.18	8.77	-0.11
3	78996	0.38	0.23	0.67	37.56	28.41	-0.06	19.93	-0.09	13.40	-0.12
4	78996	0.49	0.29	0.72	48.63	6.82	-0.16	35.62	-0.11	8.20	-0.17
5	78996	0.77	0.41	0.70	77.01	1.56	-0.19	13.63	-0.16	7.09	-0.35
6	78996	0.82	0.30	0.83	82.13	2.11	-0.14	11.52	-0.19	3.38	-0.17
7	78996	0.94	0.26	0.55	94.42	2.29	-0.16	1.62	-0.15	1.04	-0.13
8	78996	0.75	0.46	0.98	75.05	10.51	-0.28	9.40	-0.25	4.04	-0.17
9	78996	0.60	0.42	0.40	60.34	2.87	-0.09	7.40	-0.11	28.87	-0.34
10	78996	0.77	0.53	0.47	77.22	7.54	-0.23	8.35	-0.32	6.39	-0.27
11	78996	0.85	0.43	0.41	84.83	10.44	-0.30	3.07	-0.21	1.24	-0.20
12	78996	0.79	0.47	0.48	79.00	4.61	-0.16	7.53	-0.26	8.37	-0.30
13	78996	0.89	0.40	0.45	89.21	2.85	-0.22	4.08	-0.20	3.40	-0.25
14	78996	0.94	0.34	0.70	93.86	1.47	-0.17	1.42	-0.20	2.55	-0.22
15	78996	0.69	0.22	0.24	68.81	8.66	-0.20	11.97	-0.08	10.26	-0.07
16	78996	0.55	0.32	0.58	55.21	13.56	-0.09	15.87	-0.19	14.77	-0.15
17	78996	0.82	0.29	0.56	82.38	9.63	-0.17	4.87	-0.16	2.55	-0.14
18	78996	0.63	0.37	0.87	62.60	17.36	-0.15	8.56	-0.15	10.57	-0.23
19	78996	0.83	0.35	0.45	82.55	6.66	-0.16	2.48	-0.21	7.79	-0.22
20	78996	0.64	0.41	0.77	63.69	12.86	-0.17	9.59	-0.18	13.07	-0.25
21	78996	0.46	0.38	0.96	46.00	25.72	-0.16	12.35	-0.24	14.96	-0.09
22	78996	0.57	0.36	0.37	57.47	25.88	-0.18	7.70	-0.23	8.55	-0.13
23	78996	0.89	0.39	0.91	88.56	2.24	-0.21	4.22	-0.21	4.07	-0.25
24	78996	0.87	0.41	0.85	87.12	3.17	-0.24	5.27	-0.22	3.56	-0.23
25	78996	0.84	0.36	0.21	84.44	6.01	-0.31	2.21	-0.19	7.12	-0.11

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.24
2006 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	79253	0.86	0.40	0.05	86.34	5.70	-0.21	4.77	-0.23	3.13	-0.22
2	79253	0.87	0.34	0.05	86.56	1.22	-0.17	3.07	-0.22	9.08	-0.20
3	79253	0.86	0.37	0.07	85.82	6.84	-0.18	3.36	-0.23	3.90	-0.20
4	79253	0.56	0.31	0.15	56.45	4.52	-0.21	9.54	-0.21	29.30	-0.11
5	79253	0.81	0.21	0.10	80.56	1.31	-0.15	16.74	-0.14	1.28	-0.11
6	79253	0.85	0.31	0.02	84.94	4.62	-0.17	7.00	-0.17	3.42	-0.17
7	79253	0.60	0.48	0.07	59.99	14.42	-0.10	14.15	-0.34	11.35	-0.26
8	79253	0.77	0.48	0.08	76.82	15.09	-0.34	3.90	-0.23	4.07	-0.17
9	79253	0.78	0.45	0.10	77.63	4.48	-0.24	12.39	-0.25	5.38	-0.25
10	79253	0.88	0.31	0.10	87.90	3.49	-0.16	5.57	-0.20	2.93	-0.15
11	79253	0.93	0.36	0.10	93.30	2.03	-0.21	3.06	-0.22	1.49	-0.19
12	79253	0.84	0.45	0.05	83.87	5.54	-0.27	5.05	-0.25	5.48	-0.22
13	79253	0.88	0.41	0.07	87.88	2.96	-0.21	3.69	-0.22	5.38	-0.25
14	79253	0.59	0.32	0.06	58.81	7.40	-0.23	5.15	-0.19	28.54	-0.11
15	79253	0.72	0.41	0.07	72.37	16.78	-0.18	5.02	-0.25	5.72	-0.26
16	79253	0.62	0.44	0.07	62.26	21.46	-0.23	9.03	-0.27	7.15	-0.16
17	79253	0.58	0.38	0.09	58.01	14.46	-0.19	14.03	-0.14	13.39	-0.22
18	79253	0.45	0.39	0.12	45.13	27.94	-0.08	14.49	-0.24	12.29	-0.22
19	79253	0.69	0.37	0.19	68.53	7.12	-0.27	9.51	-0.22	14.61	-0.10
20	79253	0.90	0.32	0.07	90.42	3.38	-0.19	3.54	-0.17	2.54	-0.17
21	79253	0.61	0.45	0.04	60.78	5.38	-0.20	6.76	-0.20	27.01	-0.28
22	79253	0.77	0.44	0.07	76.52	8.69	-0.26	6.92	-0.24	7.77	-0.19
23	79253	0.46	0.24	0.23	45.84	11.79	-0.17	15.44	-0.11	26.67	-0.05
24	79253	0.65	0.39	0.13	65.20	18.01	-0.14	8.43	-0.24	8.21	-0.23
25	79253	0.68	0.42	0.09	68.33	13.59	-0.27	12.49	-0.19	5.45	-0.18

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.25
2006 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>rpb</i>	% Omit	%	%	<i>rpb</i>	%	<i>rpb</i>	%	<i>rpb</i>
1	78306	0.70	0.31	0.08	70.14	2.84	-0.21	13.26	-0.18	13.69	-0.13
2	78306	0.55	0.34	0.05	55.00	6.71	-0.18	18.79	-0.11	19.44	-0.20
3	78306	0.47	0.33	0.08	47.46	18.85	-0.16	18.72	-0.18	14.89	-0.08
4	78306	0.76	0.37	0.09	75.78	10.33	-0.19	9.02	-0.16	4.78	-0.25
5	78306	0.46	0.40	0.12	45.68	24.37	-0.07	17.18	-0.23	12.64	-0.24
6	78306	0.90	0.35	0.05	90.04	4.01	-0.26	3.03	-0.14	2.86	-0.17
7	78306	0.78	0.48	0.18	78.02	9.50	-0.27	5.42	-0.25	6.87	-0.24
8	78306	0.83	0.44	0.10	83.49	7.49	-0.26	5.64	-0.24	3.27	-0.22
9	78306	0.82	0.51	0.02	81.82	8.91	-0.35	4.51	-0.25	4.73	-0.21
10	78306	0.58	0.47	0.06	58.36	12.74	-0.13	21.62	-0.36	7.21	-0.16
11	78306	0.92	0.22	0.02	92.08	2.55	-0.12	3.25	-0.12	2.09	-0.12
12	78306	0.67	0.41	0.06	66.81	8.19	-0.25	8.69	-0.23	16.22	-0.16
13	78306	0.70	0.46	0.10	70.35	6.24	-0.21	11.97	-0.24	11.32	-0.26
14	78306	0.65	0.52	0.09	64.97	14.16	-0.36	12.47	-0.23	8.30	-0.15
15	78306	0.67	0.47	0.09	66.51	3.82	-0.23	4.69	-0.25	24.85	-0.29
16	78306	0.60	0.45	0.12	59.94	24.06	-0.22	8.33	-0.24	7.55	-0.23
17	78306	0.81	0.44	0.02	81.48	8.44	-0.28	5.71	-0.26	4.34	-0.15
18	78306	0.78	0.29	0.05	77.62	2.78	-0.14	13.13	-0.16	6.40	-0.17
19	78306	0.87	0.36	0.02	87.45	4.76	-0.24	3.40	-0.18	4.36	-0.17
20	78306	0.71	0.41	0.03	71.01	9.77	-0.21	14.30	-0.21	4.89	-0.22
21	78306	0.86	0.39	0.04	85.50	3.57	-0.22	4.79	-0.26	6.09	-0.18
22	78306	0.57	0.34	0.06	56.69	17.88	-0.23	14.18	-0.11	11.17	-0.13
23	78306	0.56	0.35	0.09	56.22	6.82	-0.17	15.05	-0.16	21.78	-0.18
24	78306	0.50	0.46	0.11	50.15	4.22	-0.25	40.31	-0.24	5.19	-0.27
25	78306	0.62	0.40	0.21	62.28	11.67	-0.18	10.66	-0.17	15.18	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.26
2006 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78334	0.76	0.51	0.19	75.93	12.52	-0.30	8.52	-0.30	2.78	-0.20
2	78334	0.44	0.39	0.18	43.96	13.70	-0.07	18.04	-0.22	24.08	-0.20
3	78334	0.59	0.37	0.09	58.89	13.12	-0.11	15.22	-0.15	12.67	-0.27
4	78334	0.66	0.48	0.04	65.62	16.24	-0.31	3.70	-0.13	14.40	-0.25
5	78334	0.76	0.47	0.07	75.62	8.63	-0.26	7.93	-0.27	7.73	-0.20
6	78334	0.73	0.45	0.08	72.90	6.82	-0.21	11.13	-0.31	9.05	-0.17
7	78334	0.53	0.35	0.09	52.79	20.53	-0.26	19.85	-0.05	6.73	-0.19
8	78334	0.75	0.40	0.08	74.50	9.71	-0.16	5.57	-0.22	10.11	-0.26
9	78334	0.80	0.48	0.04	79.86	6.85	-0.29	8.36	-0.28	4.89	-0.18
10	78334	0.93	0.33	0.01	92.81	1.24	-0.12	1.33	-0.16	4.59	-0.26
11	78334	0.80	0.44	0.03	80.48	1.76	-0.18	5.01	-0.19	12.71	-0.33
12	78334	0.74	0.47	0.07	74.11	11.48	-0.25	7.21	-0.26	7.12	-0.23
13	78334	0.79	0.36	0.03	78.52	6.15	-0.25	11.28	-0.14	4.02	-0.23
14	78334	0.69	0.41	0.04	68.70	5.58	-0.19	10.61	-0.26	15.07	-0.18
15	78334	0.67	0.45	0.14	66.58	8.55	-0.23	16.34	-0.18	8.37	-0.28
16	78334	0.55	0.35	0.04	54.97	6.59	-0.25	9.51	-0.24	28.88	-0.09
17	78334	0.67	0.47	0.06	67.32	14.56	-0.16	9.11	-0.29	8.92	-0.28
18	78334	0.60	0.35	0.07	59.90	14.77	-0.18	12.50	-0.17	12.73	-0.15
19	78334	0.68	0.54	0.12	68.35	15.96	-0.26	5.35	-0.23	10.20	-0.34
20	78334	0.54	0.38	0.09	53.62	23.37	-0.24	12.11	-0.11	10.79	-0.17
21	78334	0.73	0.39	0.08	73.07	13.25	-0.25	5.21	-0.21	8.38	-0.16
22	78334	0.59	0.36	0.06	59.04	23.32	-0.15	10.47	-0.29	7.09	-0.09
23	78334	0.73	0.50	0.06	72.58	9.47	-0.25	9.73	-0.28	8.14	-0.24
24	78334	0.71	0.54	0.09	70.97	10.91	-0.24	9.32	-0.28	8.69	-0.31
25	78334	0.51	0.35	0.12	50.92	13.77	-0.18	17.41	-0.16	17.77	-0.14

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.27
2006 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 7

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	77382	0.40	0.38	0.10	39.54	14.71	-0.19	25.70	0.02	19.95	-0.31
2	77382	0.57	0.35	0.09	57.43	10.79	-0.12	11.38	-0.25	20.30	-0.13
3	77382	0.61	0.39	0.08	60.57	11.97	-0.07	11.86	-0.27	15.51	-0.22
4	77382	0.70	0.38	0.05	69.53	5.27	-0.15	13.46	-0.19	11.69	-0.24
5	77382	0.61	0.43	0.11	61.33	7.32	-0.16	24.29	-0.31	6.94	-0.12
6	77382	0.83	0.35	0.05	82.54	4.83	-0.21	6.39	-0.15	6.20	-0.21
7	77382	0.40	0.34	0.11	39.96	12.62	-0.18	31.17	-0.05	16.14	-0.22
8	77382	0.53	0.43	0.11	52.65	11.61	-0.06	25.82	-0.23	9.80	-0.30
9	77382	0.80	0.33	0.03	79.61	9.90	-0.19	5.35	-0.17	5.10	-0.17
10	77382	0.39	0.42	0.08	39.31	9.31	-0.09	26.62	-0.27	24.66	-0.14
11	77382	0.59	0.50	0.08	59.07	27.98	-0.37	9.22	-0.19	3.65	-0.14
12	77382	0.80	0.38	0.04	80.03	10.80	-0.24	5.70	-0.17	3.42	-0.22
13	77382	0.70	0.42	0.08	69.88	7.19	-0.12	13.57	-0.24	9.28	-0.27
14	77382	0.70	0.48	0.08	70.20	11.10	-0.23	13.03	-0.28	5.57	-0.22
15	77382	0.82	0.42	0.07	82.38	7.72	-0.26	5.90	-0.22	3.91	-0.20
16	77382	0.70	0.43	0.10	69.51	13.22	-0.26	7.74	-0.24	9.43	-0.15
17	77382	0.40	0.42	0.08	39.63	22.65	-0.22	21.39	-0.21	16.23	-0.08
18	77382	0.36	0.32	0.08	36.38	7.36	-0.09	46.62	-0.18	9.54	-0.13
19	77382	0.53	0.32	0.03	53.47	13.65	-0.21	26.98	-0.13	5.87	-0.13
20	77382	0.39	0.32	0.09	39.34	43.42	-0.30	8.14	-0.05	9.00	0.01
21	77382	0.66	0.46	0.12	66.23	13.88	-0.24	10.69	-0.25	9.07	-0.19
22	77382	0.89	0.34	0.03	89.48	3.11	-0.19	3.47	-0.18	3.90	-0.19
23	77382	0.42	0.36	0.12	42.35	7.85	-0.08	20.84	-0.03	28.83	-0.32
24	77382	0.52	0.47	0.06	51.69	18.04	-0.20	19.98	-0.19	10.22	-0.27
25	77382	0.47	0.43	0.09	46.90	13.51	-0.15	24.75	-0.24	14.72	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.28
2006 Spring AIMS Classical Item Analysis
Mathematics NRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	77312	0.73	0.35	0.05	73.34	4.10	-0.19	12.46	-0.16	10.05	-0.22
2	77312	0.50	0.41	0.06	50.27	11.79	-0.13	26.72	-0.19	11.16	-0.25
3	77312	0.81	0.38	0.06	80.56	4.72	-0.11	6.47	-0.26	8.20	-0.22
4	77312	0.72	0.39	0.14	72.46	7.46	-0.16	10.65	-0.22	9.29	-0.22
5	77312	0.58	0.49	0.06	57.74	15.21	-0.31	13.08	-0.25	13.90	-0.13
6	77312	0.72	0.39	0.07	72.36	6.34	-0.23	10.47	-0.21	10.75	-0.16
7	77312	0.82	0.35	0.03	81.93	1.61	-0.14	13.26	-0.25	3.16	-0.18
8	77312	0.79	0.44	0.07	79.12	4.92	-0.22	10.53	-0.29	5.35	-0.19
9	77312	0.55	0.28	0.15	54.85	25.27	-0.04	6.61	-0.23	13.11	-0.19
10	77312	0.86	0.39	0.03	85.78	4.11	-0.26	3.77	-0.22	6.30	-0.17
11	77312	0.66	0.42	0.10	66.44	8.79	-0.26	16.57	-0.17	8.10	-0.22
12	77312	0.79	0.36	0.04	78.66	12.13	-0.19	4.75	-0.20	4.41	-0.22
13	77312	0.54	0.27	0.08	54.24	8.21	-0.06	9.79	-0.05	27.67	-0.23
14	77312	0.69	0.37	0.06	68.88	9.44	-0.27	16.43	-0.13	5.17	-0.20
15	77312	0.35	0.31	0.05	35.03	49.65	-0.05	7.19	-0.27	8.06	-0.20
16	77312	0.76	0.33	0.06	75.79	7.03	-0.20	11.24	-0.09	5.87	-0.25
17	77312	0.85	0.34	0.05	84.50	8.23	-0.19	4.51	-0.21	2.70	-0.15
18	77312	0.48	0.41	0.09	47.99	20.74	-0.16	24.29	-0.19	6.88	-0.23
19	77312	0.56	0.43	0.07	55.53	4.91	-0.23	34.91	-0.28	4.57	-0.14
20	77312	0.50	0.40	0.10	50.47	19.26	-0.36	14.05	-0.19	16.11	0.02
21	77312	0.48	0.31	0.08	47.86	14.91	-0.16	26.53	-0.12	10.62	-0.13
22	77312	0.35	0.31	0.09	35.39	35.09	-0.25	17.75	-0.10	11.67	0.03
23	77312	0.57	0.43	0.06	57.14	6.01	-0.22	13.80	-0.23	22.98	-0.20
24	77312	0.64	0.32	0.06	64.00	11.59	-0.12	10.42	-0.17	13.91	-0.18
25	77312	0.32	0.26	0.05	32.20	11.34	-0.06	30.57	-0.04	25.84	-0.18

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.29
2006 Spring AIMS Classical Item Analysis
Reading NRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78422	0.93	0.35	0.16	93.00	5.30	-0.28	1.54	-0.20	0.00	0.00
2	78422	0.75	0.40	0.26	74.88	5.14	-0.24	19.71	-0.30	0.00	0.00
3	78422	0.85	0.35	0.22	84.52	4.86	-0.23	10.39	-0.24	0.00	0.00
4	78422	0.93	0.33	0.30	93.32	2.94	-0.24	3.43	-0.21	0.00	0.00
5	78422	0.80	0.38	0.34	80.22	9.20	-0.27	10.23	-0.24	0.00	0.00
6	78422	0.72	0.40	0.92	72.06	11.09	-0.30	15.92	-0.23	0.00	0.00
7	78422	0.52	0.30	1.73	52.38	16.85	-0.27	29.04	-0.09	0.00	0.00
8	78422	0.62	0.29	0.33	62.04	4.89	-0.24	26.07	-0.11	6.67	-0.15
9	78422	0.44	0.37	0.46	44.44	29.26	-0.18	13.99	-0.18	11.83	-0.11
10	78422	0.31	0.32	2.25	31.25	10.79	-0.26	31.98	0.03	23.71	-0.15
11	78422	0.50	0.28	0.54	49.65	19.78	-0.10	10.17	-0.28	19.85	-0.03
12	78422	0.66	0.34	1.04	65.76	7.28	-0.28	6.34	-0.10	19.57	-0.14
13	78422	0.61	0.48	0.66	61.02	10.92	-0.23	12.00	-0.32	10.46	-0.14
14	78422	0.77	0.50	0.39	76.57	9.46	-0.31	5.38	-0.26	8.20	-0.22
15	78422	0.64	0.51	0.88	63.81	9.95	-0.26	8.91	-0.27	16.45	-0.23
16	78422	0.81	0.32	1.05	80.92	7.95	-0.16	4.91	-0.15	5.16	-0.20
17	78422	0.48	0.26	0.75	48.27	28.92	0.01	12.11	-0.28	9.95	-0.14
18	78422	0.71	0.53	0.47	70.91	5.54	-0.28	7.09	-0.24	15.98	-0.30
19	78422	0.71	0.50	0.36	71.33	9.10	-0.27	10.68	-0.26	8.52	-0.23
20	78422	0.44	0.30	0.94	43.81	16.97	-0.18	24.44	0.01	13.84	-0.23
21	78422	0.49	0.34	1.61	48.56	22.45	-0.17	10.47	-0.17	16.91	-0.10
22	78422	0.49	0.48	1.25	49.48	6.17	-0.23	29.44	-0.20	13.64	-0.26
23	78422	0.59	0.37	1.67	58.84	19.50	-0.13	13.08	-0.25	6.89	-0.18
24	78422	0.69	0.51	1.21	69.02	6.73	-0.27	12.21	-0.27	10.82	-0.22
25	78422	0.74	0.33	0.37	74.17	10.13	-0.30	2.27	-0.23	13.03	-0.05

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.30
2006 Spring AIMS Classical Item Analysis
Reading NRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78792	0.82	0.42	0.03	81.62	7.43	-0.20	6.52	-0.25	4.40	-0.22
2	78792	0.83	0.41	0.03	82.89	7.80	-0.20	5.96	-0.27	3.31	-0.21
3	78792	0.85	0.45	0.06	85.01	10.22	-0.33	1.77	-0.20	2.91	-0.20
4	78792	0.66	0.33	0.09	66.14	16.00	-0.15	7.90	-0.18	9.84	-0.17
5	78792	0.94	0.36	0.03	94.23	1.64	-0.19	2.71	-0.23	1.38	-0.19
6	78792	0.77	0.48	0.14	77.26	11.28	-0.25	4.37	-0.26	6.92	-0.26
7	78792	0.76	0.42	0.16	75.63	14.12	-0.18	5.44	-0.28	4.63	-0.25
8	78792	0.89	0.47	0.18	88.91	2.77	-0.26	4.22	-0.23	3.90	-0.30
9	78792	0.53	0.38	0.38	52.82	10.47	-0.20	17.50	-0.23	18.80	-0.10
10	78792	0.79	0.44	0.21	79.48	8.93	-0.20	4.67	-0.24	6.71	-0.28
11	78792	0.75	0.46	0.02	75.07	7.83	-0.23	12.87	-0.27	4.20	-0.22
12	78792	0.86	0.44	0.04	85.65	3.48	-0.22	4.53	-0.26	6.28	-0.25
13	78792	0.79	0.46	0.05	78.56	5.71	-0.21	10.89	-0.25	4.75	-0.27
14	78792	0.57	0.38	0.11	56.98	22.08	-0.18	8.86	-0.25	11.95	-0.14
15	78792	0.64	0.43	0.08	64.08	12.52	-0.16	7.22	-0.16	16.08	-0.30
16	78792	0.77	0.35	0.04	77.07	6.29	-0.28	13.36	-0.11	3.23	-0.22
17	78792	0.73	0.57	0.09	72.98	10.16	-0.24	9.41	-0.33	7.35	-0.32
18	78792	0.79	0.39	0.12	78.70	10.31	-0.21	7.32	-0.21	3.54	-0.22
19	78792	0.55	0.17	0.19	55.43	10.73	-0.16	21.20	0.01	12.42	-0.11
20	78792	0.74	0.55	0.13	73.80	9.71	-0.25	5.94	-0.32	10.41	-0.30
21	78792	0.40	0.27	0.15	39.72	21.11	-0.07	12.34	-0.17	26.65	-0.10
22	78792	0.71	0.48	0.20	70.84	8.88	-0.25	9.86	-0.24	10.21	-0.24
23	78792	0.63	0.54	0.10	63.27	7.34	-0.37	19.54	-0.27	9.74	-0.19
24	78792	0.63	0.47	0.14	63.11	6.79	-0.21	23.52	-0.26	6.43	-0.26
25	78792	0.64	0.47	0.20	63.68	22.99	-0.26	6.81	-0.23	6.31	-0.24

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.31
2006 Spring AIMS Classical Item Analysis
Reading NRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78000	0.61	0.40	0.03	60.58	7.68	-0.15	8.56	-0.12	23.14	-0.29
2	78000	0.86	0.32	0.02	86.10	5.77	-0.15	4.57	-0.14	3.53	-0.24
3	78000	0.53	0.34	0.10	53.32	18.81	-0.29	9.02	-0.05	18.74	-0.11
4	78000	0.80	0.43	0.04	80.31	3.76	-0.28	10.25	-0.19	5.63	-0.26
5	78000	0.74	0.39	0.06	73.54	16.00	-0.24	3.68	-0.20	6.71	-0.18
6	78000	0.76	0.40	0.06	75.86	11.55	-0.20	7.85	-0.19	4.67	-0.25
7	78000	0.60	0.35	0.06	60.40	14.00	-0.23	4.29	-0.25	21.23	-0.10
8	78000	0.68	0.41	0.07	68.20	7.15	-0.24	7.95	-0.22	16.63	-0.19
9	78000	0.84	0.45	0.07	83.73	4.86	-0.26	5.68	-0.23	5.65	-0.25
10	78000	0.72	0.40	0.01	72.42	17.48	-0.26	3.15	-0.19	6.93	-0.18
11	78000	0.67	0.44	0.04	67.32	1.89	-0.21	24.49	-0.28	6.24	-0.24
12	78000	0.88	0.38	0.02	88.39	1.83	-0.21	4.34	-0.21	5.40	-0.22
13	78000	0.80	0.28	0.04	79.61	2.79	-0.15	3.76	-0.21	13.77	-0.14
14	78000	0.83	0.46	0.03	83.32	9.21	-0.38	3.79	-0.14	3.65	-0.19
15	78000	0.51	0.22	0.06	51.16	7.65	-0.14	9.83	-0.17	31.29	-0.04
16	78000	0.79	0.46	0.03	78.59	4.09	-0.25	9.47	-0.23	7.81	-0.27
17	78000	0.84	0.49	0.42	83.78	7.82	-0.32	4.28	-0.24	3.70	-0.22
18	78000	0.70	0.54	0.06	70.44	5.74	-0.26	18.65	-0.33	5.11	-0.25
19	78000	0.61	0.23	0.10	61.43	9.90	-0.09	22.07	-0.06	6.49	-0.24
20	78000	0.57	0.44	0.13	57.00	19.56	-0.15	7.91	-0.27	15.38	-0.24
21	78000	0.44	0.37	0.11	43.57	20.20	-0.14	22.40	-0.15	13.69	-0.17
22	78000	0.39	0.28	0.10	39.50	15.76	-0.15	19.66	-0.13	24.94	-0.06
23	78000	0.72	0.47	0.02	71.59	4.55	-0.14	11.96	-0.36	11.87	-0.21
24	78000	0.60	0.29	0.02	59.70	16.95	-0.24	13.60	-0.03	9.69	-0.13
25	78000	0.36	0.16	0.06	36.35	26.08	-0.01	22.58	-0.03	14.91	-0.17

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.32
2006 Spring AIMS Classical Item Analysis
Reading NRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78508	0.69	0.39	0.02	69.04	7.68	-0.21	7.12	-0.26	16.14	-0.16
2	78508	0.82	0.35	0.01	82.20	11.76	-0.19	2.66	-0.20	3.35	-0.23
3	78508	0.91	0.44	0.02	91.43	2.72	-0.23	3.36	-0.27	2.48	-0.23
4	78508	0.62	0.37	0.06	62.27	12.86	-0.16	15.20	-0.17	9.60	-0.22
5	78508	0.73	0.35	0.02	73.28	9.64	-0.21	6.50	-0.12	10.55	-0.21
6	78508	0.71	0.44	0.11	70.81	6.68	-0.24	17.76	-0.22	4.62	-0.25
7	78508	0.81	0.42	0.03	81.17	9.22	-0.33	8.01	-0.19	1.57	-0.15
8	78508	0.87	0.34	0.04	86.84	3.36	-0.20	6.40	-0.17	3.35	-0.21
9	78508	0.55	0.34	0.05	54.75	23.51	-0.14	6.50	-0.27	15.18	-0.11
10	78508	0.79	0.32	0.05	78.82	2.66	-0.24	3.39	-0.16	15.07	-0.17
11	78508	0.57	0.37	0.07	56.55	9.64	-0.20	20.73	-0.14	13.00	-0.20
12	78508	0.92	0.37	0.09	91.62	3.27	-0.19	2.83	-0.22	2.18	-0.21
13	78508	0.85	0.46	0.06	85.48	4.25	-0.25	4.72	-0.24	5.49	-0.27
14	78508	0.84	0.44	0.02	84.32	9.61	-0.37	1.52	-0.18	4.54	-0.14
15	78508	0.62	0.34	0.05	61.82	14.90	-0.11	12.83	-0.18	10.39	-0.22
16	78508	0.67	0.30	0.03	66.56	19.41	-0.02	5.34	-0.23	8.64	-0.28
17	78508	0.79	0.37	0.08	78.66	6.22	-0.18	9.29	-0.21	5.73	-0.20
18	78508	0.63	0.48	0.06	63.33	12.75	-0.34	15.55	-0.17	8.30	-0.19
19	78508	0.52	0.34	0.08	52.00	29.42	-0.07	12.59	-0.22	5.89	-0.26
20	78508	0.64	0.48	0.08	64.35	7.46	-0.27	15.79	-0.23	12.30	-0.23
21	78508	0.51	0.32	0.08	51.23	33.18	-0.06	9.54	-0.26	5.96	-0.22
22	78508	0.55	0.37	0.08	54.73	12.38	-0.17	16.51	-0.23	16.29	-0.11
23	78508	0.43	0.24	0.12	42.85	10.24	-0.18	19.13	-0.10	27.64	-0.05
24	78508	0.67	0.49	0.11	66.54	12.46	-0.27	10.78	-0.27	10.10	-0.20
25	78508	0.42	0.25	0.17	41.88	15.75	-0.14	21.39	-0.13	20.80	-0.04

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.33
2006 Spring AIMS Classical Item Analysis
Reading NRT Grade 7

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	77881	0.91	0.30	0.02	90.56	2.96	-0.13	2.36	-0.14	4.10	-0.23
2	77881	0.60	0.28	0.03	59.75	32.59	-0.12	5.17	-0.24	2.46	-0.17
3	77881	0.82	0.43	0.02	82.33	13.27	-0.32	1.79	-0.18	2.58	-0.20
4	77881	0.70	0.45	0.03	70.00	6.49	-0.26	8.10	-0.27	15.38	-0.19
5	77881	0.69	0.51	0.11	69.31	6.83	-0.26	9.84	-0.32	13.90	-0.21
6	77881	0.66	0.51	0.10	65.85	9.17	-0.28	19.02	-0.25	5.84	-0.26
7	77881	0.67	0.51	0.14	67.34	6.88	-0.25	16.29	-0.27	9.34	-0.26
8	77881	0.68	0.45	0.09	68.02	17.92	-0.17	8.00	-0.29	5.95	-0.28
9	77881	0.64	0.41	0.10	63.91	13.14	-0.21	6.50	-0.29	16.34	-0.15
10	77881	0.56	0.28	0.15	56.29	6.88	-0.23	25.87	-0.10	10.80	-0.12
11	77881	0.53	0.38	0.05	53.24	28.18	-0.15	6.39	-0.27	12.14	-0.17
12	77881	0.34	0.22	0.06	33.68	7.06	-0.26	38.57	0.05	20.63	-0.14
13	77881	0.72	0.54	0.07	72.15	11.47	-0.29	7.06	-0.26	9.24	-0.28
14	77881	0.69	0.49	0.07	68.77	17.01	-0.21	8.49	-0.30	5.65	-0.27
15	77881	0.66	0.50	0.08	65.88	10.50	-0.31	12.44	-0.23	11.08	-0.20
16	77881	0.63	0.52	0.12	63.38	9.09	-0.27	6.83	-0.26	20.56	-0.26
17	77881	0.66	0.50	0.10	65.66	8.87	-0.30	18.28	-0.22	7.07	-0.26
18	77881	0.51	0.39	0.11	51.21	21.89	-0.11	14.63	-0.21	12.14	-0.21
19	77881	0.54	0.45	0.17	54.31	15.47	-0.22	14.27	-0.23	15.75	-0.17
20	77881	0.33	0.27	0.09	33.46	15.65	-0.23	17.89	-0.15	32.90	0.03
21	77881	0.62	0.45	0.13	61.68	11.25	-0.24	13.63	-0.20	13.31	-0.22
22	77881	0.72	0.48	0.10	72.19	12.52	-0.29	8.84	-0.29	6.34	-0.15
23	77881	0.72	0.45	0.09	72.16	5.33	-0.27	11.11	-0.24	11.29	-0.21
24	77881	0.64	0.47	0.10	63.63	10.51	-0.21	9.01	-0.27	16.73	-0.23
25	77881	0.53	0.38	0.11	53.06	11.45	-0.25	13.13	-0.13	22.24	-0.16

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.34
2006 Spring AIMS Classical Item Analysis
Reading NRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78065	0.88	0.31	0.02	87.63	1.11	-0.16	4.70	-0.12	6.54	-0.24
2	78065	0.94	0.32	0.01	94.02	3.50	-0.19	0.83	-0.16	1.64	-0.20
3	78065	0.87	0.35	0.03	87.00	3.64	-0.21	6.81	-0.18	2.52	-0.20
4	78065	0.88	0.31	0.03	87.86	5.90	-0.15	1.26	-0.17	4.94	-0.21
5	78065	0.91	0.26	0.01	91.10	0.60	-0.13	3.76	-0.19	4.53	-0.13
6	78065	0.63	0.26	0.02	62.66	5.03	-0.26	28.09	-0.08	4.20	-0.16
7	78065	0.63	0.42	0.08	62.72	14.83	-0.12	9.33	-0.28	13.03	-0.23
8	78065	0.59	0.41	0.08	59.05	33.05	-0.24	3.74	-0.26	4.08	-0.19
9	78065	0.55	0.38	0.06	54.86	18.75	-0.16	15.90	-0.17	10.42	-0.20
10	78065	0.63	0.46	0.13	62.64	14.34	-0.24	16.46	-0.24	6.42	-0.19
11	78065	0.80	0.44	0.05	79.85	5.67	-0.27	10.46	-0.23	3.96	-0.21
12	78065	0.57	0.27	0.06	56.83	6.01	-0.28	12.70	-0.17	24.40	-0.02
13	78065	0.68	0.41	0.07	67.78	8.17	-0.13	9.68	-0.21	14.28	-0.27
14	78065	0.88	0.47	0.10	87.52	3.52	-0.28	3.15	-0.24	5.71	-0.26
15	78065	0.73	0.53	0.06	72.72	8.70	-0.23	11.33	-0.32	7.17	-0.27
16	78065	0.71	0.40	0.06	71.10	10.55	-0.19	5.41	-0.22	12.89	-0.22
17	78065	0.55	0.38	0.09	55.25	9.13	-0.19	27.21	-0.12	8.30	-0.28
18	78065	0.83	0.40	0.06	83.39	4.84	-0.20	6.36	-0.21	5.33	-0.23
19	78065	0.63	0.38	0.05	62.84	11.11	-0.26	5.01	-0.28	20.97	-0.10
20	78065	0.83	0.49	0.03	83.40	6.26	-0.26	5.20	-0.30	5.12	-0.23
21	78065	0.42	0.29	0.05	42.21	13.47	-0.10	28.16	-0.13	16.10	-0.13
22	78065	0.58	0.34	0.25	57.95	12.14	-0.17	14.92	-0.24	14.73	-0.07
23	78065	0.55	0.22	0.05	54.64	4.82	-0.25	7.18	-0.19	33.30	-0.02
24	78065	0.69	0.41	0.06	68.72	10.24	-0.20	9.15	-0.28	11.81	-0.14
25	78065	0.68	0.46	0.07	67.72	10.00	-0.24	12.30	-0.23	9.90	-0.23

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.35
2006 Spring AIMS Classical Item Analysis
Language NRT Grade 3

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78422	0.82	0.38	0.33	81.55	15.31	-0.31	2.80	-0.21	0.00	0.00
2	78422	0.93	0.30	0.49	93.36	2.69	-0.20	3.45	-0.22	0.00	0.00
3	78422	0.64	0.21	0.26	64.03	28.17	-0.08	7.55	-0.23	0.00	0.00
4	78422	0.93	0.31	0.28	92.91	4.87	-0.23	1.94	-0.20	0.00	0.00
5	78422	0.45	0.16	0.60	45.31	33.18	-0.07	20.91	-0.11	0.00	0.00
6	78422	0.29	0.17	0.29	29.14	29.32	0.11	23.86	-0.14	17.39	-0.17
7	78422	0.45	0.24	3.22	44.79	30.00	-0.05	9.35	-0.22	12.60	-0.09
8	78422	0.75	0.38	0.88	75.06	7.58	-0.21	12.52	-0.22	3.52	-0.18
9	78422	0.76	0.46	0.72	75.69	7.45	-0.22	11.44	-0.28	4.69	-0.21
10	78422	0.45	0.09	0.81	45.12	10.04	-0.21	13.51	-0.11	30.51	0.13
11	78422	0.68	0.42	0.40	68.40	16.73	-0.30	3.38	-0.20	11.08	-0.13
12	78422	0.43	0.27	0.67	42.77	15.73	-0.07	19.51	-0.09	21.31	-0.17
13	78422	0.81	0.43	0.43	81.49	9.51	-0.27	4.85	-0.22	3.70	-0.20
14	78422	0.42	0.09	0.65	42.46	21.25	0.05	11.71	-0.24	23.92	0.04
15	78422	0.59	0.27	0.44	58.83	13.99	-0.16	16.40	-0.10	10.32	-0.13
16	78422	0.81	0.39	0.17	81.01	7.62	-0.25	3.81	-0.21	7.28	-0.18
17	78422	0.81	0.44	0.42	81.25	10.81	-0.27	4.36	-0.23	3.16	-0.21
18	78422	0.55	0.24	0.99	54.66	19.93	-0.19	15.47	-0.02	8.95	-0.13
19	78422	0.46	0.18	0.56	46.34	13.32	-0.09	7.94	-0.22	31.82	0.01
20	78422	0.70	0.37	0.86	69.64	7.63	-0.24	9.46	-0.22	12.40	-0.14

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.36
2006 Spring AIMS Classical Item Analysis
Language NRT Grade 4

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78792	0.82	0.36	0.06	82.17	9.44	-0.19	3.89	-0.24	4.35	-0.18
2	78792	0.67	0.32	0.07	67.23	13.68	-0.18	6.93	-0.20	12.06	-0.10
3	78792	0.57	0.29	0.07	57.33	9.56	-0.20	21.39	-0.10	11.57	-0.12
4	78792	0.57	0.24	0.06	56.62	26.48	-0.11	10.23	-0.12	6.59	-0.14
5	78792	0.51	0.21	0.08	51.05	13.46	-0.04	12.45	-0.16	22.96	-0.09
6	78792	0.37	0.16	0.35	36.77	14.33	-0.16	32.90	0.00	15.62	-0.05
7	78792	0.79	0.39	0.05	79.14	8.74	-0.20	4.78	-0.24	7.27	-0.19
8	78792	0.69	0.35	0.08	68.83	9.31	-0.20	7.32	-0.24	14.43	-0.12
9	78792	0.66	0.32	0.08	66.14	6.11	-0.23	7.85	-0.27	19.79	-0.07
10	78792	0.72	0.35	0.09	71.58	7.86	-0.21	7.58	-0.25	12.86	-0.10
11	78792	0.48	0.23	0.09	48.25	29.43	0.00	7.97	-0.13	14.26	-0.23
12	78792	0.49	0.13	0.05	48.78	3.36	-0.23	3.66	-0.18	44.16	0.02
13	78792	0.88	0.34	0.06	88.07	2.11	-0.18	4.74	-0.17	5.00	-0.21
14	78792	0.71	0.27	0.08	70.74	19.64	-0.08	5.06	-0.22	4.45	-0.18
15	78792	0.78	0.36	0.06	78.29	8.71	-0.19	6.97	-0.15	5.91	-0.23
16	78792	0.82	0.38	0.07	81.61	7.35	-0.25	4.58	-0.16	6.37	-0.20
17	78792	0.90	0.32	0.14	90.03	2.32	-0.19	3.80	-0.17	3.68	-0.18
18	78792	0.74	0.23	0.04	73.78	5.10	-0.15	6.09	-0.15	14.99	-0.09
19	78792	0.59	0.25	0.04	59.04	6.94	-0.29	6.87	-0.26	27.10	0.03
20	78792	0.51	0.20	0.07	51.37	7.19	-0.25	27.23	0.00	14.12	-0.10

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.37
2006 Spring AIMS Classical Item Analysis
Language NRT Grade 5

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78000	0.58	0.27	0.08	57.56	12.29	-0.11	18.97	-0.08	11.09	-0.20
2	78000	0.62	0.38	0.03	62.17	23.37	-0.19	8.93	-0.24	5.50	-0.15
3	78000	0.52	0.28	0.03	52.01	21.28	-0.09	12.86	-0.11	13.81	-0.19
4	78000	0.69	0.29	0.06	68.94	21.22	-0.15	7.51	-0.16	2.27	-0.19
5	78000	0.75	0.31	0.07	74.54	4.74	-0.20	4.14	-0.21	16.50	-0.13
6	78000	0.62	0.31	0.09	62.26	15.09	-0.16	12.47	-0.12	10.07	-0.18
7	78000	0.90	0.33	0.03	90.32	2.23	-0.16	3.41	-0.21	4.01	-0.18
8	78000	0.73	0.37	0.03	72.86	8.21	-0.19	6.18	-0.23	12.68	-0.17
9	78000	0.66	0.35	0.04	66.49	7.21	-0.20	15.32	-0.12	10.93	-0.22
10	78000	0.55	0.38	0.11	55.07	17.49	-0.21	10.02	-0.20	17.29	-0.13
11	78000	0.58	0.37	0.13	58.27	11.21	-0.22	19.83	-0.14	10.56	-0.18
12	78000	0.61	0.28	0.11	61.42	9.61	-0.19	19.06	-0.08	9.80	-0.16
13	78000	0.62	0.28	0.13	61.73	4.84	-0.20	12.88	-0.11	20.42	-0.13
14	78000	0.57	0.28	0.08	57.19	12.05	-0.05	14.37	-0.16	16.29	-0.18
15	78000	0.64	0.30	0.02	63.74	7.90	-0.19	18.77	-0.09	9.56	-0.20
16	78000	0.73	0.31	0.03	72.83	8.92	-0.17	5.81	-0.22	12.39	-0.11
17	78000	0.34	0.17	0.06	33.92	18.15	-0.07	26.83	-0.05	21.01	-0.08
18	78000	0.63	0.24	0.05	63.07	7.80	-0.16	16.91	-0.04	12.15	-0.17
19	78000	0.72	0.40	0.11	72.42	6.60	-0.19	9.94	-0.18	10.91	-0.25
20	78000	0.55	0.29	0.18	55.49	12.85	-0.15	18.20	-0.12	13.27	-0.14

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.38
2006 Spring AIMS Classical Item Analysis
Language NRT Grade 6

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78508	0.58	0.33	0.07	58.13	5.59	-0.20	23.82	-0.14	12.37	-0.17
2	78508	0.56	0.39	0.13	55.99	15.52	-0.20	19.61	-0.13	8.74	-0.24
3	78508	0.54	0.21	0.13	53.89	31.55	0.02	9.14	-0.22	5.28	-0.22
4	78508	0.55	0.21	0.16	54.68	21.25	-0.07	18.31	-0.09	5.59	-0.19
5	78508	0.56	0.17	0.18	55.93	12.63	-0.11	10.41	-0.14	20.85	-0.01
6	78508	0.44	0.21	0.04	43.93	20.96	-0.02	10.55	-0.19	24.51	-0.08
7	78508	0.80	0.40	0.07	79.64	6.92	-0.21	5.97	-0.25	7.40	-0.18
8	78508	0.59	0.20	0.09	58.83	26.58	0.00	8.39	-0.18	6.08	-0.20
9	78508	0.66	0.29	0.09	66.32	8.71	-0.14	7.41	-0.20	17.47	-0.11
10	78508	0.54	0.14	0.10	53.70	29.10	0.04	4.49	-0.24	12.61	-0.11
11	78508	0.69	0.34	0.19	69.27	10.91	-0.14	9.64	-0.18	9.97	-0.20
12	78508	0.65	0.34	0.31	64.73	17.43	-0.18	8.23	-0.20	9.29	-0.14
13	78508	0.70	0.21	0.12	69.71	5.35	-0.14	18.60	-0.08	6.21	-0.12
14	78508	0.69	0.38	0.03	68.60	7.77	-0.20	8.87	-0.21	14.72	-0.17
15	78508	0.41	0.15	0.05	40.98	27.44	-0.02	18.39	-0.05	13.12	-0.14
16	78508	0.87	0.40	0.05	86.67	4.67	-0.23	4.99	-0.22	3.60	-0.21
17	78508	0.66	0.38	0.06	66.12	16.43	-0.23	9.28	-0.14	8.09	-0.19
18	78508	0.76	0.42	0.05	76.42	9.14	-0.23	7.20	-0.22	7.17	-0.21
19	78508	0.74	0.43	0.07	74.43	9.35	-0.21	6.67	-0.24	9.47	-0.23
20	78508	0.56	0.26	0.04	55.57	8.38	-0.16	9.95	-0.21	26.05	-0.05

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.39
2006 Spring AIMS Classical Item Analysis
Language NRT Grade 7

Item	N	P-Value	Adj <i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	
1	77881	0.79	0.31	0.01	78.82	3.67	-0.17	3.52	-0.17	13.98	-0.19	
2	77881	0.61	0.13	0.01	61.06	28.43	-0.05	2.61	-0.13	7.88	-0.08	
3	77881	0.76	0.26	0.03	75.80	8.18	-0.04	3.04	-0.15	12.93	-0.22	
4	77881	0.43	0.16	0.05	42.94	11.58	-0.14	9.75	-0.18	35.67	0.04	
5	77881	0.61	0.23	0.10	61.00	14.97	-0.02	7.88	-0.23	16.05	-0.13	
6	77881	0.62	0.28	0.03	62.23	21.49	-0.22	13.44	-0.10	2.80	-0.07	
7	77881	0.52	0.27	0.06	52.33	25.98	-0.12	11.70	-0.09	9.90	-0.16	
8	77881	0.80	0.25	0.02	80.27	3.16	-0.19	9.02	-0.16	7.52	-0.08	
9	77881	0.74	0.34	0.03	73.54	6.57	-0.24	8.85	-0.10	11.00	-0.21	
10	77881	0.68	0.32	0.04	67.62	5.38	-0.19	13.83	-0.16	13.09	-0.16	
11	77881	0.79	0.31	0.04	78.52	3.24	-0.17	10.34	-0.18	7.85	-0.16	
12	77881	0.79	0.37	0.07	79.09	9.57	-0.21	5.15	-0.16	6.11	-0.21	
13	77881	0.78	0.29	0.02	77.59	5.63	-0.20	4.40	-0.16	12.35	-0.12	
14	77881	0.47	0.22	0.07	47.18	39.76	0.00	6.82	-0.19	6.13	-0.25	
15	77881	0.62	0.28	0.07	61.89	9.02	-0.21	21.15	-0.08	7.87	-0.16	
16	77881	0.76	0.38	0.12	75.62	5.26	-0.21	7.48	-0.23	11.51	-0.17	
17	77881	0.69	0.44	0.16	68.94	11.72	-0.21	7.79	-0.25	11.37	-0.22	
18	77881	0.72	0.49	0.11	72.16	6.84	-0.24	9.39	-0.29	11.49	-0.22	
19	77881	0.51	0.22	0.12	50.92	7.42	-0.23	33.48	-0.01	8.04	-0.15	
20	77881	0.77	0.38	0.15	77.35	7.81	-0.19	7.26	-0.23	7.42	-0.19	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Table 6.4.40
2006 Spring AIMS Classical Item Analysis
Language NRT Grade 8

Item	N	P-Value	Adj		Key	Distractor 1		Distractor 2		Distractor 3	
			<i>r</i> pb	% Omit	%	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78065	0.65	0.32	0.19	64.56	12.38	-0.13	12.26	-0.19	10.60	-0.14
2	78065	0.90	0.32	0.11	90.45	2.20	-0.18	3.44	-0.20	3.80	-0.15
3	78065	0.36	0.15	0.12	35.97	3.37	-0.19	29.58	-0.01	30.95	-0.07
4	78065	0.69	0.36	0.15	69.18	13.15	-0.18	9.69	-0.25	7.81	-0.11
5	78065	0.30	0.12	0.15	29.56	18.64	-0.11	24.93	-0.13	26.71	0.10
6	78065	0.50	0.21	0.18	49.90	19.31	-0.12	19.86	-0.05	10.73	-0.10
7	78065	0.52	0.24	0.05	52.44	9.79	-0.17	19.87	-0.10	17.84	-0.08
8	78065	0.37	0.11	0.06	37.38	16.63	-0.06	33.01	0.06	12.92	-0.16
9	78065	0.39	0.13	0.06	39.03	14.37	-0.11	18.17	-0.05	28.36	-0.01
10	78065	0.87	0.39	0.06	86.92	4.85	-0.23	4.19	-0.22	3.97	-0.18
11	78065	0.55	0.29	0.07	54.90	10.35	-0.06	10.32	-0.16	24.35	-0.18
12	78065	0.61	0.29	0.10	61.02	10.10	-0.20	11.69	-0.18	17.09	-0.06
13	78065	0.80	0.37	0.01	80.23	5.16	-0.16	3.01	-0.21	11.59	-0.24
14	78065	0.82	0.32	0.02	82.04	9.22	-0.21	5.88	-0.15	2.83	-0.17
15	78065	0.66	0.25	0.04	66.42	14.76	-0.07	10.44	-0.20	8.34	-0.12
16	78065	0.89	0.30	0.06	89.06	3.31	-0.17	4.77	-0.14	2.79	-0.20
17	78065	0.68	0.31	0.02	68.19	11.47	-0.13	5.31	-0.21	15.01	-0.15
18	78065	0.83	0.25	0.03	82.53	10.89	-0.07	3.81	-0.21	2.73	-0.19
19	78065	0.70	0.30	0.04	69.83	12.79	-0.11	5.95	-0.19	11.37	-0.17
20	78065	0.70	0.36	0.07	69.53	8.02	-0.22	11.54	-0.17	10.83	-0.17

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

Part 7: Calibration, Scaling and Equating

Part 7 of the technical report describes calibration and scaling procedures and results for the 2006 Spring AIMS assessments. All grade levels and content areas were calibrated and scaled with calibration samples that typically consisted of the entire student population. The exclusion criteria for the calibration samples are described in section 6.1 Part 7 of this report addresses the following AERA/APA/NCME standards: 1.13, 2.1, 2.2, 2.14, 4.1, 4.2, 4.3, 6.4, 6.5, and 13.6. Also note that the 2005 Fall AIMS assessment is described in Appendix A.

7.1 Calibration Methods

Item Response Theory (IRT) models were used in the item calibration for all reading and mathematics AIMS tests. All tests were calibrated separately by grade and content area. All calibration activities were replicated by ADE staff as an added quality control check.

7.1.1 Calibration Models

The mathematics and reading criterion-referenced tests are comprised of multiple choice items, which are calibrated with the Rasch model. The Rasch model (Rasch, 1960; Wright, 1977) is a one parameter IRT model in which item difficulty and student ability are estimated on the same scale. The Rasch model defines a multiple choice item in terms of one parameter: item difficulty. In the Rasch model, the probability that a student with an ability estimate (θ) responds correctly to item i is

$$P_i(\theta) = \frac{\exp[(\theta - b_i)]}{1 + \exp[(\theta - b_i)]},$$

where b_i is the item difficulty.

All norm-referenced tests are comprised of multiple choice items. Items reporting to norm-referenced tests were calibrated with the three-parameter logistic (3PL) model (Lord & Novick, 1968; Lord, 1980). The 3PL model defines a multiple choice item in terms of three item parameters: item difficulty or location, item discrimination, and the pseudo-guessing parameter. In the 3PL model, the probability that a student with an ability estimate (θ) responds correctly to item i is

$$P_i(\theta) = c_i + \frac{1 - c_i}{1 + \exp[-1.7a_i(\theta - b_i)]},$$

where a_i is the item discrimination, b_i is the item difficulty, and c_i is the probability of a correct response by a low-scoring examinee. Norm-referenced items were calibrated during the national standardization of *TerraNova* and parameters used for scoring the AIMS NRT were those obtained during this standardization. Note that the NRT items have not changed over the previous two administrations of the AIMS.

7.1.2 Calibration Software

Parameter estimation for items on the criterion-referenced tests using the Rasch model was implemented using Winsteps 3.60 (Linacre, 2005b). Winsteps uses joint maximum likelihood

estimation (JMLE) as described by Wright and Masters (1982). To estimate the standard error of measurement at the extreme scores, calcSEM_Rasch.sas (Choi, 2005) was used.

Parameter estimations for the NRT assessment were conducted in 2005 using CTB's PARDUX software (Burket, 1991).

7.2 Calibration Results

7.2.1 IRT Item Statistics

Item statistics resulting from calibration of the AIMS CRT tests in reading and mathematics are presented in tables 7.2.1.1 through 7.2.1.14. All items for all reading and mathematics tests converged during calibration using typical procedures for Winsteps software. Standard error of estimates for the Rasch difficulty measures indicated that the parameters were well estimated. Model to item data fit was monitored using mean-square (MNSQ) infit and MNSQ outfit statistics, which indicate the degree of accuracy and predictability with which the data fit the model (Linacre, 2002). Infit is sensitive to misfit on items at the ability level of the person, whereas outfit is sensitive to misfit on items with difficulty far from the ability of the person (Linacre, 2002). Typically, values less than 0.6 and greater than 1.4 for MNSQ infit indicate misfit, and values greater than 1.4 for MNSQ outfit indicate misfit (Wright & Linacre, 1994). Model misfit according to MNSQ infit was identified for only two items out of all content area and grade level tests. Misfit according to MNSQ outfit was identified for items on 13 of the 14 CRT tests with between one and five items flagged per test, with the most items identified in the Grade 5 math test. None of the misfit was so extreme as to warrant corrective action during operational analysis.

Table 7.2.1.1
2006 Spring AIMS IRT Item Statistics
Mathematics Grade 3

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.26	0.01	0.97	0.93	37	0.91	0.01	0.83	0.79
2	-0.15	0.01	1.04	1.19	38	-0.20	0.01	1.03	0.99
3	0.11	0.01	1.12	1.28	39	1.56	0.01	1.25	1.39
4	0.15	0.01	1.06	1.03	40	1.72	0.01	1.07	1.23
5	0.62	0.01	1.07	1.09	41	1.36	0.01	0.97	0.99
6	0.48	0.01	0.85	0.79	42	-1.03	0.01	0.93	0.72
7	-3.46	0.03	0.84	0.66	43	-0.37	0.01	1.06	1.07
8	0.04	0.01	1.14	1.27	44	-0.27	0.01	0.98	1.00
9	-0.02	0.01	0.94	0.88	45	-0.93	0.01	1.05	1.35
10	0.90	0.01	0.98	0.96	46	-0.95	0.01	1.07	1.03
11	-0.16	0.01	0.92	0.87	47	1.23	0.01	1.06	1.09
12	0.15	0.01	0.94	0.90	48	-1.21	0.01	0.90	0.76
13	-0.35	0.01	1.01	0.96	49	-0.74	0.01	0.85	0.66
14	-0.43	0.01	1.02	0.99	50	0.83	0.01	1.11	1.12
15	1.33	0.01	1.14	1.22	51	-0.87	0.01	1.00	1.15
16	-0.63	0.01	1.01	1.08	52	0.59	0.01	0.98	0.96
17	-2.00	0.02	0.87	0.72	53	1.14	0.01	1.07	1.11
18	-1.12	0.01	1.28	1.50	54	0.54	0.01	0.94	0.91
19	-0.10	0.01	0.89	0.77	55	-0.91	0.01	0.93	0.88
20	0.56	0.01	0.98	0.96	56	1.21	0.01	0.93	0.93
21	0.63	0.01	0.82	0.77	57	-0.25	0.01	0.81	0.68
22	-0.42	0.01	0.88	0.71	58	0.22	0.01	1.16	1.23
23	0.39	0.01	1.15	1.25	59	-0.78	0.01	0.86	0.78
24	0.56	0.01	0.97	0.94	60	1.11	0.01	0.98	0.96
25	-0.16	0.01	0.87	0.77	61	0.07	0.01	1.18	1.38
26	0.21	0.01	1.10	1.18	62	0.68	0.01	1.06	1.05
27	-2.02	0.02	0.91	0.71	63	1.54	0.01	0.91	0.94
28	-0.85	0.01	1.09	1.33	64	-1.18	0.01	0.86	0.69
29	0.25	0.01	1.18	1.34	65	-0.20	0.01	0.90	0.82
30	0.88	0.01	1.08	1.11	66	1.93	0.01	1.13	1.33
31	-0.64	0.01	1.01	1.13	67	1.95	0.01	1.09	1.19
32	1.89	0.01	1.14	1.26	68	0.16	0.01	1.02	1.07
33	-0.69	0.01	0.98	0.91	69	0.01	0.01	1.11	1.24
34	0.58	0.01	0.95	0.92	70	-0.33	0.01	0.97	0.94
35	-0.36	0.01	1.05	1.05	71	0.78	0.01	0.98	1.00
36	-0.71	0.01	0.89	0.79	72	1.14	0.01	1.18	1.29

Table 7.2.1.2
2006 Spring AIMS IRT Item Statistics
Mathematics Grade 4

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.23	0.01	0.88	0.80	36	-1.87	0.02	1.00	0.78
2	0.19	0.01	1.11	1.31	37	-0.82	0.01	0.99	0.83
3	-1.05	0.01	0.95	1.07	38	0.26	0.01	1.03	1.01
4	-0.35	0.01	0.91	0.76	39	-1.13	0.01	0.96	0.80
5	0.67	0.01	1.12	1.22	40	0.85	0.01	1.15	1.23
6	-0.80	0.01	0.86	0.79	41	1.69	0.01	1.16	1.27
7	0.70	0.01	0.99	0.94	42	-0.47	0.01	1.03	1.17
8	-1.06	0.01	1.07	1.09	43	0.23	0.01	1.04	1.03
9	0.91	0.01	1.07	1.09	44	0.46	0.01	1.13	1.23
10	0.65	0.01	0.96	0.92	45	0.86	0.01	0.95	0.90
11	1.49	0.01	1.05	1.09	46	-0.01	0.01	1.02	0.99
12	0.49	0.01	0.98	0.94	47	1.39	0.01	1.04	1.08
13	-0.17	0.01	1.03	1.06	48	0.70	0.01	0.88	0.81
14	-0.71	0.01	0.96	0.86	49	-0.29	0.01	1.16	1.34
15	0.49	0.01	1.03	1.01	50	0.45	0.01	1.12	1.19
16	-0.60	0.01	0.84	0.62	51	-0.04	0.01	1.08	1.22
17	1.34	0.01	1.06	1.09	52	-0.78	0.01	1.02	1.03
18	-0.95	0.01	1.00	1.05	53	0.33	0.01	0.92	0.85
19	0.92	0.01	1.01	1.01	54	-0.10	0.01	0.85	0.70
20	0.89	0.01	1.14	1.23	55	-0.98	0.01	1.04	1.01
21	-0.77	0.01	0.90	0.83	56	0.16	0.01	0.80	0.68
22	-0.70	0.01	0.99	1.16	57	0.07	0.01	0.84	0.72
23	2.14	0.01	1.07	1.20	58	-0.17	0.01	0.98	0.98
24	-0.53	0.01	1.24	1.55	59	1.16	0.01	0.92	0.89
25	0.34	0.01	0.89	0.83	60	1.15	0.01	1.25	1.31
26	-0.87	0.01	1.08	1.27	61	-0.14	0.01	1.02	1.08
27	0.74	0.01	1.03	1.03	62	-1.15	0.01	0.87	0.78
28	0.06	0.01	0.85	0.72	63	1.16	0.01	0.92	0.90
29	0.88	0.01	0.90	0.88	64	-0.36	0.01	1.09	1.19
30	-0.87	0.01	0.80	0.68	65	0.96	0.01	1.03	1.02
31	0.54	0.01	0.85	0.77	66	1.10	0.01	1.18	1.26
32	0.13	0.01	0.90	0.81	67	1.89	0.01	1.07	1.18
33	0.14	0.01	0.81	0.72	68	1.46	0.01	1.19	1.28
34	-0.37	0.01	1.04	1.03	69	-1.31	0.01	0.89	0.75
35	-1.04	0.01	1.00	1.23	70	0.74	0.01	1.18	1.24

Table 7.2.1.3
2006 Spring AIMS IRT Item Statistics
Mathematics Grade 5

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.22	0.01	1.15	1.38	35	0.43	0.01	0.93	0.89
2	-0.09	0.01	1.27	1.61	36	-1.21	0.01	0.90	0.69
3	0.13	0.01	1.08	1.05	37	-0.61	0.01	0.88	0.85
4	-1.05	0.01	1.00	1.04	38	0.06	0.01	0.99	0.89
5	0.04	0.01	0.86	0.74	39	0.65	0.01	0.98	0.97
6	-1.12	0.01	0.97	0.80	40	0.35	0.01	0.93	0.89
7	0.59	0.01	1.17	1.31	41	-0.56	0.01	1.06	1.00
8	-1.17	0.01	1.13	1.35	42	0.65	0.01	1.01	0.97
9	0.35	0.01	0.97	0.92	43	0.09	0.01	1.14	1.22
10	0.26	0.01	1.09	1.21	44	1.28	0.01	1.30	1.42
11	-0.86	0.01	1.20	1.45	45	1.86	0.01	1.03	1.12
12	-0.48	0.01	1.16	1.48	46	0.85	0.01	1.12	1.20
13	-0.36	0.01	0.96	1.03	47	-0.15	0.01	0.89	0.81
14	-0.30	0.01	1.15	1.24	48	0.83	0.01	1.10	1.11
15	0.96	0.01	0.92	0.90	49	0.79	0.01	0.89	0.83
16	0.63	0.01	0.85	0.78	50	-1.11	0.01	0.93	0.93
17	-1.47	0.01	1.07	0.94	51	0.41	0.01	0.82	0.71
18	0.02	0.01	1.05	1.13	52	1.03	0.01	1.00	0.99
19	1.31	0.01	0.89	0.88	53	0.85	0.01	0.85	0.79
20	0.31	0.01	1.09	1.10	54	0.85	0.01	1.05	1.04
21	-0.76	0.01	0.89	0.69	55	0.23	0.01	0.98	0.91
22	-0.12	0.01	1.04	1.00	56	0.77	0.01	0.97	0.95
23	-0.03	0.01	0.99	1.08	57	-0.30	0.01	0.80	0.66
24	0.46	0.01	0.80	0.70	58	-1.73	0.01	0.97	0.79
25	0.89	0.01	0.96	0.92	59	0.77	0.01	0.92	0.89
26	0.28	0.01	1.02	1.07	60	-0.94	0.01	0.92	0.92
27	-0.75	0.01	0.98	0.96	61	-0.24	0.01	0.96	0.96
28	-0.50	0.01	0.85	0.67	62	1.11	0.01	1.14	1.21
29	-1.50	0.01	0.89	1.05	63	0.80	0.01	1.04	1.03
30	0.34	0.01	1.04	1.07	64	1.79	0.01	1.08	1.19
31	1.02	0.01	1.09	1.10	65	1.08	0.01	0.88	0.84
32	2.04	0.01	1.14	1.31	66	0.67	0.01	1.09	1.10
33	0.02	0.01	1.02	1.08	67	0.86	0.01	1.13	1.16
34	-0.70	0.01	1.17	1.77	68	0.51	0.01	1.06	1.12

Table 7.2.1.4
2006 Spring AIMS IRT Item Statistics
Mathematics Grade 6

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	1.82	0.01	1.04	1.15	35	1.14	0.01	1.10	1.14
2	0.26	0.01	1.10	1.12	36	-0.02	0.01	1.00	1.04
3	0.13	0.01	1.15	1.22	37	-0.13	0.01	0.99	0.99
4	-0.09	0.01	1.10	1.13	38	-0.21	0.01	0.88	0.80
5	-0.34	0.01	1.04	1.12	39	0.54	0.01	0.99	0.97
6	-1.46	0.01	0.87	0.84	40	0.01	0.01	1.05	1.21
7	0.52	0.01	0.91	0.89	41	-1.22	0.01	1.14	1.33
8	0.12	0.01	0.97	0.92	42	0.57	0.01	0.93	0.88
9	2.44	0.01	1.19	1.42	43	0.20	0.01	0.85	0.78
10	-0.27	0.01	1.10	1.15	44	0.54	0.01	1.10	1.16
11	-0.42	0.01	0.95	0.92	45	0.34	0.01	1.05	1.06
12	-0.24	0.01	0.98	0.97	46	0.51	0.01	1.03	1.07
13	-0.07	0.01	1.03	1.09	47	-0.37	0.01	0.85	0.72
14	-0.34	0.01	0.91	0.81	48	0.78	0.01	1.07	1.09
15	0.82	0.01	1.03	1.03	49	-0.99	0.01	0.85	0.74
16	0.79	0.01	0.95	0.91	50	1.36	0.01	1.20	1.27
17	0.28	0.01	0.98	0.93	51	0.15	0.01	0.94	0.90
18	0.42	0.01	0.99	0.93	52	-1.30	0.01	1.01	1.11
19	0.29	0.01	0.95	0.90	53	0.11	0.01	1.08	1.09
20	0.91	0.01	1.04	1.05	54	0.16	0.01	0.98	0.95
21	-0.62	0.01	0.88	0.72	55	-1.15	0.01	1.00	1.18
22	-2.10	0.02	1.00	0.89	56	1.48	0.01	1.25	1.42
23	-0.35	0.01	0.96	0.97	57	-0.22	0.01	0.90	0.77
24	-0.02	0.01	0.97	0.92	58	0.14	0.01	1.04	1.14
25	-0.64	0.01	0.90	0.85	59	0.74	0.01	0.99	0.98
26	-0.14	0.01	1.02	0.98	60	0.22	0.01	0.96	1.01
27	0.09	0.01	1.12	1.18	61	0.14	0.01	0.98	0.96
28	0.98	0.01	1.08	1.10	62	0.67	0.01	0.90	0.84
29	-0.17	0.01	0.88	0.78	63	-0.13	0.01	0.88	0.79
30	-0.47	0.01	0.98	1.16	64	1.21	0.01	1.00	1.01
31	-1.31	0.01	0.89	0.73	65	0.14	0.01	1.04	1.02
32	0.47	0.01	1.03	1.05	66	-0.27	0.01	1.04	1.14
33	0.03	0.01	1.03	1.05	67	-0.82	0.01	0.98	0.91
34	-0.13	0.01	0.99	1.00	68	0.95	0.01	1.10	1.14

Table 7.2.1.5
2006 Spring AIMS IRT Item Statistics
Mathematics Grade 7

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.29	0.01	0.88	0.82	35	-0.70	0.01	1.02	1.04
2	1.10	0.01	1.15	1.20	36	0.03	0.01	1.01	1.01
3	-0.07	0.01	1.16	1.29	37	0.07	0.01	0.92	0.81
4	-0.24	0.01	0.92	0.87	38	-0.85	0.01	0.91	0.77
5	-0.14	0.01	1.10	1.21	39	0.31	0.01	0.91	0.83
6	0.18	0.01	0.98	0.93	40	1.74	0.01	1.00	1.07
7	-1.26	0.01	1.05	1.02	41	0.01	0.01	0.87	0.76
8	0.01	0.01	1.08	1.13	42	0.54	0.01	1.06	1.06
9	0.53	0.01	1.05	1.06	43	-0.29	0.01	0.96	0.94
10	-0.26	0.01	1.08	1.11	44	1.74	0.01	1.13	1.24
11	-1.06	0.01	1.01	1.00	45	0.77	0.01	1.21	1.31
12	0.88	0.01	0.89	0.86	46	-0.23	0.01	0.93	0.84
13	0.39	0.01	1.01	0.96	47	-0.07	0.01	1.06	1.09
14	1.29	0.01	1.16	1.25	48	0.51	0.01	1.00	0.97
15	-0.84	0.01	0.96	1.05	49	-1.38	0.01	0.85	0.71
16	0.99	0.01	1.02	1.06	50	0.02	0.01	0.87	0.77
17	1.62	0.01	1.11	1.24	51	0.78	0.01	0.88	0.83
18	0.96	0.01	1.06	1.09	52	-0.64	0.01	1.02	1.44
19	-1.12	0.01	0.96	0.86	53	-1.16	0.01	0.98	1.09
20	0.21	0.01	0.97	0.94	54	-0.57	0.01	0.74	0.55
21	0.48	0.01	1.11	1.11	55	0.50	0.01	0.96	0.94
22	-0.41	0.01	1.02	0.90	56	-0.11	0.01	0.93	0.85
23	-0.40	0.01	1.00	1.17	57	0.45	0.01	0.90	0.84
24	0.76	0.01	0.93	0.88	58	1.22	0.01	1.19	1.28
25	1.49	0.01	1.06	1.14	59	0.16	0.01	0.91	0.83
26	-1.21	0.01	1.05	1.12	60	0.69	0.01	1.13	1.17
27	-0.85	0.01	0.87	0.77	61	0.32	0.01	1.28	1.44
28	-0.65	0.01	1.02	1.14	62	-0.26	0.01	0.92	0.84
29	-0.22	0.01	0.94	0.90	63	-0.46	0.01	1.24	1.43
30	0.65	0.01	0.95	0.89	64	0.88	0.01	0.95	0.92
31	-0.36	0.01	0.93	0.86	65	-0.32	0.01	0.93	0.80
32	0.56	0.01	0.96	0.88	66	-0.99	0.01	0.89	0.94
33	-0.20	0.01	0.89	0.76	67	-0.16	0.01	0.86	0.75
34	0.28	0.01	1.05	1.08	68	0.90	0.01	1.13	1.20

Table 7.2.1.6
2006 Spring AIMS IRT Item Statistics
Mathematics Grade 8

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.95	0.01	1.02	1.02	34	-0.74	0.01	1.04	0.98
2	0.28	0.01	1.01	0.96	35	1.64	0.01	1.08	1.17
3	-1.31	0.01	0.83	0.78	36	1.84	0.01	1.13	1.31
4	-0.14	0.01	0.98	0.96	37	-0.56	0.01	1.06	1.37
5	0.86	0.01	1.06	1.07	38	0.75	0.01	0.97	0.97
6	-1.05	0.01	0.94	0.87	39	-0.38	0.01	1.12	1.29
7	-0.84	0.01	0.97	0.96	40	1.21	0.01	1.07	1.11
8	0.28	0.01	1.02	0.98	41	-0.01	0.01	1.29	1.43
9	-1.22	0.01	0.91	0.71	42	-1.77	0.01	0.91	0.74
10	-0.30	0.01	1.02	1.05	43	1.55	0.01	1.04	1.11
11	1.15	0.01	1.01	1.04	44	0.63	0.01	0.98	0.96
12	0.15	0.01	0.99	0.99	45	0.35	0.01	0.81	0.74
13	-0.80	0.01	0.96	0.92	46	0.97	0.01	1.02	1.05
14	-0.82	0.01	0.94	0.96	47	-0.28	0.01	1.05	1.18
15	0.47	0.01	1.09	1.11	48	-0.12	0.01	1.01	0.99
16	-0.90	0.01	1.02	0.94	49	0.43	0.01	0.96	0.96
17	-0.59	0.01	0.89	0.73	50	0.25	0.01	1.04	1.02
18	0.66	0.01	1.14	1.21	51	-1.18	0.01	0.84	0.59
19	0.56	0.01	0.87	0.83	52	0.24	0.01	0.99	0.94
20	0.54	0.01	0.81	0.74	53	1.69	0.01	1.09	1.21
21	-0.23	0.01	0.93	0.90	54	1.00	0.01	1.09	1.13
22	-0.25	0.01	0.91	0.88	55	-0.13	0.01	1.07	1.10
23	-0.68	0.01	0.88	0.83	56	-0.33	0.01	0.78	0.68
24	-0.68	0.01	0.89	0.84	57	-1.23	0.01	0.96	1.00
25	0.38	0.01	1.01	1.00	58	-0.35	0.01	1.03	1.05
26	-0.06	0.01	0.89	0.77	59	-0.04	0.01	0.99	0.98
27	0.01	0.01	0.91	0.84	60	0.06	0.01	1.00	0.97
28	-1.48	0.01	1.05	0.98	61	-0.24	0.01	1.06	1.16
29	1.27	0.01	1.22	1.33	62	0.26	0.01	1.10	1.14
30	1.48	0.01	1.01	1.06	63	1.94	0.01	1.18	1.37
31	0.50	0.01	1.00	0.96	64	-0.70	0.01	0.96	0.82
32	-0.72	0.01	1.00	1.03	65	0.66	0.01	0.93	0.91
33	1.09	0.01	1.09	1.14	66	-0.16	0.01	0.91	0.85

Table 7.2.1.7
2006 Spring AIMS IRT Item Statistics
Mathematics High School

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-3.06	0.02	0.99	1.14	43	-0.22	0.01	0.97	0.95
2	-0.23	0.01	0.96	0.89	44	1.09	0.01	1.09	1.13
3	-0.40	0.01	0.94	0.84	45	-1.57	0.01	0.98	0.79
4	-1.82	0.01	1.02	1.11	46	0.67	0.01	0.94	0.93
5	-1.87	0.01	0.95	0.88	47	-0.09	0.01	1.10	1.37
6	-0.02	0.01	0.85	0.76	48	0.82	0.01	1.19	1.33
7	0.07	0.01	0.94	0.89	49	-0.59	0.01	0.84	0.69
8	-0.86	0.01	1.06	1.25	50	-0.15	0.01	1.02	1.03
9	0.80	0.01	0.98	0.97	51	1.33	0.01	0.86	0.86
10	0.87	0.01	1.05	1.05	52	0.34	0.01	0.97	0.94
11	-0.31	0.01	0.86	0.75	53	0.46	0.01	1.19	1.34
12	0.63	0.01	1.11	1.12	54	-0.18	0.01	0.97	0.94
13	0.98	0.01	0.93	0.92	55	1.23	0.01	0.82	0.79
14	-0.07	0.01	1.07	1.12	56	-0.46	0.01	1.06	1.33
15	0.33	0.01	1.00	1.03	57	-1.14	0.01	1.06	1.14
16	-1.31	0.01	0.88	0.74	58	-0.22	0.01	0.85	0.75
17	-0.50	0.01	1.07	1.20	59	-1.05	0.01	0.85	0.73
18	0.90	0.01	1.08	1.10	60	0.18	0.01	0.85	0.77
19	1.09	0.01	1.05	1.09	61	0.86	0.01	0.91	0.89
20	-0.95	0.01	0.85	0.78	62	0.53	0.01	0.95	0.92
21	0.31	0.01	1.11	1.18	63	0.36	0.01	0.92	0.85
22	1.96	0.01	1.32	1.69	64	0.32	0.01	1.05	1.04
23	0.62	0.01	1.08	1.08	65	0.22	0.01	1.02	1.02
24	0.12	0.01	0.96	0.96	66	0.88	0.01	1.32	1.42
25	1.03	0.01	1.09	1.13	67	0.58	0.01	1.19	1.24
26	-1.87	0.01	1.00	0.88	68	0.99	0.01	0.98	0.97
27	-1.18	0.01	0.91	0.74	69	-1.03	0.01	0.85	0.86
28	0.45	0.01	0.88	0.85	70	1.11	0.01	1.14	1.20
29	-0.75	0.01	0.87	0.71	71	1.84	0.01	1.20	1.34
30	-0.14	0.01	0.84	0.73	72	-0.58	0.01	0.92	0.85
31	0.15	0.01	1.08	1.08	73	0.75	0.01	0.94	0.91
32	-0.20	0.01	1.00	1.02	74	-0.29	0.01	1.05	1.12
33	0.55	0.01	1.00	0.96	75	0.13	0.01	1.21	1.52
34	-1.85	0.01	0.98	0.83	76	-0.23	0.01	0.81	0.67
35	0.75	0.01	1.03	1.02	77	0.24	0.01	1.01	1.01
36	1.18	0.01	1.07	1.10	78	0.59	0.01	1.10	1.14
37	0.35	0.01	1.09	1.13	79	0.14	0.01	0.94	0.88
38	-0.35	0.01	0.97	1.06	80	0.01	0.01	0.80	0.69
39	0.60	0.01	1.04	1.10	81	0.66	0.01	1.17	1.22
40	-0.70	0.01	0.89	0.77	82	0.57	0.01	1.00	0.95
41	0.53	0.01	0.91	0.87	83	1.51	0.01	0.97	1.05
42	-0.28	0.01	0.87	0.84	84	-0.22	0.01	1.00	0.97

Table 7.2.1.8
2006 Spring AIMS IRT Item Statistics
Reading Grade 3

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-2.32	0.02	1.01	0.66	28	0.05	0.01	0.86	0.77
2	-1.10	0.01	0.99	1.02	29	-1.83	0.01	0.75	0.42
3	-2.35	0.02	1.01	0.75	30	-0.54	0.01	0.88	0.74
4	-0.84	0.01	1.04	1.03	31	0.26	0.01	1.09	1.21
5	-0.87	0.01	0.91	0.82	32	-1.22	0.01	0.88	0.82
6	-1.60	0.01	0.92	0.95	33	-0.33	0.01	1.14	1.23
7	-1.28	0.01	0.82	0.64	34	-1.13	0.01	0.86	0.65
8	-1.52	0.01	0.80	0.48	35	0.05	0.01	0.96	0.88
9	-0.62	0.01	0.94	1.04	36	-1.06	0.01	0.87	0.73
10	0.41	0.01	1.10	1.15	37	0.09	0.01	0.96	0.94
11	0.55	0.01	0.99	0.98	38	-0.13	0.01	1.10	1.19
12	-0.60	0.01	0.87	0.74	39	1.05	0.01	0.93	0.95
13	1.68	0.01	1.05	1.22	40	0.50	0.01	1.10	1.10
14	1.06	0.01	1.07	1.12	41	-0.14	0.01	0.95	0.83
15	1.92	0.01	1.02	1.17	42	-0.25	0.01	1.07	1.18
16	0.57	0.01	1.46	1.77	43	1.45	0.01	1.14	1.31
17	0.15	0.01	0.84	0.77	44	0.47	0.01	1.13	1.22
18	0.87	0.01	1.06	1.11	45	1.44	0.01	0.93	1.00
19	-0.60	0.01	0.81	0.71	46	0.41	0.01	0.95	0.89
20	0.56	0.01	1.32	1.55	47	1.08	0.01	1.09	1.15
21	-0.64	0.01	0.94	0.87	48	1.17	0.01	1.17	1.29
22	1.77	0.01	1.30	1.56	49	1.00	0.01	1.00	1.06
23	0.30	0.01	0.96	0.92	50	0.08	0.01	0.86	0.77
24	-0.11	0.01	0.92	0.83	51	-0.48	0.01	0.84	0.69
25	0.69	0.01	0.99	0.98	52	-0.92	0.01	0.84	0.68
26	-0.40	0.01	0.86	0.74	53	1.73	0.01	1.07	1.28
27	-0.14	0.01	0.89	0.79	54	-0.96	0.01	0.84	0.62

Table 7.2.1.9
2006 Spring AIMS IRT Item Statistics
Reading Grade 4

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.07	0.01	0.93	0.87	28	-0.14	0.01	0.86	0.73
2	0.00	0.01	1.23	1.31	29	0.47	0.01	0.88	0.82
3	0.54	0.01	0.97	0.91	30	-0.73	0.01	0.97	0.86
4	1.12	0.01	1.23	1.35	31	0.08	0.01	0.92	0.81
5	-0.65	0.01	0.95	0.82	32	-0.24	0.01	0.89	0.77
6	0.10	0.01	1.19	1.26	33	-0.29	0.01	0.94	0.80
7	0.59	0.01	1.03	1.01	34	0.38	0.01	0.95	0.91
8	2.30	0.01	1.23	1.83	35	0.46	0.01	0.98	0.94
9	0.27	0.01	1.20	1.34	36	-0.25	0.01	0.92	0.91
10	1.64	0.01	1.58	1.91	37	-0.46	0.01	0.88	0.74
11	-0.20	0.01	0.93	0.80	38	0.41	0.01	1.07	1.06
12	-0.32	0.01	1.07	1.25	39	-0.15	0.01	0.91	0.77
13	0.22	0.01	1.03	1.02	40	0.83	0.01	0.91	0.89
14	0.53	0.01	1.15	1.19	41	0.25	0.01	0.92	0.84
15	-1.10	0.01	0.85	0.64	42	0.26	0.01	1.04	1.09
16	-0.37	0.01	0.92	0.82	43	-0.50	0.01	0.87	0.77
17	-0.44	0.01	1.08	1.15	44	-0.08	0.01	0.87	0.75
18	-1.64	0.01	0.94	0.73	45	-0.84	0.01	0.86	0.71
19	0.85	0.01	1.11	1.14	46	-0.07	0.01	0.94	0.82
20	-0.14	0.01	0.94	0.88	47	1.05	0.01	0.92	0.92
21	-0.94	0.01	0.85	0.73	48	1.86	0.01	1.27	1.67
22	-0.39	0.01	0.92	0.88	49	0.00	0.01	1.04	1.00
23	0.81	0.01	1.10	1.13	50	-1.20	0.01	0.90	0.76
24	0.46	0.01	1.03	1.02	51	-0.76	0.01	0.99	1.21
25	-0.35	0.01	1.08	1.17	52	-1.22	0.01	0.85	0.59
26	-0.23	0.01	0.87	0.75	53	-1.06	0.01	0.84	0.62
27	-0.54	0.01	1.04	1.08	54	-0.26	0.01	0.92	0.83

Table 7.2.1.10
2006 Spring AIMS IRT Item Statistics
Reading Grade 5

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.56	0.01	0.97	0.94	28	0.32	0.01	1.03	1.05
2	-2.04	0.01	1.02	0.89	29	0.23	0.01	1.00	0.98
3	-0.66	0.01	0.90	0.78	30	-0.11	0.01	0.84	0.73
4	0.68	0.01	1.29	1.44	31	0.51	0.01	1.21	1.26
5	-1.27	0.01	1.04	1.09	32	0.51	0.01	1.00	0.97
6	-0.27	0.01	1.00	1.03	33	1.56	0.01	1.11	1.24
7	0.50	0.01	1.07	1.08	34	-0.04	0.01	0.90	0.83
8	0.06	0.01	1.00	0.95	35	0.50	0.01	1.17	1.20
9	-1.15	0.01	0.96	0.78	36	0.44	0.01	1.21	1.31
10	-0.25	0.01	0.90	0.81	37	0.60	0.01	1.13	1.17
11	-1.33	0.01	0.87	0.67	38	-1.18	0.01	0.90	0.80
12	-0.14	0.01	0.88	0.81	39	0.98	0.01	1.11	1.16
13	-0.38	0.01	0.92	0.87	40	-0.67	0.01	0.87	0.76
14	0.56	0.01	1.02	1.03	41	0.20	0.01	0.98	0.94
15	0.62	0.01	0.93	0.91	42	-0.75	0.01	0.87	0.69
16	0.53	0.01	1.13	1.18	43	-0.60	0.01	0.96	1.09
17	0.89	0.01	1.01	1.02	44	-0.09	0.01	1.02	1.09
18	0.56	0.01	1.20	1.32	45	1.02	0.01	0.96	0.97
19	0.48	0.01	0.96	0.92	46	0.74	0.01	0.90	0.87
20	-0.07	0.01	0.96	0.99	47	-0.30	0.01	0.88	0.76
21	0.31	0.01	0.95	0.89	48	-0.25	0.01	0.89	0.79
22	-0.86	0.01	0.83	0.73	49	0.39	0.01	0.92	0.88
23	0.90	0.01	1.26	1.36	50	-0.02	0.01	0.87	0.77
24	0.77	0.01	1.13	1.17	51	0.46	0.01	0.97	0.94
25	-1.28	0.01	0.96	0.95	52	0.04	0.01	0.92	0.86
26	0.18	0.01	1.08	1.11	53	0.08	0.01	0.92	0.85
27	0.30	0.01	0.94	0.88	54	0.50	0.01	1.08	1.05

Table 7.2.1.11
2006 Spring AIMS IRT Item Statistics
Reading Grade 6

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.02	0.01	1.01	0.99	28	0.53	0.01	1.13	1.18
2	-2.00	0.01	0.93	0.57	29	0.30	0.01	0.92	0.92
3	-0.74	0.01	0.91	0.79	30	0.94	0.01	1.08	1.12
4	-1.19	0.01	0.92	0.67	31	0.18	0.01	0.93	0.86
5	-0.08	0.01	1.12	1.19	32	0.01	0.01	0.98	0.93
6	-1.55	0.01	1.01	1.03	33	0.14	0.01	0.95	0.90
7	-0.15	0.01	0.97	0.94	34	-0.04	0.01	1.24	1.35
8	-1.02	0.01	1.03	1.02	35	0.87	0.01	1.17	1.25
9	-1.39	0.01	1.01	1.01	36	-1.50	0.01	0.90	0.87
10	-0.61	0.01	1.04	1.14	37	1.75	0.01	1.19	1.40
11	-1.95	0.01	0.93	0.79	38	-0.27	0.01	0.95	0.92
12	-1.30	0.01	0.91	0.75	39	0.98	0.01	1.01	1.05
13	-0.03	0.01	0.93	0.85	40	-0.60	0.01	0.94	0.91
14	-0.27	0.01	0.84	0.69	41	0.24	0.01	0.97	0.95
15	0.66	0.01	1.05	1.08	42	0.13	0.01	1.07	1.06
16	-0.03	0.01	0.93	0.85	43	0.82	0.01	0.97	0.97
17	0.33	0.01	0.96	0.91	44	1.30	0.01	1.14	1.26
18	0.41	0.01	0.96	0.91	45	1.26	0.01	1.12	1.21
19	-0.25	0.01	1.07	1.12	46	1.27	0.01	1.13	1.22
20	-0.36	0.01	0.89	0.79	47	-0.31	0.01	0.98	0.93
21	1.41	0.01	1.04	1.14	48	-0.36	0.01	0.90	0.81
22	0.60	0.01	1.08	1.14	49	-0.02	0.01	1.11	1.19
23	0.33	0.01	1.11	1.20	50	0.01	0.01	0.90	0.80
24	-0.55	0.01	0.97	0.95	51	1.48	0.01	1.15	1.31
25	-1.32	0.01	0.83	0.69	52	0.50	0.01	1.03	1.05
26	-0.89	0.01	1.00	0.90	53	-0.23	0.01	0.84	0.69
27	0.20	0.01	0.89	0.84	54	1.21	0.01	1.21	1.33

Table 7.2.1.12
2006 Spring AIMS IRT Item Statistics
Reading Grade 7

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.83	0.01	0.99	0.93	28	0.75	0.01	1.18	1.22
2	0.39	0.01	1.18	1.24	29	1.06	0.01	1.07	1.13
3	-0.94	0.01	0.89	0.72	30	0.25	0.01	0.87	0.80
4	-0.10	0.01	0.93	0.89	31	0.45	0.01	0.88	0.83
5	-0.42	0.01	0.99	0.96	32	0.63	0.01	1.06	1.10
6	-1.09	0.01	1.04	1.23	33	-0.47	0.01	0.92	0.79
7	0.15	0.01	0.96	0.91	34	0.70	0.01	1.09	1.13
8	-1.11	0.01	0.87	0.70	35	0.24	0.01	0.89	0.81
9	0.32	0.01	1.06	1.07	36	1.98	0.01	1.13	1.44
10	-1.30	0.01	0.88	0.71	37	0.98	0.01	1.28	1.40
11	0.22	0.01	1.14	1.18	38	-0.21	0.01	0.95	0.95
12	0.34	0.01	0.99	0.98	39	0.45	0.01	1.16	1.21
13	1.45	0.01	1.17	1.26	40	-0.35	0.01	0.94	0.87
14	0.24	0.01	0.89	0.83	41	-0.02	0.01	1.10	1.19
15	-0.50	0.01	0.82	0.65	42	1.33	0.01	1.27	1.43
16	0.36	0.01	1.07	1.12	43	0.13	0.01	1.04	1.07
17	-0.07	0.01	0.89	0.82	44	0.45	0.01	0.96	0.93
18	-0.50	0.01	0.80	0.63	45	0.77	0.01	1.14	1.19
19	-0.70	0.01	0.81	0.63	46	0.69	0.01	0.98	0.95
20	-0.49	0.01	0.94	0.91	47	1.22	0.01	1.01	1.04
21	0.16	0.01	1.03	1.03	48	-0.58	0.01	0.85	0.69
22	-1.37	0.01	0.97	1.01	49	1.28	0.01	1.04	1.11
23	0.12	0.01	1.06	1.07	50	0.12	0.01	0.97	0.96
24	0.42	0.01	0.98	0.93	51	-0.10	0.01	0.94	0.89
25	0.91	0.01	1.07	1.09	52	-0.22	0.01	0.90	0.84
26	-0.03	0.01	0.93	0.87	53	-0.30	0.01	0.99	0.94
27	-0.11	0.01	0.99	1.04	54	0.62	0.01	1.08	1.09

Table 7.2.1.13
2006 Spring AIMS IRT Item Statistics
Reading Grade 8

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.53	0.01	0.99	0.97	28	-0.16	0.01	1.02	1.02
2	0.35	0.01	1.10	1.12	29	-0.53	0.01	0.95	0.91
3	-0.04	0.01	0.96	0.88	30	-0.35	0.01	0.83	0.73
4	-0.48	0.01	0.97	0.97	31	-0.28	0.01	0.96	0.98
5	-0.91	0.01	0.92	0.88	32	-0.06	0.01	1.11	1.21
6	-0.37	0.01	1.00	0.97	33	0.08	0.01	0.94	0.92
7	-1.00	0.01	1.05	1.10	34	0.61	0.01	1.18	1.25
8	0.75	0.01	1.19	1.24	35	0.95	0.01	1.08	1.13
9	-0.11	0.01	1.06	1.06	36	-0.22	0.01	0.90	0.81
10	-0.38	0.01	0.93	0.84	37	-0.52	0.01	0.97	0.96
11	-0.06	0.01	1.03	0.99	38	0.85	0.01	1.16	1.21
12	0.47	0.01	0.96	0.95	39	1.30	0.01	1.12	1.22
13	0.51	0.01	1.02	1.01	40	-1.07	0.01	0.87	0.72
14	-1.02	0.01	0.98	0.83	41	0.85	0.01	0.99	1.00
15	0.17	0.01	1.02	1.04	42	-1.02	0.01	0.86	0.79
16	-0.24	0.01	1.00	1.05	43	1.38	0.01	1.09	1.20
17	0.05	0.01	0.86	0.78	44	0.27	0.01	1.06	1.03
18	-0.93	0.01	0.95	1.15	45	0.63	0.01	1.17	1.23
19	0.58	0.01	0.95	0.93	46	0.03	0.01	0.92	0.86
20	0.61	0.01	1.06	1.10	47	0.03	0.01	0.87	0.80
21	0.61	0.01	1.17	1.28	48	0.49	0.01	0.99	0.98
22	-0.06	0.01	0.97	0.93	49	-0.66	0.01	0.97	0.85
23	-1.54	0.01	0.73	0.54	50	0.20	0.01	0.94	0.90
24	1.67	0.01	1.17	1.37	51	-0.17	0.01	0.91	0.82
25	1.32	0.01	1.11	1.20	52	-0.30	0.01	1.02	0.96
26	-1.34	0.01	0.98	0.89	53	-0.07	0.01	0.98	0.94
27	0.67	0.01	1.08	1.10	54	-0.15	0.01	0.97	0.92

Table 7.2.1.14
2006 Spring AIMS IRT Item Statistics
Reading High School

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.02	0.01	0.96	0.92	28	-0.17	0.01	0.93	0.96
2	0.13	0.01	1.08	1.11	29	0.37	0.01	1.04	1.12
3	-0.88	0.01	1.05	1.04	30	0.15	0.01	0.97	1.05
4	-0.21	0.01	1.03	1.08	31	0.24	0.01	0.95	0.88
5	0.28	0.01	1.11	1.14	32	0.69	0.01	0.93	0.88
6	-1.30	0.01	0.98	0.92	33	0.07	0.01	0.95	0.89
7	-0.68	0.01	1.11	1.27	34	-0.28	0.01	0.93	0.92
8	1.37	0.01	1.01	1.05	35	0.72	0.01	0.90	0.86
9	-0.31	0.01	0.93	0.86	36	-0.54	0.01	0.94	0.88
10	0.50	0.01	1.09	1.10	37	1.16	0.01	1.05	1.09
11	0.67	0.01	1.14	1.15	38	-1.53	0.01	0.88	0.64
12	-0.67	0.01	0.94	0.88	39	-1.20	0.01	0.86	0.68
13	0.11	0.01	1.08	1.21	40	0.03	0.01	0.86	0.75
14	-0.36	0.01	0.89	0.77	41	0.62	0.01	0.96	0.94
15	-0.74	0.01	0.88	0.77	42	0.93	0.01	1.02	1.02
16	1.87	0.01	1.20	1.44	43	-0.27	0.01	0.90	0.80
17	-0.75	0.01	0.82	0.64	44	1.47	0.01	1.05	1.14
18	0.24	0.01	0.93	0.90	45	2.05	0.01	1.01	1.07
19	0.63	0.01	1.16	1.21	46	0.64	0.01	1.02	1.01
20	1.28	0.01	1.08	1.13	47	-0.23	0.01	0.83	0.72
21	-0.27	0.01	0.88	0.77	48	1.43	0.01	1.17	1.27
22	0.75	0.01	1.07	1.08	49	0.54	0.01	1.04	1.06
23	-0.53	0.01	1.12	1.40	50	0.28	0.01	1.02	1.06
24	0.38	0.01	1.12	1.24	51	0.88	0.01	1.15	1.19
25	0.04	0.01	1.02	1.04	52	0.32	0.01	0.95	0.92
26	1.33	0.01	1.04	1.10	53	1.39	0.01	0.97	1.02
27	-0.18	0.01	0.86	0.81	54	-0.72	0.01	0.92	0.83

7.3 Scaling Methods

In 2005, a scale of measurement was determined for each of the AIMS CRT tests. The AIMS CRT tests in grades 3-8 were placed on a vertical scale through the use of external anchor items comprised of *TerraNova* NRT items for which item parameters had been obtained during national standardization. The desired AIMS scales for Grades 3-8 ranged from 200 to 800. The high school tests were placed on a separate scale that ranged from 500 to 900 with an approximate mean of 700. The standard deviations were 40, 50, and 25 for mathematics, reading, and writing, respectively. The AIMS high school assessments were not placed on the grades 3-8 vertical scale. A detailed description concerning the development of the scale of measurement for the AIMS can be found in section 7.2.1 of the 2005 AIMS Technical Report and is available from the Arizona Department of Education: <http://www.ade.az.gov/standards/aims/Administering/AIMSTechReport2005.pdf>.

7.3.1 Long-term Plan for Identifying/Correcting Drift

Because 2006 was only the second year in reporting AIMS performance on the scale of measurement determined in 2005, scale drift was not a concern for the 2006 AIMS administration. In order to identify and correct for drift in later administrations, a set of anchor items from the 2005 administration has been reserved for use in future years. The anchor set will be re-administered in a subsequent administration and the resulting item parameters will be compared to those obtained in the 2005 administration to examine and correct for any scale drift.

7.4 Annual Equating

7.4.1 Reading and Mathematics

The 2006 AIMS Reading and Mathematics tests were equated using a common-item, non-equivalent groups design. A set of anchor items was selected from the 2005 operational assessments. The anchor items were selected with two principles in mind. First, the subset of anchor items should represent the content covered by the full AIMS assessment. Second, the subset of anchor items should be representative of the distribution of item difficulties for the full assessment. All items, including dual purpose items, were eligible to be considered anchor items. Table 7.4.1.1 presents the number of anchor items for each grade/subject area. Tables 7.4.1.2 and 7.4.1.3 present representation of content charts for the 2006 anchor items compared against the 2005 operational form. Tables 7.4.1.4 and 7.4.1.5 present descriptive statistics for the 2006 anchor item difficulties and the 2005 operational form.

Table 7.4.1.1
Spring 2006 AIMS Anchor Items

Content	Grade	RD CRT TOTAL (CRT + NRT/CRT)	Anchor items (CRT + NRT/CRT): Spring 2005 and 2006
Mathematics	3	72	52
	4	70	50
	5	68	47
	6	68	43
	7	68	46
	8	66	47
	HS	85	39
Reading	3	54	32
	4	54	34
	5	54	34
	6	54	38
	7	54	32
	8	54	34
	HS	54	24

Table 7.4.1.2 Representation of Content by 2006 Anchor Sets, Mathematics

Content and Grade	Items		Strand and Concept															Total
			1			2			3				4			5		
			1	2	3	1	2	3/4	1	2	1/2	3/4	1/2	3	4	3/4	1/2	
MA																		
3	2005 AIMS	N	11	10	4	4	4	4			8	8	6			9	4	72
		Pct	15.28	13.89	5.56	5.56	5.56	5.56			11.11	11.11	8.33			12.50	5.56	
	2006 Anchor	N	6	8	4	2	4	3			7	5	5			5	3	52
		Pct	11.54	15.38	7.69	3.85	7.69	5.77			13.46	9.62	9.62			9.62	5.77	
4	2005 AIMS	N	9	8	4	4	4	4			8	8	7			10	4	70
		Pct	12.86	11.43	5.71	5.71	5.71	5.71			11.43	11.43	10.00			14.29	5.71	
	2006 Anchor	N	6	6	3	2	4	2			7	4	7			6	3	50
		Pct	12.00	12.00	6.00	4.00	8.00	4.00			14.00	8.00	14.00			12.00	6.00	
5	2005 AIMS	N	7	9	4	4	4	4			8	8	7			9	4	68
		Pct	10.29	13.24	5.88	5.88	5.88	5.88			11.76	11.76	10.29			13.24	5.88	
	2006 Anchor	N	4	7	3	4	2	3			6	4	5			6	3	47
		Pct	8.51	14.89	6.38	8.51	4.26	6.38			12.77	8.51	10.64			12.77	6.38	
6	2005 AIMS	N	4	7	4	4	4	6			8	8	8			11	4	68
		Pct	5.88	10.29	5.88	5.88	5.88	8.82			11.76	11.76	11.76			16.18	5.88	
	2006 Anchor	N	2	3	4	3	3	4			5	4	4			9	2	43
		Pct	4.65	6.98	9.30	6.98	6.98	9.30			11.63	9.30	9.30			20.93	4.65	
7	2005 AIMS	N	5	6	4	6	4	4			8	8	9			10	4	68
		Pct	7.35	8.82	5.88	8.82	5.88	5.88			11.76	11.76	13.24			14.71	5.88	
	2006 Anchor	N	2	5	3	4	4	1			6	5	6			7	3	46
		Pct	4.35	10.87	6.52	8.70	8.70	2.17			13.04	10.87	13.04			15.22	6.52	
8	2005 AIMS	N	4	4	4	7	4	4	4	4			10	9	4	4	4	66
		Pct	6.06	6.06	6.06	10.61	6.06	6.06	6.06	6.06	6.06			15.15	13.64	6.06	6.06	6.06
	2006 Anchor	N	2	3	3	7	2	2	2	3			8	5	3	4	3	47
		Pct	4.26	6.38	6.38	14.89	4.26	4.26	4.26	6.38			17.02	10.64	6.38	8.51	6.38	

Note: Anchor items include CRT items as well as dual purpose NRT/CRT items.

Table 7.4.1.3 Representation of Content by 2006 Anchor Sets, Reading

Content and Grade	Items		Strand and Concept									Total
			1			2		3				
			1	3	4	6	1	2	1	2	3	
RD												
3	2005 AIMS	N	4	5	6	9	12		6	6	6	54
		Pct	7.41	9.26	11.11	16.67	22.22		11.11	11.11	11.11	
	2006 Anchor	N	3	4	3	7	8		3	0	4	32
		Pct	9.38	12.50	9.38	21.88	25.00		9.38	0.00	12.50	
4	2005 AIMS	N			4	8	17		13	6	6	54
		Pct			7.41	14.81	31.48		24.07	11.11	11.11	
	2006 Anchor	N			3	6	9		11	3	2	34
		Pct			8.82	17.65	26.47		32.35	8.82	5.88	
5	2005 AIMS	N			6	6	17		13	6	6	54
		Pct			11.11	11.11	31.48		24.07	11.11	11.11	
	2006 Anchor	N			2	5	13		11	1	2	34
		Pct			5.88	14.71	38.24		32.35	2.94	5.88	
6	2005 AIMS	N			6	6	17		13	6	6	54
		Pct			11.11	11.11	31.48		24.07	11.11	11.11	
	2006 Anchor	N			4	4	12		12	3	3	38
		Pct			10.53	10.53	31.58		31.58	7.89	7.89	
7	2005 AIMS	N			6	6	13	4	12	7	6	54
		Pct			11.11	11.11	24.07	7.41	22.22	12.96	11.11	
	2006 Anchor	N			3	4	10	4	8	1	2	32
		Pct			9.38	12.50	31.25	12.50	25.00	3.13	6.25	
8	2005 AIMS	N			4	5	14	4	13	8	6	54
		Pct			7.41	9.26	25.93	7.41	24.07	14.81	11.11	
	2006 Anchor	N			3	3	8	3	7	5	5	34
		Pct			8.82	8.82	23.53	8.82	20.59	14.71	14.71	

Note: Anchor items include CRT items as well as dual purpose NRT/CRT items.

Table 7.4.1.4 Representation of Difficulty by 2006 Anchor Sets, Mathematics

Content	Grade	Statistic	Difficulty Parameter		P-Value	
			Entire 2005	All Anchor	Entire 2005	All Anchor
			Test	Items	Test	Items
MA	3	N	72	52	72	52
		Min	-3.4620	-3.4620	0.37	0.37
		Max	1.9507	1.9507	0.98	0.98
		Mean	0.0000	0.0178	0.71	0.70
		Std Dev	1.0798	1.1117	0.16	0.16
MA	4	N	70	50	70	50
		Min	-1.8736	-1.8736	0.35	0.35
		Max	2.1376	2.1376	0.94	0.94
		Mean	0.0000	-0.0406	0.72	0.73
		Std Dev	0.8970	0.8550	0.14	0.13
MA	5	N	68	47	68	47
		Min	-2.0642	-1.7301	0.32	0.36
		Max	2.2576	2.0354	0.94	0.92
		Mean	0.0000	-0.0112	0.71	0.71
		Std Dev	0.9213	0.8666	0.14	0.13
MA	6	N	68	43	68	43
		Min	-2.1025	-2.1025	0.29	0.29
		Max	2.4377	2.4377	0.94	0.94
		Mean	0.0000	0.0478	0.71	0.70
		Std Dev	0.8425	0.8148	0.13	0.12
MA	7	N	68	46	68	46
		Min	-2.5031	-1.3759	0.40	0.40
		Max	1.7411	1.7411	0.96	0.89
		Mean	0.0000	0.0835	0.70	0.69
		Std Dev	0.9255	0.8499	0.14	0.14
MA	8	N	66	47	66	47
		Min	-1.7704	-1.7704	0.32	0.34
		Max	2.0408	1.9423	0.92	0.92
		Mean	0.0000	-0.0068	0.69	0.69
		Std Dev	0.8903	0.8960	0.15	0.15

Note: Anchor items consist of CRT items and dual purpose NRT/CRT items

Table 7.4.1.5 Representation of Difficulty by 2006 Anchor Sets, Reading

Content	Grade	Statistic	Difficulty Parameter		P-Value	
			Entire 2005	All Anchor	Entire 2005	All Anchor
			Test	Items	Test	Items
RD	3	N	54	32	54	32
		Min	-2.3521	-2.3521	0.33	0.33
		Max	1.9157	1.9157	0.94	0.94
		Mean	0.0000	-0.0460	0.67	0.67
		Std Dev	0.9774	1.0639	0.15	0.16
RD	4	N	54	34	54	34
		Min	-1.6400	-1.6400	0.26	0.38
		Max	2.6388	1.8556	0.90	0.90
		Mean	0.0000	-0.0979	0.70	0.71
		Std Dev	0.8360	0.7704	0.13	0.12
RD	5	N	54	34	54	34
		Min	-2.0399	-2.0399	0.40	0.40
		Max	1.5618	1.5618	0.93	0.93
		Mean	0.0000	0.0482	0.68	0.67
		Std Dev	0.6896	0.7960	0.11	0.12
RD	6	N	54	38	54	38
		Min	-2.0001	-2.0001	0.39	0.44
		Max	1.7333	1.4788	0.93	0.93
		Mean	0.0000	-0.1094	0.69	0.70
		Std Dev	0.9174	0.9238	0.14	0.14
RD	7	N	54	32	54	32
		Min	-1.8296	-1.8296	0.32	0.32
		Max	1.9844	1.9844	0.91	0.91
		Mean	0.0000	0.1123	0.68	0.66
		Std Dev	0.7080	0.7727	0.12	0.13
RD	8	N	54	34	54	34
		Min	-1.8217	-1.5395	0.36	0.36
		Max	1.6659	1.6659	0.91	0.89
		Mean	0.0000	-0.0316	0.67	0.68
		Std Dev	0.7989	0.7845	0.13	0.13

Note: Anchor items consist of CRT items and dual purpose NRT/CRT items

A fixed-parameter equating was implemented within WINSTEPS in order to link the 2006 assessment to the operational reporting scale. This is implemented by constraining the 2006 parameter estimates for the common anchor items to equal the final parameter estimates obtained in the 2005 AIMS calibration analyses. Displacement statistics that estimate the difference between the fixed parameter and the estimate had the item parameter not been constrained were evaluated for each anchor item. The displacement statistics indicated that the differences between the fixed parameters and their estimated values were negligible.

7.4.2 Writing

In order to expedite score reporting, the Writing prompts administered in 2006 were taken from a prompt bank that had been linked to the AIMS writing scale prior to actual administration. Appendix C contains the AIMS Writing Assessment Pre-equating Study technical report. Further information concerning the pre-equating of the AIMS writing prompts is provided in this report.

7.4.3 Scoring and Standard Error of Measurement

Item response theory makes available two types of scoring: number-correct and item-pattern. With number-correct scoring, a student's number-correct score (or raw score) is converted to a scale score. Item-pattern scoring calculates a student's scale score, taking into account not only how many items a student answered correctly, but also which items, and the characteristics of each item. For groups of 25 or more students, the two methods produce tau-equivalent results. Number-correct scoring was used to derive scales scores for the AIMS CRT tests, while the AIMS NRT tests were scored using item-pattern scoring with *TerraNova* national standardization item parameters.

Typically, a test score is obtained from a single observation of behavior and represents an estimate of the trait being measured. As an estimate, an observed test score contains some measurement error and does not perfectly reflect an individual's true score. The degree of measurement error in a test score can be estimated using a statistic called the standard error of measurement (SEM).

A student's exact true score cannot be known. The true score is defined as the average test score that would result if the test could be administered repeatedly without the effects of practice or fatigue. The standard error of measurement is an estimate of the standard deviation of an individual's observed scores from these repeated administrations. For practical purposes, this statistic can be used to obtain a range within which a student's true score is likely to fall. Using item response theory, the standard error of measurement can be calculated for every possible scale score. These SEM values can be computed for both number-correct and item-pattern scoring.

From a single administration, a student's true score can be expected to fall within one standard error of measurement of that student's observed score 68 percent of the time, and within two standard errors of the observed score 95 percent of the time. An observed score, therefore, should not be regarded as a student's true score but as a point within a range that probably includes a student's true score.

Tables 7.4.3.1 through 7.4.3.22 present raw score to scale score conversion tables and IRT conditional standard errors of measurement for all AIMS CRT tests. Tables 7.4.3.23 through 7.4.3.28 present IRT conditional standard errors of measurement for all AIMS NRT tests.

Table 7.4.3.1
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 3

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	43	37	403	11
1	201	43	38	406	11
2	232	31	39	409	11
3	251	26	40	411	11
4	265	22	41	414	11
5	276	20	42	417	11
6	285	19	43	420	11
7	293	17	44	423	11
8	300	17	45	425	11
9	306	16	46	428	11
10	312	15	47	431	11
11	317	15	48	434	11
12	322	14	49	437	11
13	327	14	50	440	11
14	331	13	51	444	12
15	335	13	52	447	12
16	339	13	53	450	12
17	343	12	54	454	12
18	347	12	55	457	12
19	350	12	56	461	12
20	354	12	57	465	13
21	357	12	58	469	13
22	360	11	59	473	13
23	363	11	60	477	14
24	366	11	61	482	14
25	369	11	62	487	15
26	372	11	63	493	15
27	375	11	64	499	16
28	378	11	65	505	17
29	381	11	66	513	18
30	384	11	67	522	20
31	387	11	68	532	22
32	389	11	69	545	25
33	392	11	70	563	30
34	395	11	71	592	42
35	398	11	72	650	82
36	400	11			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.2
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 4

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	230	41	36	429	12
1	230	41	37	432	12
2	253	32	38	435	12
3	272	27	39	438	12
4	286	24	40	441	12
5	297	21	41	444	12
6	307	20	42	447	12
7	315	18	43	450	12
8	322	17	44	453	12
9	328	17	45	456	12
10	334	16	46	460	12
11	340	15	47	463	12
12	345	15	48	466	12
13	350	14	49	470	13
14	354	14	50	473	13
15	359	14	51	477	13
16	363	13	52	481	13
17	367	13	53	485	13
18	371	13	54	489	14
19	374	13	55	493	14
20	378	13	56	497	14
21	382	12	57	502	15
22	385	12	58	507	15
23	388	12	59	512	15
24	392	12	60	517	16
25	395	12	61	523	17
26	398	12	62	530	18
27	401	12	63	537	18
28	404	12	64	545	20
29	408	12	65	554	21
30	411	12	66	565	23
31	414	12	67	579	27
32	417	12	68	599	33
33	420	12	69	631	45
34	423	12	70	675	73
35	426	12			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.3
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 5

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	255	51	35	460	11
1	273	41	36	463	11
2	302	29	37	466	11
3	320	24	38	468	11
4	333	21	39	471	11
5	343	19	40	474	11
6	351	18	41	477	11
7	359	17	42	480	11
8	365	16	43	482	11
9	371	15	44	485	11
10	376	15	45	488	11
11	381	14	46	491	11
12	386	14	47	495	11
13	391	13	48	498	11
14	395	13	49	501	12
15	399	13	50	504	12
16	403	12	51	508	12
17	406	12	52	511	12
18	410	12	53	515	12
19	413	12	54	519	13
20	416	12	55	523	13
21	420	11	56	527	13
22	423	11	57	532	14
23	426	11	58	537	14
24	429	11	59	542	15
25	432	11	60	548	16
26	435	11	61	555	17
27	438	11	62	562	18
28	441	11	63	570	19
29	443	11	64	580	21
30	446	11	65	593	24
31	449	11	66	611	29
32	452	11	67	640	41
33	455	11	68	700	85
34	457	11			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.4
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 6

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	270	44	35	473	12
1	270	44	36	476	12
2	298	33	37	479	12
3	318	27	38	482	12
4	332	24	39	485	12
5	344	22	40	488	12
6	353	20	41	491	12
7	361	19	42	494	12
8	369	18	43	497	12
9	375	17	44	501	12
10	381	16	45	504	12
11	387	16	46	507	12
12	392	15	47	511	13
13	397	15	48	514	13
14	401	14	49	518	13
15	406	14	50	522	13
16	410	14	51	526	13
17	414	13	52	530	14
18	418	13	53	534	14
19	422	13	54	538	14
20	425	13	55	543	15
21	429	13	56	548	15
22	432	12	57	553	16
23	436	12	58	558	16
24	439	12	59	564	17
25	442	12	60	571	18
26	445	12	61	578	19
27	449	12	62	587	20
28	452	12	63	596	22
29	455	12	64	608	24
30	458	12	65	622	27
31	461	12	66	642	33
32	464	12	67	675	46
33	467	12	68	725	79
34	470	12			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.5
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 7

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	290	49	35	496	11
1	300	44	36	499	11
2	331	31	37	502	11
3	350	26	38	505	11
4	363	23	39	508	11
5	374	20	40	511	11
6	383	19	41	514	11
7	390	18	42	517	11
8	397	17	43	520	12
9	403	16	44	523	12
10	409	15	45	526	12
11	414	15	46	529	12
12	419	14	47	533	12
13	424	14	48	536	12
14	428	14	49	540	12
15	432	13	50	543	13
16	436	13	51	547	13
17	440	13	52	551	13
18	444	12	53	555	13
19	447	12	54	559	14
20	451	12	55	563	14
21	454	12	56	568	14
22	457	12	57	573	15
23	461	12	58	578	15
24	464	12	59	584	16
25	467	12	60	590	17
26	470	11	61	597	18
27	473	11	62	605	19
28	476	11	63	614	21
29	479	11	64	624	23
30	482	11	65	638	26
31	485	11	66	657	31
32	488	11	67	688	44
33	490	11	68	740	79
34	493	11			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.6
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT Grade 8

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	300	46	34	513	13
1	300	46	35	517	13
2	328	35	36	520	13
3	348	29	37	523	13
4	364	25	38	527	13
5	376	23	39	530	13
6	386	21	40	534	13
7	394	20	41	538	13
8	402	19	42	541	13
9	409	18	43	545	13
10	416	17	44	549	14
11	422	17	45	553	14
12	427	16	46	556	14
13	432	16	47	561	14
14	437	15	48	565	14
15	442	15	49	569	14
16	447	15	50	573	15
17	451	14	51	578	15
18	455	14	52	583	15
19	459	14	53	588	16
20	463	14	54	593	16
21	467	14	55	599	17
22	471	13	56	605	17
23	475	13	57	611	18
24	478	13	58	619	19
25	482	13	59	626	20
26	486	13	60	635	21
27	489	13	61	645	23
28	493	13	62	658	26
29	496	13	63	673	29
30	500	13	64	694	35
31	503	13	65	729	49
32	506	13	66	800	100
33	510	13			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.7
2006 Spring AIMS Raw Score to Scale Score Table
Mathematics CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	35	43	671	8
1	500	35	44	673	8
2	525	25	45	675	8
3	541	21	46	677	8
4	552	18	47	679	8
5	560	17	48	681	8
6	568	15	49	683	8
7	574	14	50	685	8
8	580	14	51	687	8
9	585	13	52	689	8
10	590	12	53	691	8
11	594	12	54	693	8
12	598	11	55	695	8
13	601	11	56	697	8
14	605	11	57	699	9
15	608	11	58	701	9
16	611	10	59	703	9
17	614	10	60	706	9
18	617	10	61	708	9
19	620	10	62	710	9
20	623	9	63	713	9
21	625	9	64	715	9
22	628	9	65	718	9
23	630	9	66	720	10
24	633	9	67	723	10
25	635	9	68	726	10
26	637	9	69	729	10
27	639	9	70	732	10
28	642	9	71	735	11
29	644	9	72	739	11
30	646	8	73	742	11
31	648	8	74	746	12
32	650	8	75	751	13
33	652	8	76	755	13
34	654	8	77	761	14
35	656	8	78	767	15
36	658	8	79	774	16
37	660	8	80	782	18
38	662	8	81	792	20
39	664	8	82	807	25
40	666	8	83	832	35
41	668	8	84	900	92
42	670	8			

Note. SEM is the standard error of measurement for the scale score. High school mathematics scale scores are not on the same vertical scale as grades 3-8.

Table 7.4.3.8
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 3

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	55	28	410	12
1	223	42	29	414	12
2	253	30	30	418	12
3	272	25	31	422	13
4	285	22	32	426	13
5	296	20	33	429	13
6	306	19	34	433	13
7	314	18	35	437	13
8	321	17	36	441	13
9	327	16	37	446	13
10	333	16	38	450	13
11	339	15	39	454	14
12	344	15	40	459	14
13	349	14	41	464	14
14	354	14	42	469	15
15	359	14	43	474	15
16	363	13	44	480	15
17	368	13	45	486	16
18	372	13	46	492	17
19	376	13	47	499	18
20	380	13	48	507	19
21	384	13	49	516	20
22	388	13	50	527	22
23	392	13	51	540	25
24	395	12	52	559	30
25	399	12	53	589	42
26	403	12	54	640	76
27	407	12			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.9
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 4

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	220	68	28	427	11
1	265	38	29	430	11
2	292	27	30	433	11
3	309	23	31	436	11
4	321	20	32	439	11
5	330	18	33	443	11
6	338	17	34	446	11
7	345	16	35	449	11
8	351	15	36	453	12
9	357	14	37	456	12
10	362	14	38	460	12
11	367	13	39	464	12
12	371	13	40	468	12
13	375	13	41	472	13
14	379	12	42	477	13
15	383	12	43	481	13
16	387	12	44	486	14
17	391	12	45	491	14
18	394	11	46	497	15
19	398	11	47	504	16
20	401	11	48	511	17
21	404	11	49	519	18
22	408	11	50	529	20
23	411	11	51	541	23
24	414	11	52	558	28
25	417	11	53	586	39
26	420	11	54	660	99
27	423	11			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.10
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 5

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	240	65	28	453	11
1	279	41	29	456	12
2	308	29	30	459	12
3	326	24	31	463	12
4	338	21	32	466	12
5	349	19	33	469	12
6	357	18	34	473	12
7	365	17	35	476	12
8	372	16	36	480	12
9	378	15	37	484	12
10	383	15	38	487	12
11	389	14	39	491	13
12	393	14	40	495	13
13	398	13	41	500	13
14	403	13	42	504	14
15	407	13	43	509	14
16	411	13	44	514	14
17	415	12	45	519	15
18	418	12	46	525	16
19	422	12	47	532	17
20	426	12	48	539	18
21	429	12	49	547	19
22	433	12	50	557	21
23	436	12	51	570	24
24	439	12	52	587	29
25	443	12	53	616	41
26	446	12	54	675	83
27	449	11			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.11
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 6

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	250	58	28	459	12
1	278	42	29	463	12
2	308	30	30	466	12
3	326	25	31	470	12
4	339	22	32	473	12
5	350	20	33	477	12
6	359	18	34	481	12
7	367	17	35	484	12
8	374	16	36	488	13
9	380	16	37	492	13
10	386	15	38	496	13
11	391	15	39	500	13
12	396	14	40	505	13
13	401	14	41	509	14
14	406	14	42	514	14
15	410	13	43	519	14
16	414	13	44	524	15
17	419	13	45	530	16
18	423	13	46	536	16
19	426	13	47	543	17
20	430	12	48	551	18
21	434	12	49	559	20
22	438	12	50	570	22
23	441	12	51	583	25
24	445	12	52	601	30
25	448	12	53	630	41
26	452	12	54	690	84
27	455	12			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.12
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 7

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	260	61	28	477	13
1	289	44	29	481	13
2	320	32	30	485	13
3	340	26	31	488	13
4	353	23	32	492	13
5	365	21	33	496	13
6	374	19	34	500	13
7	382	18	35	503	13
8	389	17	36	507	13
9	396	17	37	511	13
10	402	16	38	516	14
11	408	15	39	520	14
12	413	15	40	525	14
13	418	15	41	529	14
14	423	14	42	534	15
15	427	14	43	539	15
16	432	14	44	545	16
17	436	13	45	551	16
18	440	13	46	557	17
19	444	13	47	565	18
20	448	13	48	573	19
21	452	13	49	582	21
22	455	13	50	593	23
23	459	13	51	607	26
24	463	13	52	626	32
25	467	13	53	657	44
26	470	13	54	720	89
27	474	13			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.13
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT Grade 8

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	270	50	28	482	14
1	270	50	29	486	14
2	305	36	30	490	14
3	326	30	31	494	14
4	342	26	32	498	14
5	354	24	33	502	15
6	365	22	34	507	15
7	374	21	35	511	15
8	382	20	36	516	15
9	390	19	37	520	15
10	396	18	38	525	15
11	403	17	39	530	16
12	409	17	40	535	16
13	414	16	41	540	16
14	420	16	42	546	17
15	425	16	43	552	17
16	430	15	44	558	18
17	435	15	45	565	19
18	439	15	46	573	20
19	444	15	47	581	21
20	448	15	48	590	22
21	452	15	49	600	24
22	457	14	50	613	26
23	461	14	51	629	30
24	465	14	52	650	36
25	469	14	53	686	50
26	473	14	54	800	155
27	477	14			

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.14
2006 Spring AIMS Raw Score to Scale Score Table
Reading CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	36	28	669	13
1	500	36	29	673	13
2	514	31	30	676	13
3	532	26	31	680	13
4	546	23	32	684	13
5	557	21	33	687	13
6	566	19	34	691	13
7	574	18	35	695	13
8	581	17	36	699	13
9	588	16	37	703	13
10	594	16	38	708	14
11	599	15	39	712	14
12	605	15	40	716	14
13	610	14	41	721	14
14	614	14	42	726	15
15	619	14	43	731	15
16	623	14	44	737	16
17	627	13	45	743	16
18	631	13	46	750	17
19	635	13	47	757	18
20	639	13	48	765	19
21	643	13	49	774	21
22	647	13	50	785	23
23	651	13	51	799	26
24	654	13	52	818	31
25	658	13	53	849	44
26	662	12	54	900	77
27	665	12			

Note. SEM is the standard error of measurement for the scale score. High school reading scale scores are not on the same vertical scale as grades 3-8.

Table 7.4.3.15
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 3

Raw Score	Scale Score	SEM
0	200	216
1	200	216
2	200	216
3	200	216
4	200	216
5	200	216
6	200	216
7	312	17
8	325	15
9	336	14
10	347	14
11	357	14
12	368	14
13	378	14
14	388	14
15	399	14
16	410	15
17	423	16
18	436	15
19	448	15
20	459	15
21	470	15
22	482	15
23	495	16
24	508	15
25	519	14
26	529	13
27	537	13
28	546	12
29	554	12
30	562	13
31	570	13
32	579	14
33	590	15
34	606	20
35	650	54
36	650	54

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.16
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 4

Raw Score	Scale Score	SEM
0	230	253
1	230	253
2	230	253
3	230	253
4	230	253
5	230	253
6	230	253
7	333	20
8	350	16
9	362	15
10	374	15
11	386	16
12	400	16
13	414	15
14	426	15
15	437	14
16	447	14
17	458	15
18	470	15
19	482	15
20	493	14
21	504	14
22	515	15
23	527	16
24	541	16
25	554	15
26	566	14
27	576	14
28	585	13
29	595	13
30	604	13
31	614	13
32	623	14
33	633	14
34	645	16
35	662	21
36	700	51

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.17
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 5

Raw Score	Scale Score	SEM
0	255	126
1	255	126
2	255	126
3	255	126
4	255	126
5	255	126
6	255	126
7	324	27
8	347	19
9	363	17
10	376	16
11	389	17
12	403	17
13	418	17
14	431	16
15	443	16
16	455	16
17	467	16
18	480	16
19	493	16
20	505	16
21	517	15
22	529	16
23	542	16
24	555	17
25	568	16
26	581	16
27	592	15
28	603	14
29	613	14
30	622	14
31	632	14
32	642	15
33	653	15
34	665	17
35	681	20
36	740	68

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.18
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 6

Raw Score	Scale Score	SEM
0	275	117
1	275	117
2	275	117
3	275	117
4	275	117
5	275	117
6	275	117
7	354	22
8	372	18
9	386	17
10	400	17
11	415	18
12	432	19
13	448	18
14	462	16
15	474	16
16	487	16
17	500	17
18	514	17
19	528	17
20	541	16
21	553	16
22	565	17
23	579	18
24	595	18
25	610	17
26	624	16
27	635	15
28	645	15
29	656	15
30	666	15
31	677	15
32	688	15
33	699	16
34	712	18
35	732	24
36	760	43

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.19
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 7

Raw Score	Scale Score	SEM
0	290	105
1	290	105
2	290	105
3	290	105
4	290	105
5	290	105
6	290	105
7	358	22
8	377	17
9	391	16
10	404	16
11	419	18
12	438	20
13	457	18
14	472	16
15	485	16
16	497	16
17	511	17
18	527	18
19	544	17
20	558	16
21	570	15
22	581	15
23	593	16
24	605	16
25	617	15
26	628	14
27	636	13
28	644	12
29	652	12
30	659	12
31	666	12
32	674	13
33	683	14
34	693	16
35	732	34
36	770	85

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.20
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT Grade 8

Raw Score	Scale Score	SEM
0	300	50
1	300	50
2	300	50
3	300	50
4	300	50
5	300	50
6	300	50
7	353	19
8	368	17
9	381	16
10	394	17
11	408	18
12	423	17
13	437	16
14	450	16
15	462	16
16	476	18
17	493	20
18	512	19
19	529	17
20	542	16
21	554	16
22	568	17
23	583	18
24	599	17
25	612	16
26	623	14
27	633	14
28	641	13
29	650	13
30	658	13
31	666	13
32	676	14
33	687	16
34	701	20
35	734	38
36	800	182

Note. SEM is the standard error of measurement for the scale score.

Table 7.4.3.21
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT High School Prompt A

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	31	18.5	658	10
0.5	500	31	19	664	9
1	500	31	19.5	670	9
1.5	500	31	20	675	9
2	500	31	20.5	680	9
2.5	500	31	21	684	9
3	500	31	21.5	689	9
3.5	500	31	22	694	9
4	500	31	22.5	700	10
4.5	500	31	23	705	10
5	500	31	23.5	712	10
5.5	500	31	24	718	10
6	500	31	24.5	725	10
6.5	519	18	25	731	10
7	537	12	25.5	737	9
7.5	544	10	26	742	9
8	551	9	26.5	747	8
8.5	556	9	27	751	8
9	561	9	27.5	755	8
9.5	566	9	28	759	8
10	571	9	28.5	763	8
10.5	576	9	29	767	8
11	581	9	29.5	772	8
11.5	586	9	30	776	8
12	591	9	30.5	780	8
12.5	597	9	31	784	8
13	602	9	31.5	789	8
13.5	607	9	32	793	8
14	612	9	32.5	798	8
14.5	617	9	33	802	9
15	621	9	33.5	807	9
15.5	626	9	34	812	10
16	630	9	34.5	820	11
16.5	636	9	35	827	13
17	641	10	35.5	864	36
17.5	647	10	36	900	111
18	652	10			

Note. SEM is the standard error of measurement for the scale score. High school writing scale scores are not on the same vertical scale as grades 3-8.

Table 7.4.3.22
2006 Spring AIMS Raw Score to Scale Score Table
Writing CRT High School Prompt T

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	31	18.5	659	10
0.5	500	31	19	664	9
1	500	31	19.5	670	9
1.5	500	31	20	675	9
2	500	31	20.5	680	9
2.5	500	31	21	684	9
3	500	31	21.5	689	9
3.5	500	31	22	694	9
4	500	31	22.5	700	10
4.5	500	31	23	705	10
5	500	31	23.5	712	10
5.5	500	31	24	718	10
6	500	31	24.5	725	10
6.5	519	18	25	731	10
7	537	12	25.5	737	9
7.5	544	10	26	742	9
8	551	9	26.5	747	8
8.5	556	9	27	751	8
9	561	9	27.5	755	8
9.5	566	9	28	759	8
10	571	9	28.5	763	8
10.5	576	9	29	767	8
11	581	9	29.5	772	8
11.5	586	9	30	776	8
12	591	9	30.5	780	8
12.5	597	9	31	784	8
13	602	9	31.5	789	8
13.5	607	9	32	793	8
14	612	9	32.5	798	8
14.5	617	9	33	802	9
15	621	9	33.5	807	9
15.5	626	9	34	812	10
16	630	9	34.5	820	11
16.5	636	9	35	827	13
17	641	10	35.5	864	36
17.5	647	10	36	900	111
18	653	10			

Note. SEM is the standard error of measurement for the scale score. High school writing scale scores are not on the same vertical scale as grades 3-8.

Table 7.4.3.23
2006 Spring AIMS NRT SEM Table
Grade 3

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	427	150	455	128	385	148
1	427	150	455	128	385	148
2	427	150	455	128	385	148
3	427	150	455	128	385	148
4	427	150	455	128	385	148
5	427	150	552	31	385	148
6	516	61	568	18	481	52
7	545	33	578	14	506	31
8	561	25	586	12	521	24
9	572	21	592	12	532	20
10	582	18	599	11	542	17
11	590	16	605	11	550	16
12	597	15	612	12	557	15
13	603	14	619	12	564	14
14	610	13	627	13	571	14
15	615	12	634	13	578	14
16	621	12	643	13	585	14
17	627	12	652	14	592	14
18	633	12	663	16	600	15
19	640	13	681	22	607	15
20	647	13	730	63	616	15
21	655	14			625	15
22	665	16			635	16
23	678	19			648	18
24	699	28			667	24
25	750	69			740	87

Table 7.4.3.24
2006 Spring AIMS NRT SEM Table
Grade 4

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	433	142	465	130	403	161
1	433	142	465	130	403	161
2	433	142	465	130	403	161
3	433	142	465	130	403	161
4	433	142	490	105	403	161
5	465	110	561	34	403	161
6	544	34	579	22	508	56
7	564	25	590	18	536	34
8	576	21	599	16	552	25
9	586	18	608	15	564	21
10	593	15	615	14	574	18
11	600	14	622	14	582	17
12	606	12	629	13	589	16
13	611	12	636	13	596	15
14	616	11	644	14	603	14
15	621	10	652	14	610	14
16	626	10	661	15	616	14
17	630	10	672	17	623	14
18	635	10	686	20	629	13
19	641	11	709	29	636	14
20	647	11	757	66	644	14
21	653	12			653	15
22	662	14			663	17
23	673	17			678	22
24	692	25			704	34
25	780	102			770	90

Table 7.4.3.25
2006 Spring AIMS NRT SEM Table
Grade 5

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	475	138	480	150	430	155
1	475	138	480	150	430	155
2	475	138	480	150	430	155
3	475	138	480	150	430	155
4	475	138	480	150	430	155
5	510	103	589	41	430	155
6	571	42	608	24	529	56
7	589	26	619	18	561	31
8	600	19	627	15	577	24
9	609	16	634	13	589	20
10	616	14	640	12	598	17
11	622	13	646	11	605	15
12	628	12	651	11	612	14
13	634	12	656	11	619	13
14	639	11	662	11	625	12
15	644	11	668	11	631	12
16	650	11	674	12	637	12
17	655	12	682	13	643	12
18	661	12	692	15	649	12
19	668	13	707	20	655	12
20	675	14	782	87	662	12
21	684	15			670	13
22	695	18			679	15
23	709	21			693	19
24	734	31			718	32
25	790	76			797	105

Table 7.4.3.26
2006 Spring AIMS NRT SEM Table
Grade 6

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	486	120	495	135	477	143
1	486	120	495	135	477	143
2	486	120	495	135	477	143
3	486	120	495	135	477	143
4	486	120	495	135	477	143
5	486	120	590	40	477	143
6	562	44	608	22	544	76
7	582	27	619	16	583	39
8	595	20	626	13	600	28
9	604	17	633	12	613	22
10	613	15	639	11	622	19
11	620	15	644	11	630	17
12	627	14	650	11	637	15
13	633	14	656	11	644	14
14	639	14	662	12	650	13
15	646	14	669	12	655	12
16	652	13	677	13	661	12
17	658	13	686	15	667	12
18	665	13	697	17	673	12
19	672	14	715	23	679	13
20	679	14	808	106	686	13
21	688	16			694	15
22	699	18			704	17
23	713	22			718	20
24	737	31			740	29
25	800	82			820	98

Table 7.4.3.27
2006 Spring AIMS NRT SEM Table
Grade 7

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	498	130	502	128	487	146
1	498	130	502	128	487	146
2	498	130	502	128	487	146
3	498	130	502	128	487	146
4	498	130	512	118	487	146
5	498	130	595	35	487	146
6	557	71	611	22	584	49
7	595	34	621	17	608	30
8	612	24	630	14	623	24
9	624	20	637	13	635	21
10	633	17	643	12	644	18
11	640	16	649	12	652	17
12	647	14	655	12	659	15
13	653	13	661	12	666	14
14	659	12	668	13	672	13
15	664	11	675	13	678	13
16	669	11	683	14	684	13
17	674	11	692	16	690	12
18	680	11	705	18	696	12
19	686	11	724	25	702	13
20	692	12	814	103	709	13
21	699	13			717	14
22	708	14			726	16
23	719	17			739	19
24	737	23			758	26
25	810	86			850	107

Table 7.4.3.28
2006 Spring AIMS NRT SEM Table
Grade 8

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	507	111	523	115	502	140
1	507	111	523	115	502	140
2	507	111	523	115	502	140
3	507	111	523	115	502	140
4	507	111	523	115	502	140
5	507	111	591	47	502	140
6	541	77	615	25	576	66
7	581	38	628	18	607	37
8	599	27	638	15	624	27
9	612	21	645	13	637	23
10	622	18	653	13	648	21
11	630	16	659	12	658	19
12	638	15	666	13	666	18
13	645	14	673	13	674	17
14	652	14	681	13	682	17
15	659	14	688	13	690	16
16	665	14	696	13	697	15
17	672	14	704	13	704	15
18	679	14	714	14	712	15
19	687	14	729	19	720	15
20	695	15	819	100	728	16
21	704	16			737	16
22	714	17			748	18
23	729	21			763	22
24	753	31			788	32
25	820	89			872	107

Part 8: Test Results

8.1 Data

Part 8 of this technical report contains information about the results of the 2006 Spring administration of AIMS DPA and AIMS High School. The first section provides information on the CRT scores from the AIMS assessments. The second section provides information on the NRT scores from AIMS DPA. The AERA/APA/NCME standards addressed in Part 8 include: 1.5, 4.3, 4.5, 4.6, 4.7, 6.35, 7.1, 7.10, 13.15, and 13.19. Please note that the corresponding information for the 2005 Fall AIMS administration can be found in Appendix A.

Results presented below are based on population data contained within the final electronic data files. The results presented in this part of the technical report may differ slightly from final testing results presented on the Arizona Department of Education website due to slight differences in the application of exclusion rules. Official final results typically use more detailed school-level information than is used to conduct research analyses. The results in the following tables are presented as evidence of reliability and validity of the AIMS assessments and should not be used for state accountability purposes.

8.1.1 AIMS CRT State Test Results

The AIMS CRT test results for mathematics, reading, and writing are each on a vertical scale for grades 3-8. Development of the vertical scale is described in section 7.2.1 of the 2005 AIMS Technical Report. The AIMS CRT grades 3-8 vertical scale runs from a lowest obtainable scale score (LOSS) of 200 to a highest obtainable scale score (HOSS) of 800. The AIMS high school assessments for mathematics, reading, and writing are each on a separate scale where the LOSS is 500 and the HOSS is 900. The LOSS and HOSS values for each grade/subject can be found in Table 8.1.1.1.

Test results for each grade level and content area CRT test follow in Tables 8.1.1.2 through 8.1.1.7. For each grade, scale score means and standard deviations as well as the percentages of students in each performance level are presented for the state as a whole and disaggregated into various demographic groups. Disaggregated results were produced for the various groups by using demographic data on student answer documents.

In addition to the descriptive statistics presented in Tables 8.1.1.2 through 8.1.1.7, scale score frequency distributions are also presented in Tables 8.1.1.8 through 8.1.1.35. Each grade and content area is presented in a separate table. These tables show the scale score, frequency (Freq), cumulative frequency (Cum Freq), percentage (%), and cumulative percentage (Cum %).

Results for AIMS high school assessments are reported by graduating cohort. Cohort 08 is defined as the group of students that expect to graduate in 2008 and typically includes 10th grade students. Cohort 07 is defined as the group of students that expect to graduate in 2007 and typically includes 11th grade students. Cohort 06 is defined as the group of students that expect to graduate in 2006 and is typically comprised of seniors.

Table 8.1.1.1
2006 Spring AIMS LOSS and HOSS Table

Content	Grade	Loss	Hoss
Reading	3	200	640
	4	220	660
	5	240	675
	6	250	690
	7	260	720
	8	270	800
	HS*	500	900
	Writing	3	200
4		230	700
5		255	740
6		275	760
7		290	770
8		300	800
HS*		500	900
Mathematics		3	200
	4	230	675
	5	255	700
	6	270	725
	7	290	740
	8	300	800
	HS*	500	900

*HS tests are not on the same scale as G3-8 tests.
 Scale scores are therefore not comparable between
 the HS and G3-8 tests.

Table 8.1.1.2
2006 Spring AIMS State Test Results
Mathematics CRT Grades 3-8

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Grade 3							
Total	79060	447.37	48.15	10	18	54	18
Ethnic Background							
White (Not Hispanic)	34695	465.36	47.11	5	11	56	29
Black or African American	4127	430.52	45.28	17	23	51	9
Hispanic or Latino	34045	432.35	42.67	14	24	53	9
American Indian or Alaskan Native	3916	423.81	40.34	17	30	47	6
Asian or Pacific Islander	2042	473.87	50.78	4	10	51	36
Special Program Membership							
Title 1	11433	429.34	43.17	16	26	50	8
English Learner Program	11735	413.87	37.26	24	33	40	3
Special Education	7958	419.05	48.81	28	27	36	9
Grade 4							
Total	79384	482.45	53.93	10	17	49	24
Ethnic Background							
White (Not Hispanic)	35807	500.59	52.04	5	10	50	35
Black or African American	4174	464.14	50.69	17	22	48	13
Hispanic or Latino	33111	466.44	49.44	15	23	49	14
American Indian or Alaskan Native	4039	455.71	45.88	18	27	46	8
Asian or Pacific Islander	2061	516.11	55.30	3	7	44	46
Special Program Membership							
Title 1	11584	462.42	48.99	16	24	47	12
English Learner Program	10616	442.51	42.07	25	32	38	4
Special Education	8586	442.89	52.88	33	25	33	9
Grade 5							
Total	78460	504.49	54.43	13	19	49	19
Ethnic Background							
White (Not Hispanic)	35758	522.97	53.92	6	13	53	28
Black or African American	4108	485.61	49.47	20	26	44	10
Hispanic or Latino	32308	487.34	47.88	18	25	46	10
American Indian or Alaskan Native	3965	479.57	44.88	22	29	43	7
Asian or Pacific Islander	2123	539.04	60.24	4	10	46	40
Special Program Membership							
Title 1	11012	483.29	47.90	21	27	43	9
English Learner Program	8628	459.71	37.71	36	34	28	2
Special Education	8609	461.81	47.22	41	28	26	5

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

Table 8.1.1.2 (continued)
2006 Spring AIMS State Test Results
Mathematics CRT Grades 3-8

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Grade 6							
Total	78455	517.75	58.26	18	19	46	16
Ethnic Background							
White (Not Hispanic)	35897	538.32	57.59	9	14	52	25
Black or African American	4198	498.72	52.88	27	24	41	8
Hispanic or Latino	31937	498.81	50.98	26	24	42	8
American Indian or Alaskan Native	4312	488.99	46.87	32	27	36	5
Asian or Pacific Islander	1933	556.38	63.79	7	10	47	36
Special Program Membership							
Title 1	9904	492.91	50.52	31	25	38	6
English Learner Program	7901	469.25	40.40	50	27	21	2
Special Education	7869	467.39	48.05	55	21	20	4
Grade 7							
Total	77414	543.49	56.18	15	17	52	15
Ethnic Background							
White (Not Hispanic)	35879	563.75	54.44	7	12	58	23
Black or African American	4114	524.36	49.41	22	22	49	7
Hispanic or Latino	30679	524.53	50.00	22	22	48	7
American Indian or Alaskan Native	4601	515.13	46.95	28	25	43	4
Asian or Pacific Islander	1904	580.33	59.41	5	9	53	34
Special Program Membership							
Title 1	9068	519.03	48.72	25	25	44	6
English Learner Program	7387	494.76	40.65	44	28	27	1
Special Education	6700	489.98	45.52	53	23	22	2
Grade 8							
Total	77311	554.40	59.18	21	19	47	12
Ethnic Background							
White (Not Hispanic)	36637	574.98	57.71	11	14	56	19
Black or African American	4092	533.32	53.06	31	23	40	5
Hispanic or Latino	30185	534.07	52.01	31	24	40	5
American Indian or Alaskan Native	4446	527.87	49.46	35	25	37	4
Asian or Pacific Islander	1782	593.28	68.43	9	12	48	31
Special Program Membership							
Title 1	9116	528.74	49.77	34	25	38	4
English Learner Program	7296	504.69	41.63	54	26	19	1
Special Education	6537	498.22	47.81	63	17	18	2

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

Table 8.1.1.3
2006 Spring AIMS State Test Results
Mathematics CRT High School

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Cohort 08							
Total	70193	701.62	42.44	22	12	51	14
Ethnic Background							
White (Not Hispanic)	35652	715.63	41.67	12	9	58	21
Black or African American	3727	685.67	37.42	33	16	45	6
Hispanic or Latino	24716	685.55	36.11	34	16	45	5
American Indian or Alaskan Native	4063	679.81	33.08	39	18	40	3
Asian or Pacific Islander	1795	730.29	49.63	10	7	50	34
Special Program Membership							
Title 1	4238	681.30	36.05	39	17	39	5
English Learner Program	3843	661.87	26.88	64	16	20	1
Special Education	4891	658.04	29.92	69	13	17	1
Cohort 07 (Retest)							
Total	13761	667.95	25.50	49	26	24	1
Ethnic Background							
White (Not Hispanic)	3960	673.81	29.59	41	26	31	3
Black or African American	1081	664.62	24.08	54	24	22	1
Hispanic or Latino	6890	665.45	22.21	52	27	21	0
American Indian or Alaskan Native	1520	664.11	21.61	55	26	19	0
Asian or Pacific Islander	209	684.26	40.40	33	23	38	6
Special Program Membership							
Title 1	1427	664.60	23.19	53	25	22	0
English Learner Program	1746	661.20	22.23	61	24	15	0
Special Education	1839	650.91	21.98	78	13	8	0
Cohort 06 (Retest)							
Total	7421	668.33	27.39	50	24	24	2
Ethnic Background							
White (Not Hispanic)	1942	675.67	34.10	43	21	31	5
Black or African American	543	663.40	25.10	57	22	22	0
Hispanic or Latino	3740	665.34	22.87	53	26	21	0
American Indian or Alaskan Native	1009	666.44	23.30	51	26	23	0
Asian or Pacific Islander	134	679.56	40.41	40	22	29	9
Special Program Membership							
Title 1	681	664.87	23.32	53	26	21	0
English Learner Program	1106	659.38	21.73	64	20	16	0
Special Education	1097	647.67	20.23	83	12	5	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

Table 8.1.1.4
2006 Spring AIMS State Test Results
Reading CRT Grades 3-8

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Grade 3							
Total	78487	451.49	50.75	9	24	56	11
Ethnic Background							
White (Not Hispanic)	34436	471.04	46.75	4	15	64	18
Black or African American	4104	439.59	48.88	13	29	52	6
Hispanic or Latino	33799	434.29	47.91	14	31	50	5
American Indian or Alaskan Native	3876	429.32	44.46	14	36	47	3
Asian or Pacific Islander	2040	474.49	46.92	3	14	63	20
Special Program Membership							
Title 1	11366	429.92	48.49	17	33	46	4
English Learner Program	11590	409.01	42.38	26	43	30	1
Special Education	7430	416.67	54.17	30	32	34	5
Grade 4							
Total	78924	469.72	49.67	11	24	57	8
Ethnic Background							
White (Not Hispanic)	35592	489.32	45.90	4	15	67	14
Black or African American	4151	458.32	47.68	15	28	53	4
Hispanic or Latino	32928	451.66	46.23	17	32	47	3
American Indian or Alaskan Native	4005	446.35	41.92	16	38	44	2
Asian or Pacific Islander	2056	489.83	46.27	5	13	69	14
Special Program Membership							
Title 1	11549	447.95	46.10	19	34	44	3
English Learner Program	10512	423.44	36.93	32	45	22	0
Special Education	8123	431.52	50.59	35	32	29	3
Grade 5							
Total	78157	489.26	47.66	9	24	58	9
Ethnic Background							
White (Not Hispanic)	35660	507.81	45.30	4	14	67	15
Black or African American	4090	476.61	44.34	13	30	53	4
Hispanic or Latino	32146	471.65	42.94	15	33	49	3
American Indian or Alaskan Native	3948	467.49	39.92	14	37	46	2
Asian or Pacific Islander	2118	510.05	47.06	4	14	66	16
Special Program Membership							
Title 1	10980	468.59	43.19	16	34	46	3
English Learner Program	8540	441.24	33.01	33	46	20	0
Special Education	8348	449.42	44.25	34	36	28	2

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

Table 8.1.1.4 (continued)
2006 Spring AIMS State Test Results
Reading CRT Grades 3-8

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Grade 6							
Total	78631	496.77	48.21	10	25	60	4
Ethnic Background							
White (Not Hispanic)	35969	516.24	44.60	4	15	74	7
Black or African American	4230	484.68	44.81	14	30	54	2
Hispanic or Latino	32003	478.45	44.22	16	34	48	1
American Indian or Alaskan Native	4317	473.43	41.12	16	40	43	1
Asian or Pacific Islander	1931	518.57	46.08	4	14	73	9
Special Program Membership							
Title 1	9905	474.99	44.42	19	35	45	1
English Learner Program	7852	446.39	34.64	37	45	17	0
Special Education	7966	452.98	43.72	37	37	25	1
Grade 7							
Total	77917	512.12	51.84	10	25	58	7
Ethnic Background							
White (Not Hispanic)	36171	531.97	49.25	4	16	68	12
Black or African American	4159	499.99	47.26	12	31	54	3
Hispanic or Latino	30813	492.60	46.89	15	34	48	2
American Indian or Alaskan Native	4619	488.71	43.23	15	39	45	2
Asian or Pacific Islander	1913	536.35	51.58	4	14	67	15
Special Program Membership							
Title 1	9113	489.57	46.81	17	36	45	2
English Learner Program	7403	458.88	35.05	35	47	18	0
Special Education	7137	462.73	42.25	37	41	22	1
Grade 8							
Total	78067	518.71	53.21	11	27	58	5
Ethnic Background							
White (Not Hispanic)	37062	538.82	50.25	5	17	71	8
Black or African American	4139	506.78	50.68	14	31	52	3
Hispanic or Latino	30433	498.17	48.08	17	36	45	1
American Indian or Alaskan Native	4471	494.75	44.35	16	41	42	1
Asian or Pacific Islander	1787	542.16	53.41	4	17	68	10
Special Program Membership							
Title 1	9176	495.02	48.13	19	38	42	1
English Learner Program	7341	463.43	35.61	38	47	14	0
Special Education	7206	466.99	43.84	41	38	20	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

Table 8.1.1.5
2006 Spring AIMS State Test Results
Reading CRT High School

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Cohort 08							
Total	72191	703.19	48.13	6	23	64	8
Ethnic Background							
White (Not Hispanic)	36730	721.24	44.25	2	12	73	13
Black or African American	3884	688.84	44.26	8	29	60	3
Hispanic or Latino	25571	682.57	43.91	10	34	54	3
American Indian or Alaskan Native	4006	675.79	39.49	9	42	48	1
Asian or Pacific Islander	1806	722.05	49.76	3	15	66	16
Special Program Membership							
Title 1	3722	680.62	45.38	11	35	51	3
English Learner Program	3891	641.64	28.54	29	59	12	0
Special Education	6153	653.95	37.28	23	50	27	0
Cohort 07 (Retest)							
Total	12232	661.20	36.04	15	53	31	1
Ethnic Background							
White (Not Hispanic)	3103	673.76	43.34	12	42	43	3
Black or African American	805	661.28	34.62	15	53	32	0
Hispanic or Latino	6361	654.88	31.65	18	57	25	0
American Indian or Alaskan Native	1672	660.04	29.66	10	61	28	0
Asian or Pacific Islander	228	673.74	39.57	6	50	41	2
Special Program Membership							
Title 1	1213	658.11	34.15	18	51	30	0
English Learner Program	2135	643.52	26.45	25	62	12	0
Special Education	2373	643.02	29.66	29	56	15	0
Cohort 06 (Retest)							
Total	6261	663.57	43.13	17	50	30	3
Ethnic Background							
White (Not Hispanic)	1521	685.05	57.15	13	36	42	9
Black or African American	411	656.89	36.05	19	52	28	0
Hispanic or Latino	3299	654.63	33.71	19	56	25	1
American Indian or Alaskan Native	836	660.98	34.69	14	54	31	1
Asian or Pacific Islander	156	674.72	46.58	10	47	38	4
Special Program Membership							
Title 1	533	656.24	34.58	18	57	24	1
English Learner Program	1225	645.04	27.28	24	61	15	0
Special Education	1262	639.44	29.33	32	56	11	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

Table 8.1.1.6
2006 Spring AIMS State Test Results
Writing CRT Grades 3-8

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Grade 3							
Total	79024	423.07	67.32	7	41	49	3
Ethnic Background							
White (Not Hispanic)	34704	437.27	60.78	4	35	56	5
Black or African American	4130	410.68	72.26	10	45	43	2
Hispanic or Latino	33991	410.32	69.69	10	46	43	1
American Indian or Alaskan Native	3927	409.06	68.85	10	47	42	1
Asian or Pacific Islander	2042	448.48	62.18	4	28	60	8
Special Program Membership							
Title 1	11417	405.48	71.90	11	48	40	1
English Learner Program	11715	384.55	76.05	17	54	28	0
Special Education	8043	376.15	80.10	23	53	24	1
Grade 4							
Total	79612	475.48	59.45	4	30	64	2
Ethnic Background							
White (Not Hispanic)	35896	489.13	53.80	2	22	72	3
Black or African American	4187	465.66	60.81	5	35	58	1
Hispanic or Latino	33227	461.93	62.13	6	36	57	1
American Indian or Alaskan Native	4049	464.41	53.33	4	39	57	1
Asian or Pacific Islander	2057	500.41	54.50	2	16	75	7
Special Program Membership							
Title 1	11634	458.26	62.06	6	39	54	1
English Learner Program	10656	434.45	68.77	12	51	37	0
Special Education	8806	426.89	71.54	15	55	30	1
Grade 5							
Total	78769	496.06	67.08	7	37	56	1
Ethnic Background							
White (Not Hispanic)	35907	511.31	59.07	4	30	65	1
Black or African American	4126	485.97	70.82	9	40	51	0
Hispanic or Latino	32489	481.21	70.44	10	44	47	0
American Indian or Alaskan Native	3923	478.06	69.41	10	46	44	0
Asian or Pacific Islander	2125	519.37	65.05	4	23	71	2
Special Program Membership							
Title 1	11073	478.40	71.30	10	45	45	0
English Learner Program	8674	439.85	79.08	22	57	21	0
Special Education	8970	439.49	75.94	24	56	21	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

Table 8.1.1.6 (continued)
2006 Spring AIMS State Test Results
Writing CRT Grades 3-8

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Grade 6							
Total	79145	563.78	67.33	3	10	76	11
Ethnic Background							
White (Not Hispanic)	36130	579.34	60.57	1	7	75	17
Black or African American	4260	551.48	71.97	4	13	75	7
Hispanic or Latino	32279	548.43	69.88	4	14	77	5
American Indian or Alaskan Native	4356	549.12	65.62	3	14	77	5
Asian or Pacific Islander	1940	591.80	59.34	1	4	69	25
Special Program Membership							
Title 1	9975	545.73	70.98	4	14	77	5
English Learner Program	7989	506.20	81.23	9	28	62	1
Special Education	8442	504.62	75.76	8	36	54	2
Grade 7							
Total	78537	566.06	61.11	3	8	88	1
Ethnic Background							
White (Not Hispanic)	36366	579.67	51.09	2	5	92	2
Black or African American	4201	560.27	63.17	4	9	87	1
Hispanic or Latino	31144	552.56	66.52	5	11	84	0
American Indian or Alaskan Native	4668	547.13	69.04	5	13	82	0
Asian or Pacific Islander	1912	589.15	49.39	1	3	91	4
Special Program Membership							
Title 1	9204	550.52	68.50	5	12	83	0
English Learner Program	7560	510.48	80.80	12	23	65	0
Special Education	7649	508.41	75.50	10	30	60	0
Grade 8							
Total	78641	554.52	59.01	3	19	78	0
Ethnic Background							
White (Not Hispanic)	37269	569.61	50.21	1	12	86	1
Black or African American	4183	547.24	61.31	3	22	75	0
Hispanic or Latino	30703	538.75	62.98	5	25	70	0
American Indian or Alaskan Native	4521	535.62	60.95	4	28	68	0
Asian or Pacific Islander	1792	578.22	55.66	2	9	87	2
Special Program Membership							
Title 1	9250	539.08	63.81	5	24	71	0
English Learner Program	7442	493.80	71.12	12	47	41	0
Special Education	7590	495.23	64.48	10	53	37	0

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Table 8.1.1.7
2006 Spring AIMS State Test Results
Writing CRT High School

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Cohort 08							
Total	71958	684.74	49.39	6	30	59	6
Ethnic Background							
White (Not Hispanic)	36588	697.54	44.17	3	21	67	8
Black or African American	3864	674.81	52.18	9	33	55	3
Hispanic or Latino	25514	669.06	50.09	9	41	48	2
American Indian or Alaskan Native	3989	669.77	51.06	9	39	50	2
Asian or Pacific Islander	1805	703.52	50.08	3	19	64	14
Special Program Membership							
Title 1	3724	665.73	48.94	10	45	43	2
English Learner Program	3868	619.66	56.94	32	57	11	0
Special Education	6070	633.19	53.32	26	56	18	0
Cohort 07 (Retest)							
Total	12085	649.32	49.81	15	57	27	1
Ethnic Background							
White (Not Hispanic)	3549	658.90	50.62	13	50	35	2
Black or African American	742	648.25	48.72	16	57	27	0
Hispanic or Latino	5934	641.56	47.57	18	62	20	0
American Indian or Alaskan Native	1572	655.72	51.04	13	51	36	1
Asian or Pacific Islander	219	657.82	56.50	10	51	37	2
Special Program Membership							
Title 1	1164	644.99	46.01	16	62	22	0
English Learner Program	2026	623.31	51.42	28	62	10	0
Special Education	2476	623.50	49.16	30	59	10	0
Cohort 06 (Retest)							
Total	6133	652.39	55.68	17	52	28	3
Ethnic Background							
White (Not Hispanic)	1771	673.02	59.94	13	39	39	9
Black or African American	374	647.16	52.20	18	56	25	1
Hispanic or Latino	3031	640.02	49.87	21	58	20	1
American Indian or Alaskan Native	764	655.37	52.79	13	53	33	2
Asian or Pacific Islander	154	653.45	65.88	18	44	32	6
Special Program Membership							
Title 1	470	636.00	51.22	21	60	18	0
English Learner Program	1149	622.42	51.46	30	59	11	0
Special Education	1279	621.25	49.27	33	58	9	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

Table 8.1.1.8
2006 Spring AIMS Frequency Distribution
Mathematics CRT Grade 3

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
265	1	0.00	1	0.00	420	1569	1.98	23835	30.15
276	1	0.00	2	0.00	423	1632	2.06	25467	32.21
285	1	0.00	3	0.00	425	1729	2.19	27196	34.40
293	2	0.00	5	0.01	428	1742	2.20	28938	36.60
300	1	0.00	6	0.01	431	1931	2.44	30869	39.05
306	3	0.00	9	0.01	434	1791	2.27	32660	41.31
312	6	0.01	15	0.02	437	1979	2.50	34639	43.81
317	6	0.01	21	0.03	440	2109	2.67	36748	46.48
322	18	0.02	39	0.05	444	2055	2.60	38803	49.08
327	21	0.03	60	0.08	447	2136	2.70	40939	51.78
331	51	0.06	111	0.14	450	2230	2.82	43169	54.60
335	79	0.10	190	0.24	454	2276	2.88	45445	57.48
339	109	0.14	299	0.38	457	2277	2.88	47722	60.36
343	160	0.20	459	0.58	461	2336	2.95	50058	63.32
347	217	0.27	676	0.86	465	2513	3.18	52571	66.50
350	288	0.36	964	1.22	469	2470	3.12	55041	69.62
354	318	0.40	1282	1.62	473	2482	3.14	57523	72.76
357	449	0.57	1731	2.19	477	2419	3.06	59942	75.82
360	446	0.56	2177	2.75	482	2381	3.01	62323	78.83
363	529	0.67	2706	3.42	487	2389	3.02	64712	81.85
366	571	0.72	3277	4.14	493	2322	2.94	67034	84.79
369	665	0.84	3942	4.99	499	2166	2.74	69200	87.53
372	700	0.89	4642	5.87	505	2083	2.63	71283	90.16
375	725	0.92	5367	6.79	513	1928	2.44	73211	92.60
378	751	0.95	6118	7.74	522	1768	2.24	74979	94.84
381	808	1.02	6926	8.76	532	1464	1.85	76443	96.69
384	887	1.12	7813	9.88	545	1163	1.47	77606	98.16
387	955	1.21	8768	11.09	563	816	1.03	78422	99.19
389	993	1.26	9761	12.35	592	460	0.58	78882	99.77
392	1047	1.32	10808	13.67	650	178	0.23	79060	100.00
395	1131	1.43	11939	15.10					
398	1106	1.40	13045	16.50					
400	1138	1.44	14183	17.94					
403	1202	1.52	15385	19.46					
406	1277	1.62	16662	21.08					
409	1251	1.58	17913	22.66					
411	1404	1.78	19317	24.43					
414	1445	1.83	20762	26.26					
417	1504	1.90	22266	28.16					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.9
2006 Spring AIMS Frequency Distribution
Mathematics CRT Grade 4

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
253	1	0.00	1	0.00	450	1464	1.84	23036	29.02
272	1	0.00	2	0.00	453	1519	1.91	24555	30.93
307	1	0.00	3	0.00	456	1629	2.05	26184	32.98
315	3	0.00	6	0.01	460	1630	2.05	27814	35.04
322	1	0.00	7	0.01	463	1811	2.28	29625	37.32
328	5	0.01	12	0.02	466	1953	2.46	31578	39.78
334	9	0.01	21	0.03	470	1897	2.39	33475	42.17
340	22	0.03	43	0.05	473	2049	2.58	35524	44.75
345	33	0.04	76	0.10	477	2109	2.66	37633	47.41
350	44	0.06	120	0.15	481	2218	2.79	39851	50.20
354	105	0.13	225	0.28	485	2353	2.96	42204	53.16
359	93	0.12	318	0.40	489	2322	2.93	44526	56.09
363	164	0.21	482	0.61	493	2552	3.21	47078	59.30
367	223	0.28	705	0.89	497	2506	3.16	49584	62.46
371	264	0.33	969	1.22	502	2659	3.35	52243	65.81
374	346	0.44	1315	1.66	507	2692	3.39	54935	69.20
378	400	0.50	1715	2.16	512	2702	3.40	57637	72.61
382	441	0.56	2156	2.72	517	2787	3.51	60424	76.12
385	552	0.70	2708	3.41	523	2793	3.52	63217	79.63
388	531	0.67	3239	4.08	530	2739	3.45	65956	83.08
392	609	0.77	3848	4.85	537	2644	3.33	68600	86.42
395	577	0.73	4425	5.57	545	2552	3.21	71152	89.63
398	651	0.82	5076	6.39	554	2378	3.00	73530	92.63
401	759	0.96	5835	7.35	565	2077	2.62	75607	95.24
404	803	1.01	6638	8.36	579	1672	2.11	77279	97.35
408	784	0.99	7422	9.35	599	1181	1.49	78460	98.84
411	786	0.99	8208	10.34	631	696	0.88	79156	99.71
414	876	1.10	9084	11.44	675	228	0.29	79384	100.00
417	865	1.09	9949	12.53					
420	966	1.22	10915	13.75					
423	992	1.25	11907	15.00					
426	985	1.24	12892	16.24					
429	1076	1.36	13968	17.60					
432	1166	1.47	15134	19.06					
435	1205	1.52	16339	20.58					
438	1221	1.54	17560	22.12					
441	1268	1.60	18828	23.72					
444	1321	1.66	20149	25.38					
447	1423	1.79	21572	27.17					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.10
2006 Spring AIMS Frequency Distribution
Mathematics CRT Grade 5

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
320	1	0.00	1	0.00	482	1549	1.97	29736	37.90
333	3	0.00	4	0.01	485	1642	2.09	31378	39.99
351	1	0.00	5	0.01	488	1688	2.15	33066	42.14
359	1	0.00	6	0.01	491	1688	2.15	34754	44.30
365	2	0.00	8	0.01	495	1772	2.26	36526	46.55
371	19	0.02	27	0.03	498	1669	2.13	38195	48.68
376	14	0.02	41	0.05	501	1860	2.37	40055	51.05
381	23	0.03	64	0.08	504	1845	2.35	41900	53.40
386	71	0.09	135	0.17	508	1888	2.41	43788	55.81
391	94	0.12	229	0.29	511	2008	2.56	45796	58.37
395	154	0.20	383	0.49	515	2057	2.62	47853	60.99
399	210	0.27	593	0.76	519	2025	2.58	49878	63.57
403	279	0.36	872	1.11	523	2119	2.70	51997	66.27
406	357	0.46	1229	1.57	527	2181	2.78	54178	69.05
410	438	0.56	1667	2.12	532	2257	2.88	56435	71.93
413	564	0.72	2231	2.84	537	2241	2.86	58676	74.78
416	616	0.79	2847	3.63	542	2451	3.12	61127	77.91
420	716	0.91	3563	4.54	548	2413	3.08	63540	80.98
423	800	1.02	4363	5.56	555	2391	3.05	65931	84.03
426	776	0.99	5139	6.55	562	2409	3.07	68340	87.10
429	859	1.09	5998	7.64	570	2430	3.10	70770	90.20
432	893	1.14	6891	8.78	580	2244	2.86	73014	93.06
435	924	1.18	7815	9.96	593	2072	2.64	75086	95.70
438	1024	1.31	8839	11.27	611	1601	2.04	76687	97.74
441	1048	1.34	9887	12.60	640	1185	1.51	77872	99.25
443	1072	1.37	10959	13.97	700	588	0.75	78460	100.00
446	1100	1.40	12059	15.37					
449	1117	1.42	13176	16.79					
452	1230	1.57	14406	18.36					
455	1211	1.54	15617	19.90					
457	1245	1.59	16862	21.49					
460	1230	1.57	18092	23.06					
463	1319	1.68	19411	24.74					
466	1396	1.78	20807	26.52					
468	1417	1.81	22224	28.33					
471	1473	1.88	23697	30.20					
474	1455	1.85	25152	32.06					
477	1457	1.86	26609	33.91					
480	1578	2.01	28187	35.93					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.11
2006 Spring AIMS Frequency Distribution
Mathematics CRT Grade 6

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
318	2	0.00	2	0.00	501	1681	2.14	33053	42.13
332	2	0.00	4	0.01	504	1696	2.16	34749	44.29
361	3	0.00	7	0.01	507	1766	2.25	36515	46.54
369	1	0.00	8	0.01	511	1819	2.32	38334	48.86
375	9	0.01	17	0.02	514	1839	2.34	40173	51.21
381	17	0.02	34	0.04	518	1864	2.38	42037	53.58
387	35	0.04	69	0.09	522	1957	2.49	43994	56.08
392	59	0.08	128	0.16	526	2091	2.67	46085	58.74
397	110	0.14	238	0.30	530	2070	2.64	48155	61.38
401	150	0.19	388	0.49	534	2107	2.69	50262	64.06
406	234	0.30	622	0.79	538	2226	2.84	52488	66.90
410	287	0.37	909	1.16	543	2109	2.69	54597	69.59
414	446	0.57	1355	1.73	548	2144	2.73	56741	72.32
418	503	0.64	1858	2.37	553	2281	2.91	59022	75.23
422	644	0.82	2502	3.19	558	2226	2.84	61248	78.07
425	685	0.87	3187	4.06	564	2263	2.88	63511	80.95
429	782	1.00	3969	5.06	571	2374	3.03	65885	83.98
432	845	1.08	4814	6.14	578	2137	2.72	68022	86.70
436	853	1.09	5667	7.22	587	2146	2.74	70168	89.44
439	983	1.25	6650	8.48	596	2043	2.60	72211	92.04
442	1031	1.31	7681	9.79	608	1832	2.34	74043	94.38
445	1036	1.32	8717	11.11	622	1690	2.15	75733	96.53
449	1095	1.40	9812	12.51	642	1377	1.76	77110	98.29
452	1140	1.45	10952	13.96	675	935	1.19	78045	99.48
455	1168	1.49	12120	15.45	725	410	0.52	78455	100.00
458	1159	1.48	13279	16.93					
461	1218	1.55	14497	18.48					
464	1194	1.52	15691	20.00					
467	1246	1.59	16937	21.59					
470	1181	1.51	18118	23.09					
473	1369	1.74	19487	24.84					
476	1356	1.73	20843	26.57					
479	1353	1.72	22196	28.29					
482	1445	1.84	23641	30.13					
485	1459	1.86	25100	31.99					
488	1588	2.02	26688	34.02					
491	1507	1.92	28195	35.94					
494	1522	1.94	29717	37.88					
497	1655	2.11	31372	39.99					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.12
2006 Spring AIMS Frequency Distribution
Mathematics CRT Grade 7

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
300	2	0.00	2	0.00	517	1520	1.96	26631	34.40
350	1	0.00	3	0.00	520	1590	2.05	28221	36.45
374	1	0.00	4	0.01	523	1589	2.05	29810	38.51
383	1	0.00	5	0.01	526	1557	2.01	31367	40.52
390	1	0.00	6	0.01	529	1701	2.20	33068	42.72
397	7	0.01	13	0.02	533	1736	2.24	34804	44.96
403	17	0.02	30	0.04	536	1751	2.26	36555	47.22
409	27	0.03	57	0.07	540	1891	2.44	38446	49.66
414	36	0.05	93	0.12	543	1956	2.53	40402	52.19
419	69	0.09	162	0.21	547	2033	2.63	42435	54.82
424	108	0.14	270	0.35	551	2078	2.68	44513	57.50
428	166	0.21	436	0.56	555	2123	2.74	46636	60.24
432	262	0.34	698	0.90	559	2297	2.97	48933	63.21
436	338	0.44	1036	1.34	563	2230	2.88	51163	66.09
440	415	0.54	1451	1.87	568	2321	3.00	53484	69.09
444	480	0.62	1931	2.49	573	2379	3.07	55863	72.16
447	629	0.81	2560	3.31	578	2485	3.21	58348	75.37
451	649	0.84	3209	4.15	584	2394	3.09	60742	78.46
454	682	0.88	3891	5.03	590	2481	3.20	63223	81.67
457	766	0.99	4657	6.02	597	2470	3.19	65693	84.86
461	758	0.98	5415	6.99	605	2444	3.16	68137	88.02
464	802	1.04	6217	8.03	614	2307	2.98	70444	91.00
467	840	1.09	7057	9.12	624	2206	2.85	72650	93.85
470	921	1.19	7978	10.31	638	1937	2.50	74587	96.35
473	925	1.19	8903	11.50	657	1424	1.84	76011	98.19
476	903	1.17	9806	12.67	688	970	1.25	76981	99.44
479	963	1.24	10769	13.91	740	433	0.56	77414	100
482	943	1.22	11712	15.13					
485	1039	1.34	12751	16.47					
488	1116	1.44	13867	17.91					
490	1081	1.40	14948	19.31					
493	1101	1.42	16049	20.73					
496	1132	1.46	17181	22.19					
499	1184	1.53	18365	23.72					
502	1298	1.68	19663	25.40					
505	1256	1.62	20919	27.02					
508	1375	1.78	22294	28.80					
511	1411	1.82	23705	30.62					
514	1406	1.82	25111	32.44					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.13
2006 Spring AIMS Frequency Distribution
Mathematics CRT Grade 8

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
300	2	0.00	2	0.00	553	1975	2.55	40373	52.22
394	1	0.00	3	0.00	556	1999	2.59	42372	54.81
402	8	0.01	11	0.01	561	1984	2.57	44356	57.37
409	27	0.03	38	0.05	565	2039	2.64	46395	60.01
416	59	0.08	97	0.13	569	2122	2.74	48517	62.76
422	75	0.10	172	0.22	573	2063	2.67	50580	65.42
427	114	0.15	286	0.37	578	2055	2.66	52635	68.08
432	183	0.24	469	0.61	583	2143	2.77	54778	70.85
437	247	0.32	716	0.93	588	2216	2.87	56994	73.72
442	318	0.41	1034	1.34	593	2214	2.86	59208	76.58
447	455	0.59	1489	1.93	599	2099	2.72	61307	79.30
451	536	0.69	2025	2.62	605	2179	2.82	63486	82.12
455	628	0.81	2653	3.43	611	2109	2.73	65595	84.85
459	663	0.86	3316	4.29	619	2074	2.68	67669	87.53
463	739	0.96	4055	5.25	626	1954	2.53	69623	90.06
467	859	1.11	4914	6.36	635	1825	2.36	71448	92.42
471	891	1.15	5805	7.51	645	1614	2.09	73062	94.50
475	965	1.25	6770	8.76	658	1406	1.82	74468	96.32
478	1025	1.33	7795	10.08	673	1170	1.51	75638	97.84
482	1063	1.37	8858	11.46	694	874	1.13	76512	98.97
486	1134	1.47	9992	12.92	729	581	0.75	77093	99.72
489	1211	1.57	11203	14.49	800	218	0.28	77311	100.00
493	1174	1.52	12377	16.01					
496	1263	1.63	13640	17.64					
500	1367	1.77	15007	19.41					
503	1414	1.83	16421	21.24					
506	1448	1.87	17869	23.11					
510	1461	1.89	19330	25.00					
513	1492	1.93	20822	26.93					
517	1533	1.98	22355	28.92					
520	1629	2.11	23984	31.02					
523	1717	2.22	25701	33.24					
527	1700	2.20	27401	35.44					
530	1737	2.25	29138	37.69					
534	1818	2.35	30956	40.04					
538	1808	2.34	32764	42.38					
541	1837	2.38	34601	44.76					
545	1859	2.40	36460	47.16					
549	1938	2.51	38398	49.67					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.14
2006 Spring AIMS Frequency Distribution
Mathematics CRT High School Cohort 08

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
560	1	0.00	1	0.00	679	1116	1.59	23271	33.15
585	1	0.00	2	0.00	681	1113	1.59	24384	34.74
594	1	0.00	3	0.00	683	1190	1.70	25574	36.43
598	6	0.01	9	0.01	685	1145	1.63	26719	38.07
601	7	0.01	16	0.02	687	1277	1.82	27996	39.88
605	17	0.02	33	0.05	689	1258	1.79	29254	41.68
608	39	0.06	72	0.10	691	1225	1.75	30479	43.42
611	59	0.08	131	0.19	693	1305	1.86	31784	45.28
614	97	0.14	228	0.32	695	1321	1.88	33105	47.16
617	117	0.17	345	0.49	697	1322	1.88	34427	49.05
620	158	0.23	503	0.72	699	1383	1.97	35810	51.02
623	219	0.31	722	1.03	701	1388	1.98	37198	52.99
625	300	0.43	1022	1.46	703	1390	1.98	38588	54.97
628	376	0.54	1398	1.99	706	1440	2.05	40028	57.03
630	449	0.64	1847	2.63	708	1470	2.09	41498	59.12
633	542	0.77	2389	3.40	710	1453	2.07	42951	61.19
635	616	0.88	3005	4.28	713	1436	2.05	44387	63.24
637	618	0.88	3623	5.16	715	1436	2.05	45823	65.28
639	672	0.96	4295	6.12	718	1438	2.05	47261	67.33
642	744	1.06	5039	7.18	720	1413	2.01	48674	69.34
644	805	1.15	5844	8.33	723	1563	2.23	50237	71.57
646	741	1.06	6585	9.38	726	1490	2.12	51727	73.69
648	809	1.15	7394	10.53	729	1405	2.00	53132	75.69
650	852	1.21	8246	11.75	732	1406	2.00	54538	77.70
652	793	1.13	9039	12.88	735	1475	2.10	56013	79.80
654	865	1.23	9904	14.11	739	1520	2.17	57533	81.96
656	947	1.35	10851	15.46	742	1461	2.08	58994	84.05
658	925	1.32	11776	16.78	746	1482	2.11	60476	86.16
660	964	1.37	12740	18.15	751	1461	2.08	61937	88.24
662	1016	1.45	13756	19.60	755	1408	2.01	63345	90.24
664	956	1.36	14712	20.96	761	1386	1.97	64731	92.22
666	997	1.42	15709	22.38	767	1286	1.83	66017	94.05
668	1021	1.45	16730	23.83	774	1177	1.68	67194	95.73
670	1014	1.44	17744	25.28	782	1028	1.46	68222	97.19
671	1098	1.56	18842	26.84	792	881	1.26	69103	98.45
673	1033	1.47	19875	28.31	807	600	0.85	69703	99.30
675	1126	1.60	21001	29.92	832	341	0.49	70044	99.79
677	1154	1.64	22155	31.56	900	149	0.21	70193	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.15
2006 Spring AIMS Frequency Distribution
Mathematics CRT High School Cohort 07

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	1	0.01	1	0.01	677	432	3.14	9503	69.06
525	1	0.01	2	0.01	679	410	2.98	9913	72.04
585	1	0.01	3	0.02	681	393	2.86	10306	74.89
590	1	0.01	4	0.03	683	421	3.06	10727	77.95
594	1	0.01	5	0.04	685	367	2.67	11094	80.62
598	2	0.01	7	0.05	687	312	2.27	11406	82.89
601	5	0.04	12	0.09	689	247	1.79	11653	84.68
605	2	0.01	14	0.10	691	281	2.04	11934	86.72
608	8	0.06	22	0.16	693	205	1.49	12139	88.21
611	29	0.21	51	0.37	695	209	1.52	12348	89.73
614	36	0.26	87	0.63	697	184	1.34	12532	91.07
617	41	0.30	128	0.93	699	153	1.11	12685	92.18
620	68	0.49	196	1.42	701	136	0.99	12821	93.17
623	103	0.75	299	2.17	703	100	0.73	12921	93.90
625	126	0.92	425	3.09	706	105	0.76	13026	94.66
628	138	1.00	563	4.09	708	91	0.66	13117	95.32
630	207	1.50	770	5.60	710	86	0.62	13203	95.95
633	230	1.67	1000	7.27	713	43	0.31	13246	96.26
635	251	1.82	1251	9.09	715	40	0.29	13286	96.55
637	252	1.83	1503	10.92	718	43	0.31	13329	96.86
639	300	2.18	1803	13.10	720	40	0.29	13369	97.15
642	325	2.36	2128	15.46	723	36	0.26	13405	97.41
644	322	2.34	2450	17.80	726	45	0.33	13450	97.74
646	335	2.43	2785	20.24	729	35	0.25	13485	97.99
648	334	2.43	3119	22.67	732	23	0.17	13508	98.16
650	356	2.59	3475	25.25	735	24	0.17	13532	98.34
652	370	2.69	3845	27.94	739	30	0.22	13562	98.55
654	368	2.67	4213	30.62	742	23	0.17	13585	98.72
656	371	2.70	4584	33.31	746	28	0.20	13613	98.92
658	412	2.99	4996	36.31	751	21	0.15	13634	99.08
660	420	3.05	5416	39.36	755	26	0.19	13660	99.27
662	434	3.15	5850	42.51	761	23	0.17	13683	99.43
664	427	3.10	6277	45.61	767	22	0.16	13705	99.59
666	443	3.22	6720	48.83	774	20	0.15	13725	99.74
668	457	3.32	7177	52.15	782	15	0.11	13740	99.85
670	505	3.67	7682	55.82	792	8	0.06	13748	99.91
671	446	3.24	8128	59.07	807	6	0.04	13754	99.95
673	483	3.51	8611	62.58	832	3	0.02	13757	99.97
675	460	3.34	9071	65.92	900	4	0.03	13761	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.16
2006 Spring AIMS Frequency Distribution
Mathematics CRT High School Cohort 06

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
598	2	0.03	2	0.03	685	193	2.60	5892	79.40
601	2	0.03	4	0.05	687	150	2.02	6042	81.42
605	4	0.05	8	0.11	689	142	1.91	6184	83.33
608	13	0.18	21	0.28	691	125	1.68	6309	85.02
611	20	0.27	41	0.55	693	114	1.54	6423	86.55
614	28	0.38	69	0.93	695	99	1.33	6522	87.89
617	35	0.47	104	1.40	697	82	1.10	6604	88.99
620	43	0.58	147	1.98	699	82	1.10	6686	90.10
623	49	0.66	196	2.64	701	86	1.16	6772	91.25
625	73	0.98	269	3.62	703	67	0.90	6839	92.16
628	80	1.08	349	4.70	706	51	0.69	6890	92.84
630	117	1.58	466	6.28	708	39	0.53	6929	93.37
633	112	1.51	578	7.79	710	49	0.66	6978	94.03
635	160	2.16	738	9.94	713	46	0.62	7024	94.65
637	138	1.86	876	11.80	715	35	0.47	7059	95.12
639	165	2.22	1041	14.03	718	37	0.50	7096	95.62
642	166	2.24	1207	16.26	720	19	0.26	7115	95.88
644	196	2.64	1403	18.91	723	21	0.28	7136	96.16
646	179	2.41	1582	21.32	726	16	0.22	7152	96.38
648	190	2.56	1772	23.88	729	24	0.32	7176	96.70
650	184	2.48	1956	26.36	732	23	0.31	7199	97.01
652	203	2.74	2159	29.09	735	28	0.38	7227	97.39
654	214	2.88	2373	31.98	739	20	0.27	7247	97.66
656	203	2.74	2576	34.71	742	24	0.32	7271	97.98
658	228	3.07	2804	37.78	746	21	0.28	7292	98.26
660	240	3.23	3044	41.02	751	23	0.31	7315	98.57
662	232	3.13	3276	44.14	755	24	0.32	7339	98.90
664	229	3.09	3505	47.23	761	26	0.35	7365	99.25
666	224	3.02	3729	50.25	767	16	0.22	7381	99.46
668	257	3.46	3986	53.71	774	16	0.22	7397	99.68
670	248	3.34	4234	57.05	782	11	0.15	7408	99.82
671	234	3.15	4468	60.21	792	11	0.15	7419	99.97
673	218	2.94	4686	63.15	807	2	0.03	7421	100.00
675	217	2.92	4903	66.07					
677	215	2.90	5118	68.97					
679	224	3.02	5342	71.98					
681	176	2.37	5518	74.36					
683	181	2.44	5699	76.80					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.17
2006 Spring AIMS Frequency Distribution
Reading CRT Grade 3

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
253	1	0.00	1	0.00	414	1503	1.91	18831	23.99
272	2	0.00	3	0.00	418	1552	1.98	20383	25.97
285	6	0.01	9	0.01	422	1634	2.08	22017	28.05
296	9	0.01	18	0.02	426	1892	2.41	23909	30.46
306	25	0.03	43	0.05	429	2022	2.58	25931	33.04
314	60	0.08	103	0.13	433	2136	2.72	28067	35.76
321	103	0.13	206	0.26	437	2235	2.85	30302	38.61
327	189	0.24	395	0.50	441	2328	2.97	32630	41.57
333	280	0.36	675	0.86	446	2393	3.05	35023	44.62
339	398	0.51	1073	1.37	450	2636	3.36	37659	47.98
344	523	0.67	1596	2.03	454	2734	3.48	40393	51.46
349	670	0.85	2266	2.89	459	3023	3.85	43416	55.32
354	756	0.96	3022	3.85	464	2980	3.80	46396	59.11
359	832	1.06	3854	4.91	469	3209	4.09	49605	63.20
363	845	1.08	4699	5.99	474	3342	4.26	52947	67.46
368	871	1.11	5570	7.10	480	3475	4.43	56422	71.89
372	874	1.11	6444	8.21	486	3512	4.47	59934	76.36
376	869	1.11	7313	9.32	492	3446	4.39	63380	80.75
380	911	1.16	8224	10.48	499	3456	4.40	66836	85.16
384	895	1.14	9119	11.62	507	3171	4.04	70007	89.20
388	1007	1.28	10126	12.90	516	2872	3.66	72879	92.85
392	1041	1.33	11167	14.23	527	2390	3.05	75269	95.90
395	1084	1.38	12251	15.61	540	1645	2.10	76914	98.00
399	1132	1.44	13383	17.05	559	1025	1.31	77939	99.30
403	1246	1.59	14629	18.64	589	454	0.58	78393	99.88
407	1313	1.67	15942	20.31	640	94	0.12	78487	100.00
410	1386	1.77	17328	22.08					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.18
2006 Spring AIMS Frequency Distribution
Reading CRT Grade 4

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
220	2	0.00	2	0.00	430	1237	1.57	18170	23.02
292	4	0.01	6	0.01	433	1374	1.74	19544	24.76
309	3	0.00	9	0.01	436	1422	1.80	20966	26.56
321	5	0.01	14	0.02	439	1494	1.89	22460	28.46
330	9	0.01	23	0.03	443	1567	1.99	24027	30.44
338	24	0.03	47	0.06	446	1682	2.13	25709	32.57
345	68	0.09	115	0.15	449	1672	2.12	27381	34.69
351	107	0.14	222	0.28	453	1919	2.43	29300	37.12
357	198	0.25	420	0.53	456	2054	2.60	31354	39.73
362	327	0.41	747	0.95	460	2072	2.63	33426	42.35
367	459	0.58	1206	1.53	464	2184	2.77	35610	45.12
371	570	0.72	1776	2.25	468	2401	3.04	38011	48.16
375	639	0.81	2415	3.06	472	2582	3.27	40593	51.43
379	762	0.97	3177	4.03	477	2716	3.44	43309	54.87
383	843	1.07	4020	5.09	481	2905	3.68	46214	58.56
387	836	1.06	4856	6.15	486	3129	3.96	49343	62.52
391	916	1.16	5772	7.31	491	3347	4.24	52690	66.76
394	935	1.18	6707	8.50	497	3645	4.62	56335	71.38
398	940	1.19	7647	9.69	504	3949	5.00	60284	76.38
401	938	1.19	8585	10.88	511	4223	5.35	64507	81.73
404	933	1.18	9518	12.06	519	3981	5.04	68488	86.78
408	929	1.18	10447	13.24	529	3880	4.92	72368	91.69
411	1007	1.28	11454	14.51	541	3233	4.10	75601	95.79
414	973	1.23	12427	15.75	558	2136	2.71	77737	98.50
417	1045	1.32	13472	17.07	586	965	1.22	78702	99.72
420	1026	1.30	14498	18.37	660	222	0.28	78924	100.00
423	1206	1.53	15704	19.90					
427	1229	1.56	16933	21.45					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.19
2006 Spring AIMS Frequency Distribution
Reading CRT Grade 5

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
308	2	0.00	2	0.00	463	1758	2.25	24105	30.84
338	2	0.00	4	0.01	466	1875	2.40	25980	33.24
349	3	0.00	7	0.01	469	1818	2.33	27798	35.57
357	14	0.02	21	0.03	473	1871	2.39	29669	37.96
365	32	0.04	53	0.07	476	2106	2.69	31775	40.66
372	62	0.08	115	0.15	480	2125	2.72	33900	43.37
378	125	0.16	240	0.31	484	2285	2.92	36185	46.30
383	189	0.24	429	0.55	487	2409	3.08	38594	49.38
389	306	0.39	735	0.94	491	2551	3.26	41145	52.64
393	426	0.55	1161	1.49	495	2597	3.32	43742	55.97
398	596	0.76	1757	2.25	500	2734	3.50	46476	59.46
403	704	0.90	2461	3.15	504	2930	3.75	49406	63.21
407	805	1.03	3266	4.18	509	2910	3.72	52316	66.94
411	922	1.18	4188	5.36	514	3103	3.97	55419	70.91
415	1035	1.32	5223	6.68	519	3217	4.12	58636	75.02
418	1040	1.33	6263	8.01	525	3324	4.25	61960	79.28
422	1092	1.40	7355	9.41	532	3218	4.12	65178	83.39
426	1135	1.45	8490	10.86	539	3115	3.99	68293	87.38
429	1169	1.50	9659	12.36	547	2996	3.83	71289	91.21
433	1267	1.62	10926	13.98	557	2582	3.30	73871	94.52
436	1322	1.69	12248	15.67	570	2007	2.57	75878	97.08
439	1282	1.64	13530	17.31	587	1403	1.80	77281	98.88
443	1358	1.74	14888	19.05	616	670	0.86	77951	99.74
446	1445	1.85	16333	20.90	675	206	0.26	78157	100.00
449	1414	1.81	17747	22.71					
453	1509	1.93	19256	24.64					
456	1553	1.99	20809	26.62					
459	1538	1.97	22347	28.59					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.20
2006 Spring AIMS Frequency Distribution
Reading CRT Grade 6

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
250	1	0.00	1	0.00	466	1754	2.23	21932	27.89
278	2	0.00	3	0.00	470	1878	2.39	23810	30.28
308	1	0.00	4	0.01	473	1942	2.47	25752	32.75
350	3	0.00	7	0.01	477	1973	2.51	27725	35.26
359	9	0.01	16	0.02	481	2062	2.62	29787	37.88
367	40	0.05	56	0.07	484	2196	2.79	31983	40.67
374	59	0.08	115	0.15	488	2386	3.03	34369	43.71
380	125	0.16	240	0.31	492	2386	3.03	36755	46.74
386	212	0.27	452	0.57	496	2499	3.18	39254	49.92
391	330	0.42	782	0.99	500	2687	3.42	41941	53.34
396	472	0.60	1254	1.59	505	2762	3.51	44703	56.85
401	594	0.76	1848	2.35	509	2900	3.69	47603	60.54
406	653	0.83	2501	3.18	514	3063	3.90	50666	64.44
410	734	0.93	3235	4.11	519	3149	4.00	53815	68.44
414	852	1.08	4087	5.20	524	3329	4.23	57144	72.67
419	902	1.15	4989	6.34	530	3319	4.22	60463	76.89
423	956	1.22	5945	7.56	536	3326	4.23	63789	81.12
426	1034	1.32	6979	8.88	543	3309	4.21	67098	85.33
430	1063	1.35	8042	10.23	551	3047	3.88	70145	89.21
434	1119	1.42	9161	11.65	559	2813	3.58	72958	92.79
438	1139	1.45	10300	13.10	570	2321	2.95	75279	95.74
441	1197	1.52	11497	14.62	583	1688	2.15	76967	97.88
445	1282	1.63	12779	16.25	601	1039	1.32	78006	99.21
448	1377	1.75	14156	18.00	630	503	0.64	78509	99.84
452	1314	1.67	15470	19.67	690	122	0.16	78631	100.00
455	1509	1.92	16979	21.59					
459	1568	1.99	18547	23.59					
463	1631	2.07	20178	25.66					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.21
2006 Spring AIMS Frequency Distribution
Reading CRT Grade 7

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
260	5	0.01	5	0.01	477	1621	2.08	21788	27.96
289	2	0.00	7	0.01	481	1702	2.18	23490	30.15
320	4	0.01	11	0.01	485	1748	2.24	25238	32.39
340	1	0.00	12	0.02	488	1837	2.36	27075	34.75
353	6	0.01	18	0.02	492	1874	2.41	28949	37.15
365	5	0.01	23	0.03	496	1903	2.44	30852	39.60
374	13	0.02	36	0.05	500	2044	2.62	32896	42.22
382	40	0.05	76	0.10	503	2104	2.70	35000	44.92
389	73	0.09	149	0.19	507	2247	2.88	37247	47.80
396	160	0.21	309	0.40	511	2292	2.94	39539	50.75
402	226	0.29	535	0.69	516	2391	3.07	41930	53.81
408	364	0.47	899	1.15	520	2490	3.20	44420	57.01
413	534	0.69	1433	1.84	525	2662	3.42	47082	60.43
418	738	0.95	2171	2.79	529	2759	3.54	49841	63.97
423	887	1.14	3058	3.92	534	2759	3.54	52600	67.51
427	949	1.22	4007	5.14	539	2885	3.70	55485	71.21
432	1058	1.36	5065	6.50	545	2929	3.76	58414	74.97
436	1146	1.47	6211	7.97	551	3008	3.86	61422	78.83
440	1239	1.59	7450	9.56	557	2817	3.62	64239	82.45
444	1257	1.61	8707	11.17	565	2910	3.73	67149	86.18
448	1269	1.63	9976	12.80	573	2764	3.55	69913	89.73
452	1295	1.66	11271	14.47	582	2487	3.19	72400	92.92
455	1406	1.80	12677	16.27	593	2153	2.76	74553	95.68
459	1433	1.84	14110	18.11	607	1640	2.10	76193	97.79
463	1529	1.96	15639	20.07	626	1067	1.37	77260	99.16
467	1462	1.88	17101	21.95	657	516	0.66	77776	99.82
470	1469	1.89	18570	23.83	720	141	0.18	77917	100.00
474	1597	2.05	20167	25.88					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.22
2006 Spring AIMS Frequency Distribution
Reading CRT Grade 8

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
270	2	0.00	2	0.00	486	1931	2.47	23005	29.47
305	1	0.00	3	0.00	490	1906	2.44	24911	31.91
342	2	0.00	5	0.01	494	2045	2.62	26956	34.53
354	3	0.00	8	0.01	498	2134	2.73	29090	37.26
365	13	0.02	21	0.03	502	2184	2.80	31274	40.06
374	14	0.02	35	0.04	507	2202	2.82	33476	42.88
382	53	0.07	88	0.11	511	2395	3.07	35871	45.95
390	104	0.13	192	0.25	516	2456	3.15	38327	49.10
396	189	0.24	381	0.49	520	2585	3.31	40912	52.41
403	263	0.34	644	0.82	525	2665	3.41	43577	55.82
409	347	0.44	991	1.27	530	2840	3.64	46417	59.46
414	553	0.71	1544	1.98	535	2837	3.63	49254	63.09
420	591	0.76	2135	2.73	540	2935	3.76	52189	66.85
425	819	1.05	2954	3.78	546	2895	3.71	55084	70.56
430	879	1.13	3833	4.91	552	3062	3.92	58146	74.48
435	1018	1.30	4851	6.21	558	3083	3.95	61229	78.43
439	1032	1.32	5883	7.54	565	3034	3.89	64263	82.32
444	1260	1.61	7143	9.15	573	2842	3.64	67105	85.96
448	1252	1.60	8395	10.75	581	2754	3.53	69859	89.49
452	1362	1.74	9757	12.50	590	2479	3.18	72338	92.66
457	1443	1.85	11200	14.35	600	2074	2.66	74412	95.32
461	1458	1.87	12658	16.21	613	1637	2.10	76049	97.42
465	1539	1.97	14197	18.19	629	1155	1.48	77204	98.89
469	1661	2.13	15858	20.31	650	598	0.77	77802	99.66
473	1698	2.18	17556	22.49	686	224	0.29	78026	99.95
477	1744	2.23	19300	24.72	800	41	0.05	78067	100.00
482	1774	2.27	21074	26.99					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.23
2006 Spring AIMS Frequency Distribution
Reading CRT High School Cohort 08

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	3	0.00	3	0.00	669	1477	2.05	18842	26.10
514	3	0.00	6	0.01	673	1540	2.13	20382	28.23
532	3	0.00	9	0.01	676	1637	2.27	22019	30.50
546	9	0.01	18	0.02	680	1762	2.44	23781	32.94
557	9	0.01	27	0.04	684	1815	2.51	25596	35.46
566	7	0.01	34	0.05	687	2009	2.78	27605	38.24
574	22	0.03	56	0.08	691	2045	2.83	29650	41.07
581	50	0.07	106	0.15	695	2224	3.08	31874	44.15
588	107	0.15	213	0.30	699	2180	3.02	34054	47.17
594	161	0.22	374	0.52	703	2411	3.34	36465	50.51
599	279	0.39	653	0.90	708	2478	3.43	38943	53.94
605	409	0.57	1062	1.47	712	2437	3.38	41380	57.32
610	533	0.74	1595	2.21	716	2634	3.65	44014	60.97
614	692	0.96	2287	3.17	721	2769	3.84	46783	64.80
619	804	1.11	3091	4.28	726	2809	3.89	49592	68.70
623	943	1.31	4034	5.59	731	3075	4.26	52667	72.96
627	1040	1.44	5074	7.03	737	2981	4.13	55648	77.08
631	1065	1.48	6139	8.50	743	2954	4.09	58602	81.18
635	1094	1.52	7233	10.02	750	2735	3.79	61337	84.96
639	1141	1.58	8374	11.60	757	2685	3.72	64022	88.68
643	1210	1.68	9584	13.28	765	2421	3.35	66443	92.04
647	1180	1.63	10764	14.91	774	2090	2.90	68533	94.93
651	1206	1.67	11970	16.58	785	1633	2.26	70166	97.19
654	1283	1.78	13253	18.36	799	1154	1.60	71320	98.79
658	1321	1.83	14574	20.19	818	595	0.82	71915	99.62
662	1392	1.93	15966	22.12	849	224	0.31	72139	99.93
665	1399	1.94	17365	24.05	900	52	0.07	72191	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.24
2006 Spring AIMS Frequency Distribution
Reading CRT High School Cohort 07

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	3	0.02	3	0.02	673	526	4.30	8361	68.35
532	3	0.02	6	0.05	676	458	3.74	8819	72.10
546	1	0.01	7	0.06	680	462	3.78	9281	75.87
557	5	0.04	12	0.10	684	381	3.11	9662	78.99
566	4	0.03	16	0.13	687	329	2.69	9991	81.68
574	13	0.11	29	0.24	691	297	2.43	10288	84.11
581	24	0.20	53	0.43	695	282	2.31	10570	86.41
588	53	0.43	106	0.87	699	251	2.05	10821	88.46
594	94	0.77	200	1.64	703	186	1.52	11007	89.99
599	102	0.83	302	2.47	708	170	1.39	11177	91.38
605	191	1.56	493	4.03	712	160	1.31	11337	92.68
610	238	1.95	731	5.98	716	117	0.96	11454	93.64
614	306	2.50	1037	8.48	721	106	0.87	11560	94.51
619	373	3.05	1410	11.53	726	96	0.78	11656	95.29
623	424	3.47	1834	14.99	731	97	0.79	11753	96.08
627	430	3.52	2264	18.51	737	87	0.71	11840	96.80
631	467	3.82	2731	22.33	743	75	0.61	11915	97.41
635	469	3.83	3200	26.16	750	74	0.60	11989	98.01
639	477	3.90	3677	30.06	757	70	0.57	12059	98.59
643	490	4.01	4167	34.07	765	57	0.47	12116	99.05
647	523	4.28	4690	38.34	774	39	0.32	12155	99.37
651	515	4.21	5205	42.55	785	36	0.29	12191	99.66
654	498	4.07	5703	46.62	799	20	0.16	12211	99.83
658	552	4.51	6255	51.14	818	18	0.15	12229	99.98
662	579	4.73	6834	55.87	849	3	0.02	12232	100.00
665	509	4.16	7343	60.03					
669	492	4.02	7835	64.05					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.25
2006 Spring AIMS Frequency Distribution
Reading CRT High School Cohort 06

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	2	0.03	2	0.03	669	228	3.64	3990	63.73
514	3	0.05	5	0.08	673	204	3.26	4194	66.99
532	2	0.03	7	0.11	676	192	3.07	4386	70.05
546	3	0.05	10	0.16	680	193	3.08	4579	73.14
557	2	0.03	12	0.19	684	175	2.80	4754	75.93
566	7	0.11	19	0.30	687	164	2.62	4918	78.55
574	8	0.13	27	0.43	691	156	2.49	5074	81.04
581	10	0.16	37	0.59	695	136	2.17	5210	83.21
588	28	0.45	65	1.04	699	107	1.71	5317	84.92
594	53	0.85	118	1.88	703	92	1.47	5409	86.39
599	75	1.20	193	3.08	708	68	1.09	5477	87.48
605	102	1.63	295	4.71	712	62	0.99	5539	88.47
610	153	2.44	448	7.16	716	53	0.85	5592	89.31
614	173	2.76	621	9.92	721	84	1.34	5676	90.66
619	191	3.05	812	12.97	726	59	0.94	5735	91.60
623	222	3.55	1034	16.51	731	55	0.88	5790	92.48
627	238	3.80	1272	20.32	737	54	0.86	5844	93.34
631	230	3.67	1502	23.99	743	59	0.94	5903	94.28
635	281	4.49	1783	28.48	750	66	1.05	5969	95.34
639	248	3.96	2031	32.44	757	57	0.91	6026	96.25
643	271	4.33	2302	36.77	765	70	1.12	6096	97.36
647	257	4.10	2559	40.87	774	47	0.75	6143	98.12
651	250	3.99	2809	44.87	785	55	0.88	6198	98.99
654	234	3.74	3043	48.60	799	26	0.42	6224	99.41
658	244	3.90	3287	52.50	818	24	0.38	6248	99.79
662	239	3.82	3526	56.32	849	8	0.13	6256	99.92
665	236	3.77	3762	60.09	900	5	0.08	6261	100.00

Note. Freq.=Frequency, Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.26
2006 Spring AIMS Frequency Distribution
Writing CRT Grade 3

Scale Score	Freq.	%	Cum. Freq.	Cum. %
200	3399	4.30	3399	4.30
312	642	0.81	4041	5.11
325	755	0.96	4796	6.07
336	1025	1.30	5821	7.37
347	1459	1.85	7280	9.21
357	1953	2.47	9233	11.68
368	3051	3.86	12284	15.54
378	3446	4.36	15730	19.91
388	4157	5.26	19887	25.17
399	5167	6.54	25054	31.70
410	5971	7.56	31025	39.26
423	6945	8.79	37970	48.05
436	7750	9.81	45720	57.86
448	7204	9.12	52924	66.97
459	6459	8.17	59383	75.15
470	5483	6.94	64866	82.08
482	4525	5.73	69391	87.81
495	3348	4.24	72739	92.05
508	2402	3.04	75141	95.09
519	1480	1.87	76621	96.96
529	940	1.19	77561	98.15
537	622	0.79	78183	98.94
546	361	0.46	78544	99.39
554	226	0.29	78770	99.68
562	131	0.17	78901	99.84
570	67	0.08	78968	99.93
579	33	0.04	79001	99.97
590	10	0.01	79011	99.98
606	6	0.01	79017	99.99
650	7	0.01	79024	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.27
2006 Spring AIMS Frequency Distribution
Writing CRT Grade 4

Scale Score	Freq.	%	Cum. Freq.	Cum. %
230	1933	2.43	1933	2.43
333	374	0.47	2307	2.90
350	400	0.50	2707	3.40
362	515	0.65	3222	4.05
374	693	0.87	3915	4.92
386	929	1.17	4844	6.08
400	1648	2.07	6492	8.15
414	2153	2.70	8645	10.86
426	2647	3.32	11292	14.18
437	3559	4.47	14851	18.65
447	5000	6.28	19851	24.93
458	6897	8.66	26748	33.60
470	9463	11.89	36211	45.48
482	8582	10.78	44793	56.26
493	7540	9.47	52333	65.74
504	6796	8.54	59129	74.27
515	6118	7.68	65247	81.96
527	5281	6.63	70528	88.59
541	3949	4.96	74477	93.55
554	2155	2.71	76632	96.26
566	1274	1.60	77906	97.86
576	737	0.93	78643	98.78
585	446	0.56	79089	99.34
595	242	0.30	79331	99.65
604	132	0.17	79463	99.81
614	73	0.09	79536	99.90
623	43	0.05	79579	99.96
633	24	0.03	79603	99.99
645	6	0.01	79609	100.00
662	3	0.00	79612	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.28
2006 Spring AIMS Frequency Distribution
Writing CRT Grade 5

Scale Score	Freq.	%	Cum. Freq.	Cum. %
255	2542	3.23	2542	3.23
324	308	0.39	2850	3.62
347	410	0.52	3260	4.14
363	528	0.67	3788	4.81
376	641	0.81	4429	5.62
389	904	1.15	5333	6.77
403	1165	1.48	6498	8.25
418	1519	1.93	8017	10.18
431	1913	2.43	9930	12.61
443	2653	3.37	12583	15.97
455	3541	4.50	16124	20.47
467	4640	5.89	20764	26.36
480	6121	7.77	26885	34.13
493	7444	9.45	34329	43.58
505	7987	10.14	42316	53.72
517	8012	10.17	50328	63.89
529	7880	10.00	58208	73.90
542	6846	8.69	65054	82.59
555	5211	6.62	70265	89.20
568	3467	4.40	73732	93.61
581	2132	2.71	75864	96.31
592	1271	1.61	77135	97.93
603	754	0.96	77889	98.88
613	404	0.51	78293	99.40
622	256	0.33	78549	99.72
632	119	0.15	78668	99.87
642	57	0.07	78725	99.94
653	30	0.04	78755	99.98
665	10	0.01	78765	99.99
681	4	0.01	78769	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.29
2006 Spring AIMS Frequency Distribution
Writing CRT Grade 6

Scale Score	Freq.	%	Cum. Freq.	Cum. %
275	1552	1.96	1552	1.96
354	136	0.17	1688	2.13
372	216	0.27	1904	2.41
386	228	0.29	2132	2.69
400	307	0.39	2439	3.08
415	363	0.46	2802	3.54
432	586	0.74	3388	4.28
448	642	0.81	4030	5.09
462	888	1.12	4918	6.21
474	1194	1.51	6112	7.72
487	1755	2.22	7867	9.94
500	2536	3.20	10403	13.14
514	3685	4.66	14088	17.80
528	4438	5.61	18526	23.41
541	5454	6.89	23980	30.30
553	6762	8.54	30742	38.84
565	8206	10.37	38948	49.21
579	9668	12.22	48616	61.43
595	10235	12.93	58851	74.36
610	6844	8.65	65695	83.01
624	4664	5.89	70359	88.90
635	3160	3.99	73519	92.89
645	2027	2.56	75546	95.45
656	1368	1.73	76914	97.18
666	963	1.22	77877	98.40
677	552	0.70	78429	99.10
688	349	0.44	78778	99.54
699	190	0.24	78968	99.78
712	109	0.14	79077	99.91
732	58	0.07	79135	99.99
760	10	0.01	79145	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.30
2006 Spring AIMS Frequency Distribution
Writing CRT Grade 7

Scale Score	Freq.	%	Cum. Freq.	Cum. %
290	1563	1.99	1563	1.99
358	166	0.21	1729	2.20
377	202	0.26	1931	2.46
391	255	0.32	2186	2.78
404	274	0.35	2460	3.13
419	416	0.53	2876	3.66
438	606	0.77	3482	4.43
457	738	0.94	4220	5.37
472	1099	1.40	5319	6.77
485	1364	1.74	6683	8.51
497	1976	2.52	8659	11.03
511	2697	3.43	11356	14.46
527	3773	4.80	15129	19.26
544	4983	6.34	20112	25.61
558	6143	7.82	26255	33.43
570	8243	10.50	34498	43.93
581	10083	12.84	44581	56.76
593	11848	15.09	56429	71.85
605	10931	13.92	67360	85.77
617	5183	6.60	72543	92.37
628	2662	3.39	75205	95.76
636	1505	1.92	76710	97.67
644	844	1.07	77554	98.75
652	492	0.63	78046	99.37
659	264	0.34	78310	99.71
666	128	0.16	78438	99.87
674	66	0.08	78504	99.96
683	28	0.04	78532	99.99
693	4	0.01	78536	100.00
732	1	0.00	78537	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.31
2006 Spring AIMS Frequency Distribution
Writing CRT Grade 8

Scale Score	Freq.	%	Cum. Freq.	Cum. %
300	1020	1.30	1020	1.30
353	160	0.20	1180	1.50
368	164	0.21	1344	1.71
381	206	0.26	1550	1.97
394	230	0.29	1780	2.26
408	385	0.49	2165	2.75
423	652	0.83	2817	3.58
437	773	0.98	3590	4.57
450	923	1.17	4513	5.74
462	1322	1.68	5835	7.42
476	1890	2.40	7725	9.82
493	3143	4.00	10868	13.82
512	6050	7.69	16918	21.51
529	6467	8.22	23385	29.74
542	6811	8.66	30196	38.40
554	7681	9.77	37877	48.16
568	8624	10.97	46501	59.13
583	9738	12.38	56239	71.51
599	10187	12.95	66426	84.47
612	5373	6.83	71799	91.30
623	3002	3.82	74801	95.12
633	1680	2.14	76481	97.25
641	947	1.20	77428	98.46
650	618	0.79	78046	99.24
658	324	0.41	78370	99.66
666	140	0.18	78510	99.83
676	69	0.09	78579	99.92
687	38	0.05	78617	99.97
701	16	0.02	78633	99.99
734	8	0.01	78641	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

Table 8.1.1.32
2006 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 08 Prompt A

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	1385	2.03	1385	2.03	689	4263	6.25	36035	52.86
519	57	0.08	1442	2.12	694	4323	6.34	40358	59.20
537	80	0.12	1522	2.23	700	4149	6.09	44507	65.29
544	67	0.10	1589	2.33	705	3792	5.56	48299	70.85
551	95	0.14	1684	2.47	712	3422	5.02	51721	75.87
556	71	0.10	1755	2.57	718	2955	4.33	54676	80.20
561	120	0.18	1875	2.75	725	2457	3.60	57133	83.81
566	115	0.17	1990	2.92	731	2060	3.02	59193	86.83
571	146	0.21	2136	3.13	737	1665	2.44	60858	89.27
576	157	0.23	2293	3.36	742	1431	2.10	62289	91.37
581	158	0.23	2451	3.60	747	1127	1.65	63416	93.02
586	189	0.28	2640	3.87	751	950	1.39	64366	94.42
591	263	0.39	2903	4.26	755	750	1.10	65116	95.52
597	253	0.37	3156	4.63	759	685	1.00	65801	96.52
602	355	0.52	3511	5.15	763	515	0.76	66316	97.28
607	330	0.48	3841	5.63	767	425	0.62	66741	97.90
612	460	0.67	4301	6.31	772	328	0.48	67069	98.38
617	527	0.77	4828	7.08	776	291	0.43	67360	98.81
621	617	0.91	5445	7.99	780	211	0.31	67571	99.12
626	735	1.08	6180	9.07	784	199	0.29	67770	99.41
630	911	1.34	7091	10.40	789	137	0.20	67907	99.61
636	1064	1.56	8155	11.96	793	102	0.15	68009	99.76
641	1258	1.85	9413	13.81	798	53	0.08	68062	99.84
647	1549	2.27	10962	16.08	802	46	0.07	68108	99.91
652	1944	2.85	12906	18.93	807	28	0.04	68136	99.95
658	2226	3.27	15132	22.20	812	15	0.02	68151	99.97
664	2555	3.75	17687	25.94	820	9	0.01	68160	99.98
670	2918	4.28	20605	30.23	827	7	0.01	68167	99.99
675	3338	4.90	23943	35.12	864	5	0.01	68172	100.00
680	3691	5.41	27634	40.54					
684	4138	6.07	31772	46.61					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.33
2006 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 08 Prompt T

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	74	3.44	74	3.44	689	97	4.50	1330	61.75
519	10	0.46	84	3.90	694	88	4.09	1418	65.83
537	16	0.74	100	4.64	700	112	5.20	1530	71.03
544	6	0.28	106	4.92	705	94	4.36	1624	75.39
551	11	0.51	117	5.43	712	88	4.09	1712	79.48
556	8	0.37	125	5.80	718	96	4.46	1808	83.94
561	3	0.14	128	5.94	725	73	3.39	1881	87.33
566	9	0.42	137	6.36	731	50	2.32	1931	89.65
571	10	0.46	147	6.82	737	38	1.76	1969	91.41
576	15	0.70	162	7.52	742	30	1.39	1999	92.80
581	11	0.51	173	8.03	747	28	1.30	2027	94.10
586	13	0.60	186	8.64	751	14	0.65	2041	94.75
591	20	0.93	206	9.56	755	21	0.97	2062	95.73
597	26	1.21	232	10.77	759	25	1.16	2087	96.89
602	32	1.49	264	12.26	763	9	0.42	2096	97.31
607	28	1.30	292	13.56	767	12	0.56	2108	97.86
612	18	0.84	310	14.39	772	8	0.37	2116	98.24
617	21	0.97	331	15.37	776	8	0.37	2124	98.61
621	22	1.02	353	16.39	780	6	0.28	2130	98.89
626	36	1.67	389	18.06	784	4	0.19	2134	99.07
630	55	2.55	444	20.61	789	6	0.28	2140	99.35
636	47	2.18	491	22.79	793	2	0.09	2142	99.44
641	65	3.02	556	25.81	798	5	0.23	2147	99.68
647	86	3.99	642	29.81	807	3	0.14	2150	99.81
653	96	4.46	738	34.26	812	3	0.14	2153	99.95
659	78	3.62	816	37.88	820	1	0.05	2154	100.00
664	96	4.46	912	42.34					
670	85	3.95	997	46.29					
675	84	3.90	1081	50.19					
680	71	3.30	1152	53.48					
684	81	3.76	1233	57.24					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.34
2006 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 07 Prompt A

Scale			Cum.			Scale			Cum.					
Score	Freq.	%	Freq.	Cum. %	Score	Freq.	%	Freq.	Cum. %	Score	Freq.	%	Freq.	Cum. %
500	412	3.90	412	3.90	684	463	4.39	8623	81.70					
519	29	0.27	441	4.18	689	412	3.90	9035	85.61					
537	37	0.35	478	4.53	694	298	2.82	9333	88.43					
544	32	0.30	510	4.83	700	298	2.82	9631	91.25					
551	43	0.41	553	5.24	705	208	1.97	9839	93.23					
556	46	0.44	599	5.68	712	171	1.62	10010	94.85					
561	58	0.55	657	6.23	718	140	1.33	10150	96.17					
566	48	0.45	705	6.68	725	75	0.71	10225	96.88					
571	70	0.66	775	7.34	731	74	0.70	10299	97.58					
576	56	0.53	831	7.87	737	56	0.53	10355	98.11					
581	95	0.90	926	8.77	742	42	0.40	10397	98.51					
586	98	0.93	1024	9.70	747	33	0.31	10430	98.83					
591	126	1.19	1150	10.90	751	34	0.32	10464	99.15					
597	108	1.02	1258	11.92	755	17	0.16	10481	99.31					
602	161	1.53	1419	13.45	759	16	0.15	10497	99.46					
607	175	1.66	1594	15.10	763	14	0.13	10511	99.59					
612	264	2.50	1858	17.60	767	7	0.07	10518	99.66					
617	218	2.07	2076	19.67	772	10	0.09	10528	99.75					
621	302	2.86	2378	22.53	776	9	0.09	10537	99.84					
626	353	3.34	2731	25.88	780	5	0.05	10542	99.89					
630	396	3.75	3127	29.63	784	6	0.06	10548	99.94					
636	406	3.85	3533	33.48	789	2	0.02	10550	99.96					
641	495	4.69	4028	38.17	793	3	0.03	10553	99.99					
647	567	5.37	4595	43.54	802	1	0.01	10554	100.00					
652	612	5.80	5207	49.34										
658	605	5.73	5812	55.07										
664	597	5.66	6409	60.73										
670	604	5.72	7013	66.45										
675	615	5.83	7628	72.28										
680	532	5.04	8160	77.32										

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.35
2006 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 07 Prompt T

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	22	2.34	22	2.34	680	40	4.26	648	69.01
519	3	0.32	25	2.66	684	45	4.79	693	73.80
537	3	0.32	28	2.98	689	42	4.47	735	78.27
544	5	0.53	33	3.51	694	33	3.51	768	81.79
551	5	0.53	38	4.05	700	27	2.88	795	84.66
556	6	0.64	44	4.69	705	22	2.34	817	87.01
561	1	0.11	45	4.79	712	38	4.05	855	91.05
566	3	0.32	48	5.11	718	19	2.02	874	93.08
571	2	0.21	50	5.32	725	14	1.49	888	94.57
576	7	0.75	57	6.07	731	11	1.17	899	95.74
581	6	0.64	63	6.71	737	7	0.75	906	96.49
586	5	0.53	68	7.24	742	8	0.85	914	97.34
591	10	1.06	78	8.31	747	3	0.32	917	97.66
597	13	1.38	91	9.69	751	5	0.53	922	98.19
602	20	2.13	111	11.82	755	2	0.21	924	98.40
607	12	1.28	123	13.10	759	2	0.21	926	98.62
612	17	1.81	140	14.91	763	2	0.21	928	98.83
617	18	1.92	158	16.83	767	1	0.11	929	98.94
621	23	2.45	181	19.28	772	1	0.11	930	99.04
626	24	2.56	205	21.83	776	2	0.21	932	99.25
630	29	3.09	234	24.92	780	1	0.11	933	99.36
636	31	3.30	265	28.22	784	1	0.11	934	99.47
641	44	4.69	309	32.91	789	4	0.43	938	99.89
647	55	5.86	364	38.76	802	1	0.11	939	100.00
653	56	5.96	420	44.73					
659	54	5.75	474	50.48					
664	32	3.41	506	53.89					
670	61	6.50	567	60.38					
675	41	4.37	608	64.75					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.36
2006 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 06 Prompt A

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	186	3.54	186	3.54	680	214	4.07	3829	72.79
519	16	0.30	202	3.84	684	199	3.78	4028	76.58
537	28	0.53	230	4.37	689	179	3.40	4207	79.98
544	20	0.38	250	4.75	694	155	2.95	4362	82.93
551	36	0.68	286	5.44	700	123	2.34	4485	85.27
556	29	0.55	315	5.99	705	122	2.32	4607	87.59
561	27	0.51	342	6.50	712	100	1.90	4707	89.49
566	37	0.70	379	7.21	718	84	1.60	4791	91.08
571	46	0.87	425	8.08	725	67	1.27	4858	92.36
576	32	0.61	457	8.69	731	56	1.06	4914	93.42
581	54	1.03	511	9.71	737	45	0.86	4959	94.28
586	55	1.05	566	10.76	742	39	0.74	4998	95.02
591	57	1.08	623	11.84	747	35	0.67	5033	95.68
597	58	1.10	681	12.95	751	47	0.89	5080	96.58
602	91	1.73	772	14.68	755	28	0.53	5108	97.11
607	101	1.92	873	16.60	759	33	0.63	5141	97.74
612	111	2.11	984	18.71	763	16	0.30	5157	98.04
617	125	2.38	1109	21.08	767	14	0.27	5171	98.31
621	151	2.87	1260	23.95	772	22	0.42	5193	98.73
626	161	3.06	1421	27.02	776	18	0.34	5211	99.07
630	199	3.78	1620	30.80	780	15	0.29	5226	99.35
636	199	3.78	1819	34.58	784	9	0.17	5235	99.52
641	250	4.75	2069	39.33	789	6	0.11	5241	99.64
647	247	4.70	2316	44.03	793	6	0.11	5247	99.75
652	249	4.73	2565	48.76	798	2	0.04	5249	99.79
658	257	4.89	2822	53.65	802	6	0.11	5255	99.90
664	263	5.00	3085	58.65	807	2	0.04	5257	99.94
670	276	5.25	3361	63.90	812	1	0.02	5258	99.96
675	254	4.83	3615	68.73	827	2	0.04	5260	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

Table 8.1.1.37
2006 Spring AIMS Frequency Distribution
Writing CRT High School Cohort 06 Prompt T

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	15	2.90	15	2.90	670	15	2.90	301	58.22
519	1	0.19	16	3.09	675	19	3.68	320	61.90
537	2	0.39	18	3.48	680	27	5.22	347	67.12
544	2	0.39	20	3.87	684	21	4.06	368	71.18
551	6	1.16	26	5.03	689	23	4.45	391	75.63
556	2	0.39	28	5.42	694	19	3.68	410	79.30
561	3	0.58	31	6.00	700	7	1.35	417	80.66
566	1	0.19	32	6.19	705	18	3.48	435	84.14
571	1	0.19	33	6.38	712	13	2.51	448	86.65
576	2	0.39	35	6.77	718	8	1.55	456	88.20
581	5	0.97	40	7.74	725	10	1.93	466	90.14
586	6	1.16	46	8.90	731	7	1.35	473	91.49
591	6	1.16	52	10.06	737	6	1.16	479	92.65
597	7	1.35	59	11.41	742	7	1.35	486	94.00
602	5	0.97	64	12.38	747	6	1.16	492	95.16
607	10	1.93	74	14.31	751	6	1.16	498	96.32
612	7	1.35	81	15.67	755	2	0.39	500	96.71
617	12	2.32	93	17.99	759	2	0.39	502	97.10
621	12	2.32	105	20.31	763	3	0.58	505	97.68
626	6	1.16	111	21.47	767	2	0.39	507	98.07
630	13	2.51	124	23.98	776	2	0.39	509	98.45
636	22	4.26	146	28.24	780	4	0.77	513	99.23
641	22	4.26	168	32.50	784	2	0.39	515	99.61
647	22	4.26	190	36.75	789	1	0.19	516	99.81
653	37	7.16	227	43.91	798	1	0.19	517	100.00
659	27	5.22	254	49.13					
664	32	6.19	286	55.32					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

8.1.2 AIMS DPA NRT State Results

This section of the technical report provides information on the results of the norm-referenced scores provided by the AIMS DPA. Students in grades 3-8 were administered a number of *TerraNova* items embedded within the AIMS DPA to provide norm-referenced scores. Please see Parts 3 and 4 of this report for more details on the design of the AIMS DPA. The AIMS DPA provided scale scores on the *TerraNova* vertical scale. In addition to scale scores, Arizona students were also assigned norm-referenced scores based on their scale scores and the 2000 *TerraNova* norms. For more information regarding the development of *TerraNova* norms please see *TerraNova, The Second Edition: California Achievement Tests Technical Report* (CTB/McGraw-Hill, 2003) and *TerraNova, The Second Edition, Norms Book* (CTB, 2001).

Table 8.1.2.1 presents norm-referenced results from the 2006 Spring AIMS DPA. Included in the table for each grade and content are the mean (M), standard deviation (SD), and scales scores at the 25th, 50th, and 75th percentiles for both the Arizona students (AZ) and the *TerraNova* national standardization data.

Table 8.1.2.1
2006 Spring AIMS NRT State Test Results

Test	N	M	SD	Percentile			
				25	50	75	
Mathematics							
3	AZ	79060	608.9	46.0	582	610	635
	TN	1819	604.5	39.4	583	609	632
4	AZ	79384	636.2	49.2	611	637	660
	TN	1756	619.7	47.8	605	632	655
5	AZ	78460	648.0	50.3	621	648	673
	TN	1726	635.0	48.3	620	649	675
6	AZ	78455	668.9	55.7	642	673	699
	TN	1786	655.5	49.2	639	666	692
7	AZ	77414	673.4	50.8	649	677	703
	TN	1784	657.7	47.8	644	675	702
8	AZ	77311	692.2	52.9	664	696	724
	TN	1646	674.2	51.3	658	689	718
Reading							
3	AZ	78487	622.7	47.3	599	627	651
	TN	1886	624.1	41.7	606	631	655
4	AZ	78924	641.4	50.3	620	643	664
	TN	1882	631.4	47.6	616	644	668
5	AZ	78157	657.8	44.8	636	660	682
	TN	1596	648.5	46.8	631	657	681
6	AZ	78631	663.0	44.5	640	665	688
	TN	1773	650.6	46.7	633	660	686
7	AZ	77917	665.6	53.5	640	673	697
	TN	1852	648.2	54.4	639	667	693
8	AZ	78067	681.5	48.3	654	682	709
	TN	1666	662.8	50.5	646	676	704

Note. AZ=Arizona NRT; TN=TerraNova National Standardization Sample. Source for TN data *TerraNova, The Second Edition* Technical Report (2003) by CTB/McGraw-Hill. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in the AZ NRT data summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in the AZ NRT summary. The AZ NRT results are not final results and are presented here for purposes of addressing reliability and validity. AZ NRT results should not be used for accountability purposes.

(table continues)

Table 8.1.2.1
2006 Spring AIMS NRT State Test Results (continued)

Test	N	M	SD	Percentile		
				25	50	75
Language						
3 AZ	78487	619.7	39.3	600	622	642
TN	1886	621.2	40.2	602	626	650
4 AZ	78924	640.0	45.6	619	643	665
TN	1882	632.0	45.0	616	642	665
5 AZ	78157	654.1	51.5	634	657	679
TN	1596	644.8	51.6	631	655	678
6 AZ	78631	653.0	52.8	635	657	679
TN	1773	649.2	46.4	633	658	682
7 AZ	77917	668.3	47.0	645	669	692
TN	1852	648.4	53.5	637	664	687
8 AZ	78067	673.1	42.8	654	675	695
TN	1666	657.5	49.3	643	670	696

Note. AZ=Arizona NRT; TN=TerraNova National Standardization Sample. Source for TN data *TerraNova, The Second Edition* Technical Report (2003) by CTB/McGraw-Hill. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in the AZ NRT data summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in the AZ NRT summary. The AZ NRT results are not final results and are presented here for purposes of addressing reliability and validity. AZ NRT results should not be used for accountability purposes.

8.2 Longitudinal Data

The Spring 2005 administration of the AIMS assessments represents the baseline year for the AIMS testing program. During the 2005 administration a new vertical scale was established for Grades 3-8, new scales were established for the high school assessments, and new cut scores were assigned for each grade and content area. In this section, the Spring 2006 results are presented along with the 2005 results to provide longitudinal information. Tables 8.2.1-8.2.6 include scale score descriptive statistics and performance level distributions for 2005 and 2006 AIMS administrations. Caution should be taken when interpreting year-to-year comparisons, as slight differences in exclusion rules, changes in the manner in which accommodations were identified, and changes in the manner in which high school results were separated into grades (2005) and cohorts (2006) may result in different student population characteristics reported in Tables 8.2.1-8.2.6.

Table 8.2.1
Longitudinal Comparison of Scale Scores
Mathematics CRT

Grade	Year	N	Scale Score		Percentiles				
			M	SD	P10	P25	P50	P75	P90
3	2005	77443	448.03	50.28	383	411	445	481	512
	2006	79060	447.37	48.15	387	414	447	477	505
4	2005	76152	476.55	53.20	407	440	478	511	539
	2006	79384	482.45	53.93	411	444	481	517	554
5	2005	76719	501.46	54.34	433	462	499	538	566
	2006	78460	504.49	54.43	438	466	501	542	570
6	2005	75884	515.57	57.72	441	475	515	556	594
	2006	78455	517.75	58.26	445	476	514	553	596
7	2005	77084	539.32	54.28	469	500	538	572	605
	2006	77414	543.49	56.18	470	502	543	578	614
8	2005	75599	552.01	58.62	477	508	552	590	623
	2006	77311	554.40	59.18	478	510	553	593	626
HS	2005 (Grade 10)	66788	704.70	46.06	648	672	702	734	766
	2006 (Cohort 08)	70193	701.62	42.44	648	670	699	729	755
HS	2005 (Grade 11)	27209	685.99	32.40	642	664	687	709	725
	2006 (Cohort 07)	13761	667.95	25.50	637	650	668	683	697
HS	2005 (Grade 12)	10191	664.70	29.73	629	642	662	685	704
	2006 (Cohort 06)	7421	668.33	27.39	637	650	666	683	699

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 data only), attending state hospital schools (2006 data only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Table 8.2.2
Longitudinal Comparison of Performance Level Distribution
Mathematics CRT

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77443	10	19	51	20
	2006	79060	10	18	54	18
4	2005	76152	13	17	49	20
	2006	79384	10	17	49	24
5	2005	76719	13	20	48	19
	2006	78460	13	19	49	19
6	2005	75884	18	20	46	16
	2006	78455	18	19	46	16
7	2005	77084	16	20	52	13
	2006	77414	15	17	52	15
8	2005	75599	22	19	48	12
	2006	77311	21	19	47	12
HS	2005 (Grade 10)	66788	22	12	49	17
	2006 (Cohort 08)	70193	22	12	51	14
HS	2005 (Grade 11)	27209	28	16	53	3
	2006 (Cohort 07)	13761	49	26	24	1
HS	2005 (Grade 12)	10191	55	18	26	1
	2006 (Cohort 06)	7421	50	24	24	2

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 data only), attending state hospital schools (2006 data only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Table 8.2.3
Longitudinal Comparison of Scale Scores
Reading CRT

Grade	Year	N	Scale Score		Percentiles				
			M	SD	P10	P25	P50	P75	P90
3	2005	77047	448.29	51.03	379	413	451	486	516
	2006	78487	451.49	50.75	380	418	454	486	516
4	2005	75685	468.70	53.56	398	431	469	506	531
	2006	78924	469.72	49.67	401	436	472	504	529
5	2005	76379	486.68	48.19	421	451	489	517	545
	2006	78157	489.26	47.66	426	456	491	519	547
6	2005	75940	494.22	49.30	427	460	493	526	561
	2006	78631	496.77	48.21	430	463	500	530	559
7	2005	77541	509.05	51.42	439	472	510	545	576
	2006	77917	512.12	51.84	444	474	511	551	582
8	2005	76356	515.56	52.76	448	478	517	553	582
	2006	78067	518.71	53.21	448	482	520	558	590
HS	2005 (Grade 10)	68788	699.75	50.35	631	667	701	731	762
	2006 (Cohort 08)	72191	703.19	48.13	635	669	703	737	765
HS	2005 (Grade 11)	18204	669.18	43.55	615	638	667	693	720
	2006 (Cohort 07)	12232	661.20	36.04	619	635	658	680	708
HS	2005 (Grade 12)	8882	651.91	40.67	606	623	649	677	706
	2006 (Cohort 06)	6261	663.57	43.13	619	635	658	684	721

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 data only), attending state hospital schools (2006 data only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Table 8.2.4
Longitudinal Comparison of Performance Level Distribution
Reading CRT

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77047	10	26	55	10
	2006	78487	9	24	56	11
4	2005	75685	12	24	54	9
	2006	78924	11	24	57	8
5	2005	76379	10	24	58	9
	2006	78157	9	24	58	9
6	2005	75940	12	25	57	7
	2006	78631	10	25	60	4
7	2005	77541	10	25	58	7
	2006	77917	10	25	58	7
8	2005	76356	11	26	57	6
	2006	78067	11	27	58	5
HS	2005 (Grade 10)	68788	8	21	63	8
	2006 (Cohort 08)	72191	6	23	64	8
HS	2005 (Grade 11)	18204	15	39	43	3
	2006 (Cohort 07)	12232	15	53	31	1
HS	2005 (Grade 12)	8882	28	44	28	1
	2006 (Cohort 06)	6261	17	50	30	3

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 data only), attending state hospital schools (2006 data only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Table 8.2.5
Longitudinal Comparison of Scale Scores
Writing CRT

Grade	Year	N	Scale Score		Percentiles				
			M	SD	P10	P25	P50	P75	P90
3	2005	77058	444.76	75.47	358	411	460	496	520
	2006	79024	423.07	67.32	357	388	436	459	495
4	2005	76049	470.86	76.49	385	435	481	514	553
	2006	79612	475.48	59.45	414	458	482	515	541
5	2005	76681	502.76	70.74	422	471	509	546	572
	2006	78769	496.06	67.08	418	467	505	542	568
6	2005	76125	525.89	65.43	445	497	538	563	593
	2006	79145	563.78	67.33	500	541	579	610	635
7	2005	77537	543.12	61.26	472	512	545	582	606
	2006	78537	566.06	61.11	497	544	581	605	617
8	2005	76227	548.41	66.65	466	517	558	588	615
	2006	78641	554.52	59.01	493	529	568	599	612
HS	2005 (Grade 10)	68272	693.41	48.63	630	668	698	723	749
	2006 (Cohort 08)	71958	684.74	49.39	630	664	689	712	742
HS	2005 (Grade 11)	15977	665.69	51.55	600	636	668	698	730
	2006 (Cohort 07)	12085	649.32	49.81	591	626	658	680	700
HS	2005 (Grade 12)	7609	649.49	52.88	579	619	657	683	710
	2006 (Cohort 06)	6133	652.39	55.68	586	626	658	684	718

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 data only), attending state hospital schools (2006 data only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Table 8.2.6
Longitudinal Comparison of Performance Level Distribution
Writing CRT

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77058	6	21	63	10
	2006	79024	7	41	49	3
4	2005	76049	7	31	56	6
	2006	79612	4	30	64	2
5	2005	76681	6	29	63	2
	2006	78769	7	37	56	1
6	2005	76125	4	26	66	3
	2006	79145	3	10	76	11
7	2005	77537	3	18	77	2
	2006	78537	3	8	88	1
8	2005	76227	4	18	77	2
	2006	78641	3	19	78	0
HS	2005 (Grade 10)	68272	5	24	62	9
	2006 (Cohort 08)	71958	6	30	59	6
HS	2005 (Grade 11)	15977	12	43	41	4
	2006 (Cohort 07)	12085	15	57	27	1
HS	2005 (Grade 12)	7609	18	50	30	2
	2006 (Cohort 06)	6133	17	52	28	3

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 data only), attending state hospital schools (2006 data only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

Part 9: Validity Evidence

Part 9 of the technical report provides evidence supporting the reliability and validity of the 2006 AIMS DPA and high school assessments. All data presented in this section were computed using population test data available in the final electronic data files. The following AERA/APA/NCME standards are addressed: 1.5, 1.7, 2.1, 2.4, 2.10, 2.13, 3.16, 4.15, 6.5, 7.1, 7.3, and 7.10.

9.1 Reliability

AERA/APA/NCME standards for Educational and Psychological Testing refer to reliability as the “consistency of [a measure] when the testing procedure is repeated on a population of individuals or groups.” A reliable test produces stable scores; that is, very similar score distributions would result if the test were administered repeatedly under similar conditions to the same students without memory or fatigue affecting the scores. Reliability of the 2006 Spring AIMS assessments was estimated in two ways: internal consistency for all multiple choice tests and inter-rater reliability for all writing tests.

9.1.1 Measures of Internal Consistency

The Kuder-Richardson Formula 20 (K-R 20) is a frequently used measure of internal consistency for tests consisting of dichotomously scored (multiple choice) items (Allen & Yen, 1979). Based on a single administration of a test, this statistic provides a reliability estimate that equals the average of all split-half coefficients that would be obtained on all possible divisions of the test into halves. Such a split-half coefficient would be obtained by correlating scores on one half of the test with the scores on the other half, and then adjusting the correlation with the Spearman-Brown formula so that it applies to the whole test. K-R 20 is used as the measure of internal consistency for the 2006 AIMS Spring CRT reading, CRT mathematics, NRT reading, NRT mathematics, and NRT language tests. K-R 20 is computed as (Crocker & Algina, 1986)

$$KR_{20} = \frac{k}{k-1} \left(1 - \frac{\sum pq}{\sigma_x^2} \right),$$

where k = number of items, σ_x^2 = the total score variance, and pq = the variance of item i .

For tests consisting of constructed response and/or multiple choice items, Cronbach’s alpha is a frequently used measure of internal consistency. Cronbach’s alpha can be estimated for tests consisting of dichotomous items only as well, and as such, will produce the same result as the K-R 20 estimate. Cronbach’s alpha is computed as (Crocker & Algina, 1986)

$$\hat{\alpha} = \frac{k}{k-1} \left(1 - \frac{\sum \sigma_i^2}{\sigma_x^2} \right),$$

where k = number of items, σ_x^2 = the total score variance, and σ_i^2 = the variance of item i .

Although Cronbach's alpha could be used as the measure of internal consistency for the 2006 Spring AIMS CRT writing tests, this measure would likely overestimate the coefficient because the trait scores are based on the same response; that is the student response is scored repeatedly for each of the six traits. Furthermore, split-half reliability for a single prompt test may not be a valid estimate of reliability.

Reliability estimates for the multiple choice tests administered as part of the 2006 Spring AIMS assessment are presented in Table 9.1.1.1. Note that a high degree of internal consistency is evident for all CRT tests. The reliability for the NRT assessment tends to be slightly lower than the corresponding CRT assessment due to the fewer number of items on each test.

Table 9.1.1.1
2006 Spring AIMS Internal Consistency

Grade	CRT				NRT					
	Reading		Mathematics		Reading		Language		Mathematics	
	N	Alpha	N	Alpha	N	Alpha	N	Alpha	N	Alpha
03	78487	0.90	79060	0.92	78487	0.82	78487	0.84	79060	0.82
04	78924	0.90	79384	0.93	78924	0.86	78924	0.85	79384	0.80
05	78157	0.90	78460	0.93	78157	0.84	78157	0.84	78460	0.83
06	78631	0.91	78455	0.93	78631	0.82	78631	0.82	78455	0.85
07	77917	0.91	77414	0.93	77917	0.85	77917	0.83	77414	0.84
08	78067	0.87	77311	0.92	78067	0.78	78067	0.82	77311	0.83
HS	72191	0.90	70193	0.94	--	--	--	--	--	--

9.1.2 Inter-Rater Reliability

Reliability for constructed response items is typically examined by calculating indices of inter-rater agreement: the reliability with which human raters assign scores to student responses. Evidence supporting inter-rater reliability for each trait of the AIMS writing assessments is presented in terms of raw score means, raw score standard deviations, and percentage of agreement between raters. Perfect agreement is defined as trait scores that are exactly the same across raters. Adjacent agreement is defined as trait scores differing by one point across raters. Discrepant cases include records in which scores from the two raters differed by more than one point. In addition, Cohen's kappa and intraclass correlation are provided as indices of agreement between the raters.

Cohen's kappa (Cohen, 1960) is commonly used to summarize the agreement between raters and is computed as (Brennan & Prediger, 1981)

$$\kappa = \frac{\sum P_{ii} - \sum P_{i \cdot} P_{\cdot i}}{1 - \sum P_{i \cdot} P_{\cdot i}}$$

where $\sum P_{ii}$ is the observed proportion of agreement and $\sum P_{i \cdot} P_{\cdot i}$ is the chance proportion of agreement.

Intraclass correlation is defined by Shrout and Fleiss (1979) as "the correlation between one measurement on a target and another measurement obtained on that target." In the context of the 2006 Spring AIMS writing tests, the "target" is the trait, and each measurement was obtained by a

randomly assigned rater to that trait. Therefore, ICC(1,1) was used to estimate intraclass correlation. ICC(1,1) is estimated as (Shrout & Fleiss, 1979)

$$ICC(1,1) = \frac{BMS - WMS}{BMS + (k - 1)WMS},$$

where BMS = between-targets mean square, WMS = within-targets mean square, and k =the number of raters rating each target.

For the grades 3-8 writing tests, each trait was scored by one rater. Ten percent of the student responses were randomly selected and scored by a second rater to reduce rater drift and allow measures of inter-rater reliability to be estimated. The inter-rater reliability statistics provided in Table 9.1.2.1 were calculated using the scores from both raters on each trait for the ten percent of the responses that were scored twice.

For the high school writing prompts, traits were scored by two independent raters for all students. The inter-rater reliability statistics for Prompt A and Prompt T are presented in Table 9.1.2.2 and were calculated using the scores from both raters on a given trait. The final two trait scores for each trait were used in the analyses to calculate rater agreement.

Table 9.1.2.1
2006 Spring AIMS Inter-rater Reliability
Grades 3-8

Trait	N	Max Points	Rater 1		Rater 2		% Agreement			Kappa	Intraclass Correlation
			M	SD	M	SD	Perfect	Adjacent	Discrepant		
Grade 3											
1 Ideas and Content	7932	6	2.55	1.00	2.56	0.99	57.36	38.30	4.34	0.54	0.69
2 Organization	7932	6	2.97	0.96	2.97	0.95	61.06	36.59	2.36	0.57	0.74
3 Voice	7932	6	3.12	1.05	3.11	1.04	54.39	40.97	4.64	0.53	0.71
4 Word Choice	7932	6	2.76	1.01	2.76	1.01	58.47	38.41	3.11	0.57	0.74
5 Sentence Fluency	7932	6	2.85	1.05	2.86	1.05	52.81	40.86	6.33	0.51	0.68
6 Conventions	7932	6	2.93	1.04	2.92	1.05	55.91	39.81	4.27	0.56	0.72
Grade 4											
1 Ideas and Content	7940	6	3.18	0.85	3.18	0.83	63.99	34.24	1.76	0.54	0.69
2 Organization	7940	6	3.00	0.91	3.01	0.91	62.13	35.59	2.28	0.57	0.72
3 Voice	7940	6	3.27	0.90	3.29	0.91	61.56	36.25	2.19	0.55	0.71
4 Word Choice	7940	6	3.10	0.94	3.12	0.96	55.20	40.37	4.43	0.49	0.65
5 Sentence Fluency	7940	6	3.04	0.91	3.04	0.91	60.62	37.25	2.13	0.55	0.71
6 Conventions	7940	6	3.00	0.97	3.00	0.96	58.00	38.90	3.10	0.55	0.71
Grade 5											
1 Ideas and Content	7894	6	3.23	1.10	3.24	1.08	48.29	44.19	7.52	0.47	0.66
2 Organization	7894	6	3.14	1.00	3.15	1.00	56.46	39.19	4.35	0.52	0.69
3 Voice	7894	6	3.29	1.01	3.30	1.01	48.90	44.74	6.36	0.43	0.62
4 Word Choice	7894	6	3.32	1.09	3.32	1.09	50.51	43.45	6.04	0.50	0.68
5 Sentence Fluency	7894	6	3.14	1.02	3.14	1.05	52.69	41.07	6.25	0.49	0.67
6 Conventions	7894	6	3.22	1.04	3.24	1.03	53.39	42.04	4.56	0.51	0.69
Grade 6											
1 Ideas and Content	7920	6	3.43	1.04	3.44	1.03	53.86	41.06	5.08	0.52	0.69
2 Organization	7920	6	3.56	0.87	3.57	0.86	64.84	33.45	1.72	0.55	0.71
3 Voice	7920	6	3.76	1.03	3.77	1.01	55.25	39.53	5.21	0.50	0.67
4 Word Choice	7920	6	3.58	0.97	3.58	0.97	55.18	40.47	4.36	0.49	0.66
5 Sentence Fluency	7920	6	3.70	0.97	3.69	0.98	55.13	39.57	5.30	0.47	0.66
6 Conventions	7920	6	3.77	0.93	3.76	0.93	64.09	33.67	2.23	0.57	0.73
Grade 7											
1 Ideas and Content	7842	6	3.36	0.87	3.35	0.87	58.25	39.25	2.50	0.48	0.66
2 Organization	7842	6	3.68	0.87	3.67	0.87	70.05	27.61	2.35	0.57	0.73
3 Voice	7842	6	3.61	0.95	3.60	0.94	59.45	36.66	3.89	0.50	0.69
4 Word Choice	7842	6	3.39	0.87	3.39	0.88	60.10	37.25	2.65	0.50	0.65
5 Sentence Fluency	7842	6	3.40	0.99	3.41	0.98	53.09	41.23	5.69	0.47	0.65
6 Conventions	7842	6	3.61	0.86	3.62	0.85	67.11	30.81	2.08	0.53	0.69
Grade 8											
1 Ideas and Content	7859	6	3.42	0.81	3.42	0.81	62.26	36.07	1.67	0.51	0.67
2 Organization	7859	6	3.57	0.85	3.56	0.85	62.35	35.21	2.44	0.52	0.67
3 Voice	7859	6	3.49	0.84	3.48	0.83	62.13	36.12	1.74	0.52	0.68
4 Word Choice	7859	6	3.59	0.84	3.59	0.84	61.22	36.70	2.09	0.50	0.67
5 Sentence Fluency	7859	6	3.47	0.84	3.48	0.84	58.56	39.10	2.34	0.48	0.65
6 Conventions	7859	6	3.52	0.89	3.52	0.88	60.12	37.33	2.54	0.52	0.69

Note. Approximately 10% of the student responses were randomly assigned to be rated by a second rater.

Table 9.1.2.2
2006 Spring AIMS Inter-rater Reliability
High School

Trait	N	Max Points	Rater 1		Rater 2		% Agreement			Kappa	Intraclass Correlation
			M	SD	M	SD	Perfect	Adjacent	Discrepant		
Prompt A											
1 Ideas and Content	68156	6	3.82	1.04	3.82	1.04	54.49	39.50	6.01	0.49	0.68
2 Organization	68156	6	3.76	0.98	3.77	0.98	62.95	34.65	2.40	0.57	0.75
3 Voice	68156	6	3.14	1.05	3.14	1.05	43.44	45.92	10.63	0.39	0.57
4 Word Choice	68156	6	3.30	0.87	3.30	0.87	55.84	40.50	3.66	0.45	0.62
5 Sentence Fluency	68156	6	3.44	0.94	3.43	0.94	53.55	41.93	4.52	0.46	0.64
6 Conventions	68156	6	3.57	0.87	3.57	0.87	57.21	38.80	4.00	0.45	0.61
Prompt T											
1 Ideas and Content	2154	6	3.27	1.09	3.30	1.10	84.03	15.46	0.51	0.85	0.92
2 Organization	2154	6	3.49	1.08	3.50	1.08	79.16	20.06	0.79	0.80	0.89
3 Voice	2154	6	3.10	1.08	3.09	1.08	57.61	38.95	3.44	0.60	0.77
4 Word Choice	2154	6	3.15	1.15	3.12	1.15	46.19	44.66	9.15	0.48	0.67
5 Sentence Fluency	2154	6	3.24	1.05	3.24	1.09	58.17	38.63	3.20	0.60	0.77
6 Conventions	2154	6	3.26	1.07	3.25	1.05	57.75	38.49	3.76	0.58	0.75

Note. All student responses were rated by two raters. Only students receiving scores and condition codes of B, C, and D are included in this analysis.

9.2 Validity

“Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed users of tests. Validity is, therefore, the most fundamental consideration in developing and evaluating tests” (AERA/APA/NCME, 1999). The purpose of test score validation is not to validate the test itself, but to validate interpretations of the test scores for particular purposes or uses. Test score validation is not a quantifiable property but an ongoing process, beginning at initial conceptualization and continuing throughout the entire assessment process. Every aspect of an assessment provides evidence in support of its validity (or evidence to the contrary), including design, content specifications, item development, psychometric quality, and inferences made from the results. The 2006 Spring AIMS tests were designed and developed to provide fair and accurate ability scores that support appropriate, meaningful, and useful educational decisions.

In addition to the evidence provided in Part 2 (Involvement of Arizona Educators), Part 3 (Test Design), Part 4 (Test Development), Part 5 (Test Administration), Part 6 (Data for Operational Analysis), Part 7 (Calibration and Scaling), Part 8 (Reliability), and Part 10 (Classification), additional evidence to support the validity of the 2006 AIMS assessments is provided by the following:

- Identification of any items that displayed differential item functioning for subgroups of ethnicity and gender; and
- Correlations between scores on the 2006 AIMS tests for each grade level.

Also note that further evidence in support of the AIMS assessment has been documented in previous AIMS technical reports. Please see the 2005 AIMS Technical Report available at: <http://www.ade.az.gov/standards/aims/Administering/AIMSTechReport2005.pdf>.

9.2.1 Differential Item Functioning

Because test scores can have many sources of variation, the test publishers' task is to develop assessments that measure the intended abilities and skills without introducing extraneous elements or construct irrelevant variance. When tests measure something other than what they are intended to measure, test scores will reflect these unintended skills and knowledge, as well as what is purportedly assessed by the test. If this occurs, these tests can be called biased (Angoff, 1993; Camilli & Shepard, 1994; Green, 1975). One of the factors that may render test scores to be biased is differing cultural and socioeconomic experiences.

The 2006 Spring AIMS tests were developed using procedures to minimize item and test bias and include reviews such as the Content and Sensitivity Reviews described in Part 4 (i.e., Test Development). Expertise in this area is not, however, a substitute for statistical analyses of the items. Thus, an empirical differential item functioning (DIF) approach was used to examine potential item bias. DIF studies include systematic item analyses to determine if examinees with the same underlying level of ability have the same probability of correctly responding to the item. Items identified with DIF are further examined to determine if item performance differences between identifiable subgroups of the population are due to extraneous or construct irrelevant information making the items unfairly difficult for one of the subgroups.

DIF analyses of the 2006 Spring AIMS tests were conducted for ethnic subgroups and gender. In order to compute DIF, students must be matched on ability level using a conditioning variable. For these analyses, raw score on the CRT test in the content area of interest was used as the conditioning variable. Note that DIF analyses were conducted on reading and mathematics items only, as the writing single prompt assessments do not have an appropriate conditioning variable for analysis.

The Mantel-Haenszel chi-square statistic was used to identify DIF in multiple choice items. The Mantel-Haenszel statistic was first recommended by Holland and Thayer (1988), is frequently used, and is efficient in terms of statistical power (Clauser & Mazor, 1998). The Mantel-Haenszel statistic is computed as (Zwick, Donoghue, & Grima, 1993)

$$\text{Mantel } \chi^2 = \frac{\left(\sum_k F_k - \sum_k E(F_k) \right)^2}{\sum_k \text{Var}(F_k)},$$

where F_k is the sum of scores for the focal group at the k^{th} level of the matching variable. Note that the Mantel-Haenszel statistic is sensitive to N such that larger sample sizes increase the value of chi square.

In addition to the Mantel-Haenszel chi-square statistic, the delta statistic (MH-D DIF) was computed for all items. Educational Testing Service (ETS) first developed the MH-D DIF statistic. To compute delta, alpha (the odds ratio) is first computed as

$$\alpha_{MH} = \frac{\sum_{k=1}^K N_{r1k} N_{f0k} / N_k}{\sum_{k=1}^K N_{f1k} N_{r0k} / N_k},$$

where N_{r1k} is the number of correct responses in the reference group at ability level k , N_{f0k} is the number of incorrect responses in the focal group at ability level k , N_k is the total number of

responses, N_{fjk} is the number of correct responses in the focal group at ability level k , and N_{rok} is the number of incorrect responses in the reference group at ability level k . MH-D DIF is then computed as

$$\text{MH-D DIF} = -2.35 \ln(\alpha_{MH}) .$$

Positive values of MH-D DIF indicate items that favor the focal group, whereas negative values of MH-D DIF indicate items that favor the reference group.

The Mantel-Haenszel chi-square statistic and the delta statistic were used in combination to identify the 2006 Spring AIMS items that exhibit strong, weak, or no DIF (Zieky, 1993). Table 9.2.1.1 indicates the criteria for each category used for the 2006 AIMS DIF analysis. An alpha level of .01 was used for all Mantel-Haenszel statistics. Note that the criteria are very lenient given very large sample sizes and the number of DIF statistics computed. In other words, a large number of items will be placed in categories B and C given the critical value. For reference, the critical value for the chi-square statistic to be significant at $p < 0.01$ is 6.635, at $p < 0.001$ the critical value is 10.827, and at $p < 0.0005$ the critical value is 12.116.

Table 9.2.1.1
Differential Item Functioning Flag Categories

Category	Description	Criterion
A	No DIF	Mantel-Haenzel chi-square not significantly different than zero
B	Weak DIF	Significant Mantel-Haenzel chi-square ($p < 0.01$) and $ \text{MH D-DIF} < 1.5$
C	Strong DIF	Significant Mantel-Haenzel chi-square ($p < 0.01$) and $ \text{MH D-DIF} \geq 1.5$

Another measure of DIF, also presented here for the 2006 Spring AIMS operational items, is the standardized mean difference (SMD; Zwick et al., 1993). The SMD is an effect size index of DIF which is relatively easy to interpret. The SMD compares the means of the reference and focus groups, adjusting for the distribution of reference and focal group members on the conditioning variable, which for these analyses is the CRT raw score. SMD is computed as (Zwick et al., 1993)

$$SMD = p_{fk} \left(\sum_k m_{Fk} - \sum_k m_{Rk} \right),$$

where p_{fk} = proportion of the focal group members at the k th level of the matching variable, $m_{Fk} = 1/N_{F1k}$ and $m_{Rk} = 1/N_{R1k}$. A negative SMD value indicates an item on which the focal group has a lower mean than the reference group. A positive SMD value indicates an item on which the reference group has a lower mean than the focal group.

Mantel-Haenszel chi-square statistic, MH-D DIF, SMD, and flag category results for all items in the 2006 Spring AIMS CRT tests are presented in tables 9.2.1.2 through 9.2.1.15. It is important to note that DIF analyses are also conducted on field test items prior to form construction. Very few AIMS items are identified as exhibiting strong DIF in field testing. All items exhibiting strong DIF are investigated for possible sources of differential functioning by CTB Test Development and ADE staff and such items are avoided in form construction. Not surprisingly, the vast majority of items on the operational AIMS exhibit no DIF or weak DIF, and the impact of DIF on AIMS tests scores can be considered negligible.

Table 9.2.1.2
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3

Item	Reference: Male N = 40168 Focal: Female N = 38385				Reference: White N = 34659 Focal: African Am. N = 4117				Reference: White N = 34659 Focal: Hispanic N = 34045				Reference: White N = 34659 Focal: Native Am. N = 3907				Reference: White N = 34659 Focal: Asian N = 2034			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	126.27	0.50	0.03	B>	2.24	-0.15	-0.01	A	36.18	0.31	0.02	B>	46.47	-0.66	-0.05	B<	23.15	0.88	0.04	B>
2	111.93	0.45	0.03	B>	34.70	0.58	0.04	B>	182.31	0.65	0.05	B>	30.88	0.55	0.04	B>	12.38	0.54	0.03	B>
3	0.93	0.04	0.00	A	0.22	-0.04	0.00	A	17.62	-0.19	-0.02	B<	0.71	-0.08	-0.01	A	10.19	-0.42	-0.03	B<
4	5.70	-0.10	-0.01	A	2.02	0.13	0.01	A	4.93	0.10	0.01	A	2.63	-0.15	-0.01	A	5.71	0.36	0.02	A
5	447.39	0.80	0.07	B>	9.85	-0.27	-0.02	B<	221.37	-0.63	-0.05	B<	17.56	-0.37	-0.03	B<	99.64	-1.23	-0.09	B<
6	44.20	0.29	0.02	B>	3.25	0.18	0.01	A	1.14	0.05	0.00	A	5.78	-0.24	-0.02	A	0.00	0.00	0.00	A
7	3.31	0.28	0.00	A	0.46	-0.21	0.00	A	10.57	0.59	0.00	B>	7.11	0.93	0.01	B>	0.42	0.54	0.00	A
8	8.57	0.11	0.01	B>	8.70	0.27	0.02	B>	70.64	0.37	0.03	B>	7.70	0.26	0.02	B>	10.71	0.46	0.03	B>
9	594.84	-1.06	-0.07	B<	14.64	-0.37	-0.03	B<	51.39	-0.35	-0.03	B<	11.25	0.34	0.02	B>	2.17	-0.24	-0.01	A
10	90.78	-0.37	-0.03	B<	0.25	-0.05	0.00	A	355.45	-0.81	-0.06	B<	76.56	-0.79	-0.07	B<	20.15	-0.61	-0.04	B<
11	16.88	-0.18	-0.01	B<	3.57	0.19	0.01	A	52.76	0.37	0.03	B>	6.49	0.26	0.02	A	7.27	0.47	0.02	B>
12	7.27	-0.11	-0.01	B<	15.18	-0.38	-0.03	B<	823.96	-1.36	-0.10	B<	26.87	-0.49	-0.04	B<	35.51	-0.92	-0.04	B<
13	4.25	0.09	0.01	A	32.72	0.58	0.04	B>	194.38	0.71	0.05	B>	24.44	0.50	0.04	B>	59.46	1.46	0.06	B>
14	11.24	-0.15	-0.01	B<	31.34	-0.57	-0.04	B<	244.36	-0.81	-0.05	B<	97.29	-0.94	-0.07	B<	62.75	-1.25	-0.05	B<
15	33.67	-0.21	-0.02	B<	5.42	-0.20	-0.02	A	149.61	-0.49	-0.05	B<	24.01	-0.44	-0.04	B<	39.60	-0.73	-0.07	B<
16	4.90	-0.10	-0.01	A	10.21	0.34	0.02	B>	116.00	0.58	0.04	B>	17.53	0.45	0.03	B>	1.87	0.24	0.01	A
17	36.61	0.48	0.01	B>	0.00	0.02	0.00	A	4.27	0.19	0.00	A	4.54	-0.34	-0.01	A	6.51	0.98	0.01	A
18	145.55	0.59	0.03	B>	0.17	-0.05	0.00	A	140.08	0.66	0.04	B>	5.16	0.24	0.02	A	18.66	0.84	0.03	B>
19	10.21	-0.15	-0.01	B<	8.29	0.29	0.02	B>	0.53	0.04	0.00	A	0.03	-0.02	0.00	A	1.04	0.19	0.01	A
20	271.92	-0.65	-0.05	B<	49.50	-0.64	-0.05	B<	0.30	-0.02	0.00	A	12.21	0.32	0.03	B>	0.28	0.08	0.01	A
21	485.78	-0.99	-0.06	B<	64.86	-0.82	-0.05	B<	491.15	-1.07	-0.08	B<	161.41	-1.32	-0.09	B<	40.74	-0.98	-0.05	B<
22	0.16	-0.02	0.00	A	0.02	0.02	0.00	A	5.00	0.13	0.01	A	6.56	0.28	0.02	A	0.11	0.08	0.00	A
23	41.36	0.24	0.02	B>	1.24	0.10	0.01	A	97.74	0.42	0.03	B>	22.81	0.42	0.04	B>	5.19	0.30	0.02	A
24	0.58	-0.03	0.00	A	5.50	0.22	0.02	A	94.65	-0.43	-0.03	B<	18.64	-0.39	-0.03	B<	25.01	-0.71	-0.04	B<
25	2.44	-0.07	0.00	A	25.83	-0.52	-0.03	B<	9.38	-0.16	-0.02	B<	41.28	-0.66	-0.05	B<	7.89	-0.50	-0.02	B<
26	106.51	0.40	0.03	B>	5.54	0.21	0.02	A	80.22	0.40	0.03	B>	2.46	0.14	0.01	A	3.90	0.27	0.02	A
27	23.72	-0.39	-0.01	B<	0.60	0.14	0.00	A	11.92	0.33	0.01	B>	2.35	0.27	0.01	A	0.01	-0.06	0.00	A
28	9.48	0.15	0.01	B>	9.18	0.33	0.02	B>	47.44	0.38	0.02	B>	15.02	0.42	0.03	B>	8.11	0.51	0.02	B>
29	5.95	0.09	0.01	A	2.79	0.15	0.01	A	37.39	0.26	0.02	B>	21.25	0.42	0.04	B>	8.16	0.38	0.03	B>
30	105.57	0.38	0.03	B>	0.28	-0.05	0.00	A	63.08	-0.33	-0.03	B<	15.48	-0.35	-0.03	B<	11.71	-0.43	-0.03	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.2 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3

Item	Reference: Male N = 40168 Focal: Female N = 38385				Reference: White N = 34659 Focal: African Am. N = 4117				Reference: White N = 34659 Focal: Hispanic N = 34045				Reference: White N = 34659 Focal: Native Am. N = 3907				Reference: White N = 34659 Focal: Asian N = 2034			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	17.23	0.20	0.01	B>	3.38	0.19	0.01	A	114.32	0.58	0.04	B>	23.97	0.53	0.04	B>	3.21	0.31	0.01	A
32	13.06	-0.13	-0.01	B<	66.69	-0.76	-0.06	B<	0.98	0.04	0.00	A	7.92	0.26	0.02	B>	4.47	-0.25	-0.02	A
33	4.22	0.10	0.00	A	1.45	-0.13	-0.01	A	1.47	0.07	0.01	A	0.04	-0.02	0.00	A	0.01	0.03	0.00	A
34	112.53	-0.42	-0.03	B<	35.44	0.55	0.05	B>	118.27	0.49	0.04	B>	23.79	0.46	0.04	B>	31.25	0.83	0.05	B>
35	0.01	0.00	0.00	A	27.39	0.53	0.04	B>	120.33	0.54	0.04	B>	15.36	0.39	0.03	B>	13.19	0.61	0.03	B>
36	1.48	0.06	0.00	A	5.16	0.27	0.01	A	16.31	-0.24	-0.02	B<	1.82	0.16	0.01	A	15.91	0.91	0.02	B>
37	38.96	-0.27	-0.02	B<	4.35	-0.21	-0.01	A	4.61	-0.10	0.00	A	7.61	-0.27	-0.02	B<	0.49	0.12	0.01	A
38	77.24	-0.38	-0.02	B<	0.31	-0.05	0.00	A	43.38	0.32	0.02	B>	66.07	0.81	0.06	B>	19.44	0.72	0.03	B>
39	151.05	0.43	0.04	B>	8.09	0.24	0.02	B>	120.66	0.44	0.04	B>	63.62	0.68	0.07	B>	16.04	0.46	0.04	B>
40	165.95	0.49	0.04	B>	1.53	-0.11	-0.01	A	8.81	0.13	0.01	B>	10.70	-0.31	-0.02	B<	0.32	-0.07	-0.01	A
41	228.40	-0.59	-0.05	B<	7.03	-0.24	-0.02	B<	213.50	-0.62	-0.05	B<	35.01	-0.56	-0.04	B<	5.13	-0.30	-0.02	A
42	2.64	-0.09	0.00	A	2.54	0.19	0.01	A	61.37	0.50	0.02	B>	26.28	0.63	0.03	B>	8.97	0.73	0.02	B>
43	39.64	0.27	0.02	B>	22.49	0.46	0.04	B>	256.73	0.79	0.06	B>	179.67	1.37	0.11	B>	18.14	0.72	0.03	B>
44	138.47	-0.52	-0.03	B<	9.13	0.31	0.02	B>	62.08	0.40	0.03	B>	65.20	0.84	0.06	B>	2.36	0.25	0.01	A
45	46.07	0.34	0.02	B>	2.23	0.17	0.01	A	54.33	0.43	0.02	B>	43.81	0.78	0.05	B>	1.12	0.20	0.01	A
46	0.05	-0.01	0.00	A	9.85	0.36	0.02	B>	30.43	0.32	0.02	B>	42.18	0.75	0.05	B>	9.07	0.63	0.02	B>
47	851.16	-1.08	-0.10	B<	53.36	-0.63	-0.06	B<	205.84	-0.59	-0.06	B<	1.53	-0.11	-0.01	A	6.12	-0.31	-0.03	A
48	35.17	-0.35	-0.01	B<	0.63	0.10	0.00	A	141.30	0.81	0.03	B>	21.81	0.59	0.03	B>	3.03	0.43	0.01	A
49	6.31	-0.14	-0.01	A	40.84	-0.77	-0.04	B<	538.54	-1.51	-0.07	C<	401.26	-2.10	-0.13	C<	37.70	-1.31	-0.03	B<
50	15.40	0.14	0.01	B>	31.49	-0.47	-0.04	B<	3.90	0.08	0.01	A	4.63	-0.19	-0.02	A	0.02	0.02	0.00	A
51	26.96	0.27	0.01	B>	1.83	0.16	0.01	A	132.96	0.67	0.03	B>	22.24	0.57	0.03	B>	5.59	0.46	0.02	A
52	196.02	0.55	0.04	B>	2.95	0.16	0.01	A	30.39	-0.24	-0.02	B<	33.07	-0.51	-0.05	B<	4.20	-0.29	-0.02	A
53	2.05	-0.05	0.00	A	12.65	-0.31	-0.03	B<	17.84	-0.17	-0.02	B<	6.16	-0.22	-0.02	A	13.78	-0.45	-0.04	B<
54	102.80	-0.41	-0.03	B<	22.59	0.45	0.03	B>	39.05	0.28	0.01	B>	1.90	0.13	0.01	A	10.43	0.48	0.03	B>
55	29.26	0.29	0.01	B>	21.67	0.56	0.03	B>	40.70	0.39	0.02	B>	45.42	0.82	0.05	B>	2.69	0.36	0.01	A
56	112.83	-0.42	-0.03	B<	13.26	-0.33	-0.03	B<	0.67	-0.04	0.00	A	1.74	0.13	0.01	A	0.12	0.05	0.00	A
57	0.64	-0.04	0.00	A	3.75	0.22	0.01	A	25.92	0.29	0.01	B>	38.18	-0.65	-0.05	B<	18.04	0.91	0.03	B>
58	332.80	0.70	0.06	B>	5.26	-0.20	-0.02	A	0.04	-0.01	0.00	A	1.15	-0.10	-0.01	A	57.01	-0.95	-0.07	B<
59	110.75	0.56	0.02	B>	22.59	0.57	0.03	B>	54.16	0.45	0.02	B>	18.38	0.50	0.03	B>	9.50	0.70	0.02	B>
60	33.29	0.22	0.02	B>	43.89	0.59	0.05	B>	81.75	0.40	0.03	B>	24.45	0.45	0.04	B>	51.00	1.01	0.06	B>

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.2 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3

Item	Reference: Male N = 40168 Focal: Female N = 38385				Reference: White N = 34659 Focal: African Am. N = 4117				Reference: White N = 34659 Focal: Hispanic N = 34045				Reference: White N = 34659 Focal: Native Am. N = 3907				Reference: White N = 34659 Focal: Asian N = 2034			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	11.53	0.13	0.01	B>	12.28	0.32	0.03	B>	15.10	0.17	0.02	B>	20.54	0.42	0.04	B>	0.05	0.03	0.00	A
62	39.50	-0.24	-0.02	B<	1.69	-0.12	-0.01	A	110.15	-0.45	-0.04	B<	101.63	-0.93	-0.08	B<	1.54	-0.17	-0.01	A
63	882.25	-1.22	-0.09	B<	33.80	-0.56	-0.04	B<	283.48	-0.76	-0.05	B<	0.45	0.07	0.01	A	12.50	-0.49	-0.03	B<
64	100.16	0.60	0.02	B>	0.06	0.04	0.00	A	9.68	0.22	0.01	B>	13.15	0.47	0.02	B>	0.05	-0.07	0.00	A
65	3.92	0.09	0.01	A	2.20	-0.15	-0.01	A	21.43	-0.24	-0.02	B<	24.45	-0.49	-0.04	B<	4.92	0.42	0.02	A
66	18.67	0.16	0.01	B>	10.82	-0.29	-0.03	B<	22.00	-0.20	-0.02	B<	22.52	-0.45	-0.04	B<	8.06	-0.35	-0.03	B<
67	16.32	0.15	0.01	B>	3.99	0.18	0.01	A	1.28	-0.05	0.00	A	2.86	-0.17	-0.01	A	0.00	0.00	0.00	A
68	22.41	0.19	0.01	B>	0.01	-0.01	0.00	A	6.44	0.12	0.00	A	0.45	-0.07	-0.01	A	0.22	-0.07	0.00	A
69	53.41	0.29	0.02	B>	2.82	0.16	0.01	A	17.24	0.19	0.01	B>	0.65	-0.08	-0.01	A	0.71	-0.12	-0.01	A
70	35.00	-0.27	-0.02	B<	16.06	-0.40	-0.03	B<	97.60	-0.51	-0.04	B<	5.94	-0.25	-0.02	A	11.76	-0.56	-0.02	B<
71	8.21	-0.11	-0.01	B<	2.02	-0.13	-0.01	A	53.52	-0.32	-0.04	B<	76.63	-0.82	-0.07	B<	1.94	-0.19	-0.01	A
72	234.01	0.54	0.05	B>	12.59	0.30	0.03	B>	5.72	0.10	0.00	A	3.95	0.18	0.01	A	0.01	0.01	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.3
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4

Item	Reference: Male N = 40079 Focal: Female N = 38743				Reference: White N = 35718 Focal: African Am. N = 4166				Reference: White N = 35718 Focal: Hispanic N = 33094				Reference: White N = 35718 Focal: Native Am. N = 4028				Reference: White N = 35718 Focal: Asian N = 2055			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	191.99	-0.62	-0.04	B<	20.49	-0.44	-0.03	B<	26.97	-0.26	-0.02	B<	107.47	-1.00	-0.08	B<	3.53	-0.33	-0.01	A
2	87.36	-0.37	-0.03	B<	0.98	-0.09	-0.01	A	264.35	-0.73	-0.07	B<	123.84	-1.00	-0.09	B<	17.47	-0.58	-0.04	B<
3	0.05	0.01	0.00	A	6.27	-0.32	-0.01	A	27.23	-0.35	-0.01	B<	31.13	-0.68	-0.03	B<	7.11	-0.57	-0.01	B<
4	11.01	0.16	0.01	B>	3.77	0.21	0.01	A	106.43	0.58	0.04	B>	5.31	0.24	0.02	A	25.35	1.13	0.03	B>
5	65.91	0.30	0.03	B>	0.82	-0.08	-0.01	A	70.47	-0.35	-0.03	B<	33.29	-0.50	-0.05	B<	19.42	-0.56	-0.04	B<
6	27.04	0.29	0.01	B>	3.06	0.21	0.01	A	104.78	0.66	0.03	B>	23.17	0.58	0.03	B>	6.56	0.64	0.01	A
7	43.87	-0.26	-0.02	B<	17.60	-0.37	-0.03	B<	36.15	-0.26	-0.02	B<	53.13	-0.65	-0.06	B<	0.19	-0.07	0.00	A
8	47.96	-0.38	-0.02	B<	3.38	0.22	0.01	A	58.77	0.47	0.03	B>	13.42	0.43	0.02	B>	2.34	0.34	0.01	A
9	18.75	0.16	0.01	B>	3.31	-0.16	-0.01	A	30.72	-0.23	-0.03	B<	37.36	-0.53	-0.05	B<	7.81	-0.36	-0.03	B<
10	204.09	0.58	0.04	B>	11.38	0.31	0.03	B>	137.57	0.53	0.04	B>	17.06	0.38	0.03	B>	63.67	1.28	0.07	B>
11	69.12	-0.31	-0.03	B<	10.66	-0.28	-0.02	B<	66.18	-0.34	-0.02	B<	1.69	-0.12	-0.01	A	11.40	-0.43	-0.03	B<
12	370.36	0.79	0.06	B>	89.27	0.88	0.07	B>	478.08	1.01	0.08	B>	109.35	0.98	0.08	B>	50.39	1.12	0.06	B>
13	6.72	-0.11	-0.01	B<	1.13	0.11	0.01	A	3.68	0.10	0.01	A	3.89	-0.19	-0.02	A	1.49	0.21	0.01	A
14	6.37	-0.13	-0.01	A	0.00	0.01	0.00	A	14.15	0.22	0.01	B>	0.43	0.08	0.00	A	1.42	0.26	0.01	A
15	50.25	0.28	0.02	B>	28.75	0.48	0.04	B>	3.62	0.08	0.01	A	0.93	-0.09	-0.01	A	12.34	0.54	0.03	B>
16	41.26	-0.36	-0.01	B<	8.58	-0.36	-0.02	B<	117.99	-0.70	-0.03	B<	38.51	-0.73	-0.04	B<	1.32	-0.29	-0.01	A
17	1.44	-0.05	0.00	A	43.51	0.58	0.05	B>	5.34	-0.10	-0.01	A	37.02	0.54	0.05	B>	0.26	0.07	0.01	A
18	2.66	-0.09	0.00	A	1.43	0.15	0.01	A	1.15	0.07	0.00	A	14.64	0.46	0.03	B>	15.05	0.93	0.02	B>
19	1.34	0.04	0.00	A	29.90	-0.48	-0.04	B<	472.56	-0.93	-0.07	B<	193.84	-1.20	-0.10	B<	70.32	-1.07	-0.07	B<
20	0.02	0.00	0.00	A	4.24	0.18	0.02	A	2.04	0.06	0.00	A	6.71	0.23	0.02	B>	1.71	0.17	0.01	A
21	0.75	-0.05	0.00	A	0.46	0.08	0.00	A	36.91	0.38	0.02	B>	66.35	1.02	0.05	B>	3.02	0.40	0.01	A
22	72.37	0.43	0.02	B>	1.70	-0.15	-0.01	A	26.18	0.30	0.01	B>	16.52	0.47	0.03	B>	0.75	-0.17	-0.01	A
23	30.97	0.21	0.02	B>	63.04	-0.73	-0.06	B<	97.44	-0.42	-0.03	B<	28.21	-0.51	-0.04	B<	23.33	-0.60	-0.05	B<
24	52.22	-0.32	-0.02	B<	0.32	0.06	0.00	A	103.78	0.50	0.04	B>	59.92	0.81	0.06	B>	13.41	0.62	0.03	B>
25	31.44	-0.25	-0.02	B<	0.86	0.09	0.01	A	8.74	0.15	0.01	B>	29.20	0.54	0.04	B>	8.18	0.50	0.02	B>
26	2.16	0.08	0.00	A	0.90	0.11	0.01	A	111.05	0.61	0.03	B>	38.65	0.72	0.04	B>	0.16	-0.08	0.00	A
27	660.38	-1.00	-0.08	B<	11.76	-0.30	-0.03	B<	4.85	-0.10	-0.01	A	55.93	0.68	0.06	B>	8.33	0.41	0.03	B>
28	22.37	-0.22	-0.01	B<	8.50	0.30	0.02	B>	0.00	0.00	0.00	A	3.49	-0.19	-0.01	A	2.09	0.29	0.01	A
29	12.70	-0.15	-0.01	B<	8.81	-0.28	-0.02	B<	252.75	-0.73	-0.06	B<	124.84	-1.07	-0.08	B<	7.50	-0.41	-0.02	B<
30	240.18	0.94	0.03	B>	0.01	0.02	0.00	A	19.69	-0.31	-0.01	B<	1.29	-0.15	-0.01	A	15.05	-0.92	-0.02	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.3 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4

Item	Reference: Male N = 40079 Focal: Female N = 38743				Reference: White N = 35718 Focal: African Am. N = 4166				Reference: White N = 35718 Focal: Hispanic N = 33094				Reference: White N = 35718 Focal: Native Am. N = 4028				Reference: White N = 35718 Focal: Asian N = 2055			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	238.07	0.68	0.04	B>	25.68	0.51	0.03	B>	203.49	0.70	0.05	B>	30.37	0.54	0.04	B>	8.21	0.49	0.02	B>
32	235.44	-0.69	-0.04	B<	1.08	-0.10	-0.01	A	1.19	0.06	0.00	A	27.79	0.53	0.04	B>	3.47	0.35	0.01	A
33	10.74	-0.16	-0.01	B<	15.56	-0.42	-0.03	B<	111.96	-0.56	-0.04	B<	0.00	0.01	0.00	A	0.97	-0.19	-0.01	A
34	0.00	0.00	0.00	A	13.30	-0.36	-0.02	B<	0.02	-0.01	0.00	A	0.12	-0.04	0.00	A	0.15	-0.08	0.00	A
35	14.41	0.21	0.01	B>	0.31	0.07	0.00	A	50.41	0.45	0.02	B>	54.83	0.96	0.05	B>	0.00	-0.01	0.00	A
36	28.27	0.40	0.01	B>	0.00	-0.01	0.00	A	10.44	0.28	0.01	B>	16.28	0.66	0.02	B>	2.98	-0.54	-0.01	A
37	12.64	0.19	0.01	B>	0.01	0.01	0.00	A	2.03	0.09	0.00	A	30.72	0.64	0.04	B>	0.02	-0.04	0.00	A
38	207.68	-0.59	-0.04	B<	0.66	-0.08	-0.01	A	0.47	-0.03	0.00	A	8.03	-0.26	-0.02	B<	2.02	0.22	0.01	A
39	53.08	0.43	0.01	B>	2.03	-0.19	-0.01	A	27.36	-0.36	-0.02	B<	1.41	-0.15	-0.01	A	1.11	-0.27	-0.01	A
40	90.88	-0.35	-0.03	B<	4.04	0.17	0.02	A	33.77	0.24	0.02	B>	12.51	0.31	0.03	B>	3.44	0.23	0.02	A
41	536.43	-0.84	-0.08	B<	0.74	-0.07	-0.01	A	2.63	-0.07	-0.01	A	3.53	-0.17	-0.02	A	0.93	-0.11	-0.01	A
42	0.88	0.04	0.00	A	29.61	-0.55	-0.03	B<	23.17	-0.26	-0.02	B<	35.82	-0.60	-0.04	B<	18.87	-0.73	-0.03	B<
43	25.84	0.21	0.02	B>	0.12	-0.03	0.00	A	73.60	0.39	0.03	B>	0.46	0.06	0.00	A	13.22	0.58	0.03	B>
44	58.16	0.29	0.02	B>	43.00	0.59	0.05	B>	177.93	0.58	0.05	B>	52.19	0.65	0.06	B>	5.83	0.33	0.02	A
45	10.99	0.13	0.01	B>	0.22	-0.04	0.00	A	0.01	0.00	0.00	A	10.73	-0.30	-0.02	B<	0.46	0.10	0.01	A
46	0.03	0.01	0.00	A	5.41	0.23	0.02	A	0.01	0.01	0.00	A	78.75	0.88	0.07	B>	0.00	0.01	0.00	A
47	31.00	-0.21	-0.02	B<	4.61	-0.19	-0.02	A	26.80	-0.22	-0.02	B<	46.77	-0.62	-0.05	B<	1.63	-0.16	-0.01	A
48	164.79	-0.55	-0.04	B<	0.35	-0.06	0.00	A	41.85	-0.31	-0.02	B<	17.64	-0.41	-0.03	B<	6.10	0.41	0.02	A
49	54.12	0.32	0.02	B>	0.00	0.00	0.00	A	0.22	-0.02	0.00	A	0.05	0.02	0.00	A	0.83	-0.15	-0.01	A
50	56.57	0.29	0.02	B>	6.52	0.23	0.02	A	207.51	0.64	0.05	B>	4.34	0.19	0.01	A	2.69	0.23	0.02	A
51	34.41	-0.25	-0.02	B<	9.93	-0.30	-0.02	B<	36.49	-0.29	-0.02	B<	0.34	0.06	0.01	A	5.89	-0.36	-0.02	A
52	1.21	-0.06	0.00	A	1.61	0.14	0.01	A	71.24	0.49	0.03	B>	18.95	0.49	0.03	B>	6.55	0.55	0.02	A
53	252.75	0.69	0.04	B>	30.74	0.53	0.04	B>	249.55	0.77	0.06	B>	47.58	0.66	0.05	B>	40.22	1.15	0.05	B>
54	259.04	-0.82	-0.04	B<	46.85	-0.76	-0.04	B<	489.03	-1.25	-0.07	B<	110.83	-1.14	-0.07	B<	36.60	-1.16	-0.03	B<
55	1.83	0.07	0.00	A	8.32	-0.33	-0.02	B<	36.54	-0.37	-0.02	B<	1.29	0.13	0.01	A	5.46	-0.48	-0.01	A
56	37.07	0.29	0.02	B>	22.34	0.50	0.03	B>	95.96	0.53	0.03	B>	7.85	0.29	0.02	B>	6.90	0.53	0.02	B>
57	243.53	-0.74	-0.04	B<	0.30	-0.06	0.00	A	98.29	-0.53	-0.03	B<	116.01	-1.07	-0.08	B<	9.30	-0.58	-0.02	B<
58	85.14	-0.42	-0.02	B<	33.57	-0.58	-0.04	B<	370.08	-0.98	-0.06	B<	24.53	-0.50	-0.03	B<	59.40	-1.23	-0.05	B<
59	20.52	0.18	0.01	B>	2.91	-0.16	-0.01	A	10.39	-0.14	-0.01	B<	39.82	-0.59	-0.05	B<	0.01	0.02	0.00	A
60	0.44	0.02	0.00	A	1.52	-0.10	-0.01	A	11.74	-0.13	-0.01	B<	6.27	0.21	0.02	A	7.17	-0.32	-0.03	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.3 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4

Item	Reference: Male N = 40079 Focal: Female N = 38743				Reference: White N = 35718 Focal: African Am. N = 4166				Reference: White N = 35718 Focal: Hispanic N = 33094				Reference: White N = 35718 Focal: Native Am. N = 4028				Reference: White N = 35718 Focal: Asian N = 2055			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	160.92	0.56	0.03	B>	19.55	0.44	0.03	B>	101.07	0.50	0.04	B>	12.49	0.34	0.03	B>	7.34	0.46	0.02	B>
62	25.60	0.31	0.01	B>	1.33	-0.15	-0.01	A	42.03	0.46	0.02	B>	0.36	0.08	0.00	A	1.34	-0.29	-0.01	A
63	54.56	-0.30	-0.02	B<	0.22	0.05	0.00	A	33.17	0.26	0.02	B>	6.01	0.23	0.02	A	24.97	0.74	0.04	B>
64	36.10	0.27	0.02	B>	12.45	-0.35	-0.02	B<	90.18	-0.48	-0.03	B<	35.86	-0.58	-0.04	B<	13.35	-0.59	-0.03	B<
65	186.04	0.52	0.04	B>	3.58	0.17	0.02	A	29.09	-0.23	-0.01	B<	3.86	-0.17	-0.01	A	18.80	-0.58	-0.04	B<
66	27.93	0.19	0.02	B>	0.15	0.03	0.01	A	44.35	0.27	0.03	B>	34.68	0.50	0.05	B>	0.05	0.03	0.00	A
67	53.42	0.28	0.02	B>	18.55	0.38	0.03	B>	67.35	0.35	0.02	B>	2.06	-0.14	-0.01	A	33.46	0.71	0.06	B>
68	0.86	0.03	0.00	A	1.77	0.11	0.01	A	116.74	-0.43	-0.03	B<	5.61	-0.20	-0.02	A	38.07	-0.72	-0.06	B<
69	130.24	0.73	0.02	B>	2.27	-0.20	-0.01	A	28.80	0.39	0.02	B>	13.39	0.50	0.02	B>	0.00	0.03	0.00	A
70	29.53	0.20	0.02	B>	2.78	0.14	0.01	A	83.69	0.38	0.03	B>	4.73	0.19	0.02	A	0.04	-0.03	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.4
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5

Item	Reference: Male N = 39590 Focal: Female N = 38308				Reference: White N = 35666 Focal: African Am. N = 4096				Reference: White N = 35666 Focal: Hispanic N = 32284				Reference: White N = 35666 Focal: Native Am. N = 3949				Reference: White N = 35666 Focal: Asian N = 2113			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	171.14	-0.51	-0.04	B<	36.84	-0.54	-0.05	B<	490.86	-0.97	-0.08	B<	71.54	-0.75	-0.07	B<	62.56	-1.02	-0.07	B<
2	15.35	0.15	0.01	B>	0.39	-0.06	-0.01	A	239.55	0.68	0.06	B>	244.81	1.54	0.13	C>	8.66	0.41	0.03	B>
3	186.04	-0.56	-0.04	B<	68.45	-0.74	-0.06	B<	30.25	-0.25	-0.02	B<	5.46	0.22	0.02	A	4.99	-0.33	-0.02	A
4	139.51	0.64	0.03	B>	0.62	0.10	0.00	A	48.69	-0.43	-0.02	B<	8.26	-0.33	-0.02	B<	10.58	-0.66	-0.02	B<
5	54.78	-0.34	-0.02	B<	30.23	0.57	0.04	B>	46.37	0.35	0.02	B>	0.03	0.02	0.00	A	7.92	0.53	0.02	B>
6	365.94	1.10	0.04	B>	0.42	-0.08	0.00	A	73.90	-0.57	-0.03	B<	12.55	-0.43	-0.02	B<	4.52	-0.51	-0.01	A
7	10.54	0.12	0.01	B>	0.23	-0.04	-0.01	A	4.35	-0.09	-0.01	A	22.31	-0.41	-0.04	B<	15.44	-0.49	-0.04	B<
8	12.25	0.18	0.01	B>	3.16	-0.20	-0.01	A	0.27	0.03	0.01	A	36.95	0.74	0.04	B>	0.57	0.16	0.00	A
9	253.74	0.66	0.05	B>	32.52	0.54	0.04	B>	156.03	0.58	0.05	B>	27.08	0.49	0.04	B>	9.46	0.47	0.02	B>
10	30.70	0.22	0.02	B>	7.56	0.25	0.02	B>	96.66	0.44	0.04	B>	5.54	0.22	0.02	A	19.74	0.65	0.04	B>
11	4.63	0.10	0.00	A	3.50	0.19	0.01	A	16.17	0.21	0.02	B>	54.81	0.80	0.06	B>	0.51	-0.13	-0.01	A
12	1.41	-0.05	0.00	A	1.49	-0.12	-0.01	A	3.85	0.10	0.01	A	8.01	0.28	0.02	B>	2.09	-0.22	-0.01	A
13	10.68	0.15	0.01	B>	1.10	-0.11	-0.01	A	72.49	-0.45	-0.03	B<	17.45	-0.42	-0.03	B<	8.58	-0.50	-0.02	B<
14	31.73	-0.24	-0.02	B<	4.86	-0.21	-0.01	A	23.79	-0.23	-0.02	B<	1.80	-0.13	-0.01	A	1.18	-0.17	-0.01	A
15	61.69	0.33	0.02	B>	4.97	0.22	0.01	A	121.06	0.51	0.03	B>	15.09	0.38	0.03	B>	21.14	0.68	0.04	B>
16	24.06	0.22	0.01	B>	4.67	-0.21	-0.02	A	88.92	-0.46	-0.03	B<	131.01	-1.13	-0.08	B<	12.81	-0.57	-0.03	B<
17	2.05	0.09	0.00	A	3.83	0.25	0.01	A	111.08	0.72	0.03	B>	57.60	0.99	0.05	B>	1.13	0.27	0.01	A
18	174.09	0.55	0.04	B>	10.67	0.31	0.02	B>	110.92	0.50	0.04	B>	19.19	0.42	0.03	B>	16.85	0.64	0.03	B>
19	149.21	-0.52	-0.04	B<	3.42	0.18	0.01	A	90.08	0.45	0.03	B>	8.73	0.30	0.02	B>	40.07	0.92	0.05	B>
20	114.71	0.43	0.03	B>	0.41	-0.06	0.00	A	0.01	0.01	0.00	A	1.45	0.11	0.01	A	2.52	-0.23	-0.01	A
21	1.54	-0.07	0.00	A	9.81	-0.37	-0.02	B<	19.18	-0.28	-0.02	B<	52.97	-0.82	-0.05	B<	3.03	-0.39	-0.01	A
22	9.11	-0.13	-0.01	B<	1.36	-0.11	-0.01	A	14.32	0.18	0.01	B>	2.29	0.15	0.01	A	0.87	0.15	0.01	A
23	178.44	0.58	0.04	B>	18.02	0.43	0.03	B>	33.61	-0.28	-0.02	B<	0.27	0.05	0.00	A	0.63	-0.13	-0.01	A
24	16.80	0.19	0.01	B>	12.10	-0.36	-0.02	B<	118.27	-0.56	-0.04	B<	169.42	-1.30	-0.09	B<	7.82	-0.50	-0.02	B<
25	81.91	-0.37	-0.03	B<	16.39	-0.37	-0.03	B<	63.18	-0.36	-0.03	B<	8.39	-0.27	-0.02	B<	1.69	-0.19	-0.01	A
26	0.86	0.04	0.00	A	6.68	-0.24	-0.02	B<	24.06	-0.22	-0.02	B<	5.71	-0.22	-0.02	A	0.14	0.06	0.00	A
27	457.89	-1.10	-0.05	B<	48.51	-0.75	-0.04	B<	153.37	-0.72	-0.04	B<	84.69	-0.99	-0.06	B<	27.92	-0.96	-0.03	B<
28	28.94	-0.28	-0.01	B<	0.22	0.05	0.00	A	50.33	0.42	0.02	B>	0.11	-0.04	0.00	A	3.22	0.41	0.01	A
29	11.17	0.22	0.01	B>	4.29	0.29	0.01	A	79.79	0.66	0.02	B>	20.43	0.65	0.03	B>	3.90	0.53	0.01	A
30	267.28	-0.66	-0.05	B<	31.71	-0.51	-0.04	B<	153.85	-0.55	-0.04	B<	27.08	-0.47	-0.04	B<	10.75	-0.47	-0.03	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.4 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5

Item	Reference: Male N = 39590 Focal: Female N = 38308				Reference: White N = 35666 Focal: African Am. N = 4096				Reference: White N = 35666 Focal: Hispanic N = 32284				Reference: White N = 35666 Focal: Native Am. N = 3949				Reference: White N = 35666 Focal: Asian N = 2113			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	86.15	0.36	0.03	B>	4.89	-0.20	-0.02	A	3.72	0.08	0.01	A	5.26	-0.20	-0.02	A	4.42	-0.28	-0.02	A
32	43.87	0.25	0.02	B>	16.53	0.37	0.03	B>	42.62	0.28	0.01	B>	0.97	-0.10	-0.01	A	1.09	0.13	0.01	A
33	0.57	0.03	0.00	A	3.57	0.18	0.01	A	132.63	0.55	0.04	B>	13.94	0.36	0.03	B>	0.00	0.01	0.00	A
34	23.05	0.22	0.01	B>	2.11	-0.15	-0.01	A	86.23	0.49	0.03	B>	25.78	0.54	0.04	B>	0.55	0.12	0.01	A
35	68.07	0.35	0.02	B>	2.39	-0.15	-0.01	A	75.75	-0.41	-0.03	B<	30.67	-0.52	-0.04	B<	2.26	-0.24	-0.01	A
36	44.69	0.41	0.01	B>	0.44	-0.09	0.00	A	2.70	0.12	0.01	A	9.55	0.39	0.02	B>	4.41	0.60	0.01	A
37	1.31	-0.06	0.00	A	0.00	0.00	0.00	A	2.18	-0.09	-0.01	A	0.34	-0.07	-0.01	A	0.03	0.05	0.00	A
38	551.00	-1.01	-0.07	B<	7.25	-0.26	-0.02	B<	158.30	-0.60	-0.04	B<	40.76	-0.59	-0.04	B<	23.99	-0.78	-0.03	B<
39	236.41	0.62	0.05	B>	40.96	0.59	0.05	B>	245.87	0.71	0.05	B>	43.23	0.62	0.05	B>	63.91	1.22	0.07	B>
40	16.49	-0.17	-0.01	B<	30.30	-0.52	-0.04	B<	48.73	-0.33	-0.02	B<	3.12	-0.17	-0.01	A	7.46	-0.42	-0.02	B<
41	147.07	0.57	0.03	B>	105.56	1.09	0.07	B>	348.60	0.99	0.06	B>	94.24	1.01	0.07	B>	53.19	1.45	0.05	B>
42	871.26	-1.19	-0.09	B<	14.79	-0.35	-0.03	B<	1.08	-0.05	0.00	A	8.45	0.27	0.02	B>	1.04	0.15	0.01	A
43	15.86	-0.16	-0.01	B<	0.09	0.03	0.00	A	9.47	0.14	0.01	B>	8.53	0.27	0.02	B>	0.02	-0.02	0.00	A
44	10.79	-0.12	-0.01	B<	0.07	0.02	0.00	A	13.21	-0.15	-0.01	B<	1.46	0.10	0.01	A	2.93	-0.20	-0.02	A
45	396.47	-0.79	-0.06	B<	4.90	-0.21	-0.02	A	33.46	-0.25	-0.02	B<	0.42	-0.07	-0.01	A	0.14	-0.05	0.00	A
46	142.23	-0.45	-0.04	B<	0.03	0.02	0.00	A	129.89	-0.48	-0.05	B<	1.83	-0.12	-0.01	A	2.12	-0.19	-0.01	A
47	286.61	0.80	0.04	B>	2.15	0.16	0.01	A	179.42	-0.71	-0.04	B<	114.69	-1.04	-0.07	B<	22.81	-0.83	-0.03	B<
48	151.76	0.47	0.04	B>	0.20	0.04	0.00	A	31.51	0.24	0.02	B>	11.92	0.31	0.03	B>	8.71	0.39	0.03	B>
49	264.44	-0.70	-0.05	B<	6.20	-0.24	-0.02	A	187.34	-0.64	-0.05	B<	63.58	-0.76	-0.06	B<	2.75	-0.25	-0.01	A
50	42.10	0.37	0.01	B>	3.36	-0.23	-0.01	A	52.42	-0.48	-0.02	B<	34.93	-0.69	-0.04	B<	30.29	-1.12	-0.03	B<
51	471.87	-1.01	-0.06	B<	0.05	0.02	0.00	A	6.17	0.13	0.01	A	2.03	-0.15	-0.01	A	0.91	-0.17	-0.01	A
52	107.96	0.41	0.03	B>	10.87	0.30	0.02	B>	48.12	0.31	0.02	B>	0.31	0.05	0.00	A	5.84	0.33	0.02	A
53	37.27	-0.27	-0.02	B<	24.16	-0.49	-0.03	B<	7.93	-0.14	-0.01	B<	4.56	-0.22	-0.02	A	0.74	-0.14	-0.01	A
54	3.55	-0.07	-0.01	A	0.48	-0.06	0.00	A	10.72	0.14	0.02	B>	30.56	0.49	0.04	B>	15.63	0.55	0.03	B>
55	84.45	-0.39	-0.03	B<	4.65	-0.20	-0.02	A	7.14	0.13	0.01	B>	23.41	0.46	0.04	B>	1.67	0.21	0.01	A
56	519.73	-0.92	-0.07	B<	53.55	-0.66	-0.05	B<	452.49	-0.94	-0.07	B<	132.48	-1.05	-0.09	B<	67.55	-1.13	-0.07	B<
57	6.84	-0.13	-0.01	B<	54.42	0.84	0.05	B>	62.97	0.46	0.03	B>	6.18	0.27	0.02	A	14.10	0.80	0.02	B>
58	35.61	0.41	0.01	B>	8.17	0.42	0.01	B>	98.56	0.79	0.03	B>	16.60	0.59	0.02	B>	0.02	0.06	0.00	A
59	49.49	-0.29	-0.02	B<	3.20	0.17	0.01	A	33.46	0.27	0.02	B>	0.22	0.05	0.00	A	5.06	0.34	0.02	A
60	142.08	0.65	0.03	B>	0.41	0.08	0.00	A	2.48	0.10	0.01	A	12.34	0.41	0.03	B>	2.52	-0.34	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.4 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5

Item	Reference: Male N = 39590 Focal: Female N = 38308				Reference: White N = 35666 Focal: African Am. N = 4096				Reference: White N = 35666 Focal: Hispanic N = 32284				Reference: White N = 35666 Focal: Native Am. N = 3949				Reference: White N = 35666 Focal: Asian N = 2113			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	62.84	0.36	0.02	B>	2.33	-0.16	-0.01	A	19.95	-0.23	-0.02	B<	4.25	-0.20	-0.01	A	5.52	-0.39	-0.02	A
62	1.75	0.05	0.00	A	0.04	-0.02	0.00	A	34.93	-0.25	-0.03	B<	45.68	-0.59	-0.06	B<	41.58	-0.77	-0.06	B<
63	114.43	0.42	0.03	B>	5.43	0.21	0.02	A	5.21	0.10	0.01	A	13.31	0.33	0.03	B>	9.76	0.44	0.03	B>
64	33.92	0.23	0.02	B>	17.30	0.38	0.03	B>	25.54	0.22	0.01	B>	5.45	0.22	0.02	A	30.79	0.68	0.05	B>
65	0.46	0.03	0.00	A	17.00	0.40	0.03	B>	29.17	0.25	0.01	B>	2.13	0.15	0.01	A	4.39	0.31	0.02	A
66	170.83	0.50	0.04	B>	12.68	0.31	0.03	B>	103.51	0.44	0.04	B>	27.81	0.47	0.04	B>	14.85	0.52	0.03	B>
67	53.89	0.28	0.02	B>	9.67	0.27	0.02	B>	7.06	0.11	0.01	B>	1.24	0.10	0.01	A	2.54	0.21	0.02	A
68	22.46	0.19	0.02	B>	4.52	0.19	0.02	A	2.76	-0.07	0.00	A	0.38	0.06	0.01	A	2.38	-0.21	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.5
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6

Item	Reference: Male N = 39528 Focal: Female N = 38433				Reference: White N = 35824 Focal: African Am. N = 4188				Reference: White N = 35824 Focal: Hispanic N = 31919				Reference: White N = 35824 Focal: Native Am. N = 4297				Reference: White N = 35824 Focal: Asian N = 1928			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	22.05	0.19	0.01	B>	1.15	-0.10	-0.01	A	3.39	0.08	0.01	A	0.08	-0.03	0.00	A	11.18	0.47	0.03	B>
2	425.35	-0.80	-0.07	B<	8.38	-0.25	-0.02	B<	10.97	-0.14	-0.01	B<	1.07	-0.09	-0.01	A	0.04	-0.03	0.00	A
3	85.26	-0.36	-0.03	B<	2.78	-0.14	-0.01	A	13.43	-0.16	-0.01	B<	1.41	0.10	0.01	A	0.11	-0.05	0.00	A
4	5.99	0.10	0.01	A	4.01	0.18	0.01	A	64.00	0.37	0.03	B>	35.13	0.53	0.05	B>	4.82	0.34	0.02	A
5	292.88	-0.74	-0.05	B<	28.56	-0.50	-0.04	B<	44.33	-0.32	-0.02	B<	4.06	-0.19	-0.02	A	0.90	-0.16	-0.01	A
6	23.12	-0.30	-0.01	B<	20.53	-0.60	-0.03	B<	48.47	-0.51	-0.02	B<	35.12	-0.74	-0.03	B<	3.05	-0.46	-0.01	A
7	37.94	-0.26	-0.02	B<	166.48	-1.18	-0.09	B<	232.86	-0.70	-0.06	B<	194.23	-1.26	-0.10	B<	80.71	-1.32	-0.07	B<
8	205.77	-0.60	-0.04	B<	0.00	0.00	0.00	A	10.51	-0.15	-0.01	B<	12.44	-0.32	-0.03	B<	1.00	0.16	0.01	A
9	232.22	0.61	0.05	B>	0.42	-0.06	-0.01	A	24.24	-0.22	-0.02	B<	62.32	-0.83	-0.06	B<	8.37	-0.37	-0.03	B<
10	105.06	-0.42	-0.03	B<	47.39	-0.62	-0.05	B<	30.50	-0.26	-0.01	B<	0.72	0.08	0.01	A	0.56	-0.12	-0.01	A
11	0.09	0.01	0.00	A	0.46	0.07	0.00	A	26.17	-0.27	-0.02	B<	2.03	-0.14	-0.01	A	1.69	-0.24	-0.01	A
12	33.68	-0.25	-0.02	B<	4.76	-0.21	-0.02	A	8.66	-0.15	-0.01	B<	1.41	-0.11	-0.01	A	1.97	0.25	0.01	A
13	45.46	0.28	0.02	B>	3.58	-0.17	-0.01	A	4.01	-0.09	-0.01	A	4.63	0.20	0.02	A	1.06	-0.17	-0.01	A
14	1.09	-0.05	0.00	A	3.46	-0.19	-0.01	A	6.32	-0.13	-0.01	A	7.24	0.26	0.02	B>	12.90	-0.63	-0.02	B<
15	5.40	0.09	0.01	A	10.18	0.28	0.02	B>	44.92	-0.29	-0.03	B<	21.14	-0.40	-0.04	B<	25.69	0.75	0.05	B>
16	4.70	-0.09	-0.01	A	20.31	-0.41	-0.04	B<	21.87	-0.21	-0.02	B<	67.68	-0.75	-0.07	B<	0.72	-0.13	-0.01	A
17	0.50	-0.03	0.00	A	12.10	0.32	0.02	B>	16.21	0.18	0.02	B>	2.74	0.15	0.01	A	12.25	0.56	0.03	B>
18	15.82	0.16	0.01	B>	10.23	-0.29	-0.02	B<	18.29	-0.19	-0.01	B<	2.60	-0.14	-0.01	A	0.09	0.05	0.00	A
19	117.86	0.45	0.03	B>	31.61	0.52	0.04	B>	157.22	0.59	0.04	B>	27.05	-0.46	-0.04	B<	22.61	0.77	0.04	B>
20	89.46	0.36	0.03	B>	4.97	-0.19	-0.02	A	47.87	-0.30	-0.02	B<	18.25	-0.36	-0.03	B<	13.06	-0.49	-0.03	B<
21	85.08	0.46	0.02	B>	2.95	0.19	0.01	A	5.92	0.14	0.01	A	1.86	-0.14	-0.01	A	0.25	-0.11	0.00	A
22	0.96	-0.07	0.00	A	5.47	-0.37	-0.01	A	0.73	0.08	0.00	A	1.06	0.16	0.01	A	2.96	-0.57	-0.01	A
23	93.16	0.43	0.03	B>	0.06	-0.03	0.00	A	154.64	-0.63	-0.05	B<	107.17	-0.96	-0.08	B<	25.27	-0.83	-0.04	B<
24	33.72	0.25	0.02	B>	8.33	0.27	0.02	B>	150.90	0.59	0.04	B>	19.33	0.41	0.03	B>	4.92	0.37	0.02	A
25	33.22	-0.28	-0.01	B<	0.00	0.01	0.00	A	32.30	0.32	0.02	B>	1.88	0.14	0.01	A	0.96	0.21	0.01	A
26	9.75	-0.13	-0.01	B<	9.31	0.29	0.02	B>	27.42	0.25	0.02	B>	0.62	-0.07	0.00	A	5.64	0.40	0.02	A
27	56.26	-0.29	-0.02	B<	0.11	-0.03	0.00	A	1.89	-0.06	0.00	A	5.34	0.20	0.02	A	0.00	-0.01	0.00	A
28	121.70	0.41	0.04	B>	0.99	0.09	0.01	A	37.74	0.26	0.02	B>	0.49	0.06	0.00	A	18.39	0.59	0.04	B>
29	0.13	-0.02	0.00	A	69.13	0.85	0.06	B>	158.76	0.66	0.04	B>	18.85	0.42	0.03	B>	19.11	0.86	0.03	B>
30	23.94	0.22	0.01	B>	0.13	0.04	0.00	A	2.11	-0.08	-0.01	A	3.61	-0.19	-0.01	A	9.88	-0.53	-0.02	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.5 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6

Item	Reference: Male N = 39528 Focal: Female N = 38433				Reference: White N = 35824 Focal: African Am. N = 4188				Reference: White N = 35824 Focal: Hispanic N = 31919				Reference: White N = 35824 Focal: Native Am. N = 4297				Reference: White N = 35824 Focal: Asian N = 1928			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	2.71	0.10	0.00	A	4.66	0.27	0.01	A	123.72	0.75	0.03	B>	65.74	1.01	0.05	B>	8.91	0.88	0.02	B>
32	0.02	0.01	0.00	A	10.82	0.29	0.03	B>	18.46	0.19	0.02	B>	26.33	0.45	0.04	B>	3.48	0.27	0.02	A
33	0.00	0.00	0.00	A	0.01	0.01	0.00	A	9.12	0.14	0.01	B>	10.22	0.29	0.02	B>	5.07	0.35	0.02	A
34	149.22	0.52	0.03	B>	7.56	0.26	0.02	B>	53.93	0.35	0.03	B>	2.51	0.14	0.02	A	1.90	-0.22	-0.01	A
35	332.66	-0.68	-0.06	B<	0.11	0.03	0.00	A	11.50	-0.14	-0.01	B<	21.52	0.40	0.04	B>	0.88	-0.12	-0.01	A
36	137.43	-0.49	-0.03	B<	32.09	-0.52	-0.04	B<	51.41	-0.34	-0.02	B<	9.34	-0.28	-0.02	B<	5.93	-0.37	-0.02	A
37	37.52	0.26	0.02	B>	2.39	-0.15	-0.01	A	7.50	-0.13	-0.01	B<	0.61	0.07	0.01	A	1.01	-0.17	-0.01	A
38	7.51	-0.13	-0.01	B<	15.57	0.41	0.03	B>	46.47	0.36	0.02	B>	6.71	0.26	0.02	B>	3.36	0.35	0.01	A
39	6.54	-0.10	-0.01	A	5.10	-0.20	-0.02	A	26.17	-0.23	-0.02	B<	33.04	-0.51	-0.05	B<	2.28	-0.22	-0.01	A
40	196.74	0.57	0.04	B>	2.70	0.15	0.01	A	20.35	0.21	0.01	B>	30.77	0.51	0.04	B>	0.01	-0.02	0.00	A
41	128.80	0.58	0.03	B>	26.14	0.57	0.03	B>	110.08	0.59	0.04	B>	33.30	0.62	0.04	B>	10.91	0.70	0.02	B>
42	36.50	-0.25	-0.02	B<	1.84	0.13	0.01	A	13.86	0.17	0.01	B>	12.57	-0.33	-0.03	B<	8.62	0.46	0.03	B>
43	91.70	-0.43	-0.03	B<	0.26	0.05	0.00	A	0.12	0.02	0.00	A	0.09	-0.03	0.00	A	3.59	0.34	0.01	A
44	8.01	-0.11	-0.01	B<	20.80	0.40	0.04	B>	9.18	0.13	0.01	B>	1.20	0.09	0.01	A	2.10	0.20	0.01	A
45	23.55	0.19	0.02	B>	51.13	0.66	0.05	B>	35.69	-0.26	-0.02	B<	3.91	0.17	0.02	A	7.22	0.41	0.02	B>
46	67.31	-0.32	-0.03	B<	0.37	-0.06	0.00	A	101.63	0.45	0.03	B>	15.37	0.35	0.03	B>	2.21	-0.21	-0.01	A
47	5.86	-0.12	-0.01	A	24.89	0.54	0.03	B>	52.14	0.40	0.03	B>	12.47	0.36	0.02	B>	10.19	0.69	0.02	B>
48	122.99	0.42	0.04	B>	15.72	0.34	0.03	B>	1.50	-0.05	0.00	A	1.17	0.09	0.01	A	4.86	0.30	0.02	A
49	30.84	0.31	0.01	B>	0.00	0.01	0.00	A	12.22	0.22	0.01	B>	17.92	0.49	0.03	B>	2.14	-0.34	-0.01	A
50	335.49	0.66	0.06	B>	1.40	0.10	0.01	A	0.01	0.00	-0.01	A	16.13	-0.34	-0.03	B<	5.52	-0.29	-0.02	A
51	92.92	-0.41	-0.03	B<	6.76	-0.24	-0.02	B<	3.08	-0.08	-0.01	A	16.18	0.38	0.03	B>	0.01	0.02	0.00	A
52	6.14	-0.14	-0.01	A	1.64	-0.15	-0.01	A	0.59	-0.05	0.00	A	23.82	0.59	0.03	B>	0.00	0.01	0.00	A
53	423.92	-0.81	-0.06	B<	39.80	-0.55	-0.05	B<	0.24	0.02	0.00	A	44.35	0.59	0.05	B>	2.06	-0.21	-0.01	A
54	224.46	-0.62	-0.04	B<	5.29	-0.21	-0.02	A	18.49	-0.20	-0.01	B<	43.96	-0.59	-0.05	B<	0.94	-0.16	-0.01	A
55	200.46	0.75	0.03	B>	6.43	-0.28	-0.01	A	1.90	0.08	0.01	A	44.92	0.77	0.05	B>	14.96	-0.74	-0.02	B<
56	30.77	0.20	0.02	B>	7.51	0.23	0.02	B>	1.13	0.04	0.01	A	0.31	0.05	0.01	A	1.92	0.17	0.02	A
57	18.24	0.20	0.01	B>	4.76	0.22	0.02	A	3.75	-0.10	-0.01	A	0.27	-0.05	0.00	A	0.01	-0.03	0.00	A
58	151.33	0.49	0.04	B>	1.06	-0.09	-0.01	A	45.56	-0.31	-0.03	B<	0.19	-0.04	0.00	A	9.23	-0.43	-0.03	B<
59	240.42	-0.61	-0.05	B<	2.77	-0.15	-0.01	A	120.19	-0.48	-0.04	B<	57.73	-0.67	-0.06	B<	80.87	-1.21	-0.08	B<
60	11.92	-0.14	-0.01	B<	19.95	-0.41	-0.03	B<	3.90	-0.09	-0.01	A	10.44	0.31	0.02	B>	1.72	-0.20	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.5 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6

Item	Reference: Male N = 39528 Focal: Female N = 38433				Reference: White N = 35824 Focal: African Am. N = 4188				Reference: White N = 35824 Focal: Hispanic N = 31919				Reference: White N = 35824 Focal: Native Am. N = 4297				Reference: White N = 35824 Focal: Asian N = 1928			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	603.03	1.02	0.07	B>	11.42	0.31	0.03	B>	8.28	0.13	0.01	B>	24.60	0.45	0.04	B>	13.53	0.62	0.03	B>
62	113.83	0.44	0.03	B>	10.77	0.31	0.02	B>	37.22	0.28	0.02	B>	0.81	-0.08	-0.01	A	19.26	0.70	0.04	B>
63	81.27	-0.42	-0.02	B<	0.98	-0.10	-0.01	A	8.43	0.15	0.01	B>	26.21	0.51	0.03	B>	1.16	-0.19	-0.01	A
64	151.76	-0.48	-0.04	B<	0.11	-0.03	0.00	A	34.73	-0.26	-0.02	B<	15.03	-0.35	-0.03	B<	2.89	-0.23	-0.02	A
65	0.71	0.03	0.00	A	38.74	0.57	0.05	B>	194.81	0.64	0.05	B>	40.66	0.57	0.05	B>	13.79	0.59	0.03	B>
66	25.75	0.21	0.01	B>	5.35	-0.22	-0.02	A	0.25	0.02	0.01	A	8.32	-0.26	-0.02	B<	1.70	-0.21	-0.01	A
67	48.51	0.34	0.02	B>	4.43	-0.22	-0.01	A	3.43	-0.10	-0.01	A	1.60	-0.13	-0.01	A	0.08	0.07	0.00	A
68	0.07	0.01	0.00	A	6.32	-0.22	-0.02	A	40.46	-0.27	-0.02	B<	24.00	-0.42	-0.04	B<	13.89	-0.48	-0.04	B<

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.6
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7

Item	Reference: Male N = 38952 Focal: Female N = 38033				Reference: White N = 35869 Focal: African Am. N = 4110				Reference: White N = 35869 Focal: Hispanic N = 30674				Reference: White N = 35869 Focal: Native Am. N = 4586				Reference: White N = 35869 Focal: Asian N = 1906			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	142.31	-0.73	-0.02	B<	13.26	-0.49	-0.02	B<	133.74	-0.86	-0.04	B<	299.03	-1.96	-0.10	C<	19.87	-1.10	-0.02	B<
2	103.43	-0.38	-0.03	B<	5.34	-0.20	-0.02	A	66.51	-0.34	-0.03	B<	61.61	-0.64	-0.06	B<	6.33	-0.33	-0.03	A
3	35.98	-0.24	-0.02	B<	61.83	-0.70	-0.06	B<	17.73	-0.19	-0.02	B<	182.06	-1.11	-0.10	B<	39.14	-0.87	-0.05	B<
4	9.05	0.14	0.01	B>	1.24	0.12	0.01	A	4.90	0.12	0.01	A	17.36	-0.39	-0.03	B<	19.15	0.91	0.03	B>
5	0.05	0.01	0.00	A	17.05	-0.38	-0.03	B<	20.22	-0.22	-0.02	B<	1.16	-0.10	-0.01	A	16.41	-0.61	-0.03	B<
6	42.01	0.27	0.02	B>	14.21	0.36	0.03	B>	159.54	0.61	0.05	B>	46.66	0.61	0.05	B>	3.41	0.31	0.02	A
7	156.33	-0.69	-0.03	B<	23.18	-0.56	-0.03	B<	124.78	-0.71	-0.04	B<	0.02	0.02	0.00	A	14.83	-0.82	-0.02	B<
8	6.83	-0.11	-0.01	B<	3.51	0.17	0.01	A	90.85	0.45	0.03	B>	8.05	0.25	0.02	B>	1.08	0.16	0.01	A
9	138.61	-0.46	-0.04	B<	4.58	-0.19	-0.02	A	0.36	0.03	0.00	A	36.38	-0.51	-0.05	B<	3.54	-0.27	-0.02	A
10	6.30	-0.11	-0.01	A	1.73	0.13	0.01	A	10.07	0.15	0.02	B>	36.94	0.56	0.04	B>	4.86	0.38	0.02	A
11	9.21	0.16	0.01	B>	0.62	-0.10	-0.01	A	104.49	-0.63	-0.03	B<	48.44	-0.72	-0.04	B<	32.04	-1.13	-0.03	B<
12	16.09	-0.17	-0.01	B<	1.40	-0.11	-0.01	A	33.49	-0.27	-0.02	B<	72.02	-0.78	-0.06	B<	12.46	-0.54	-0.03	B<
13	4.39	-0.09	-0.01	A	1.29	-0.10	-0.01	A	46.85	0.32	0.03	B>	53.54	0.64	0.06	B>	0.58	0.12	0.01	A
14	3.20	-0.07	-0.01	A	1.63	-0.11	-0.01	A	0.15	0.02	0.00	A	9.04	0.25	0.02	B>	0.39	0.08	0.01	A
15	84.65	0.47	0.02	B>	0.70	0.10	0.00	A	28.80	0.32	0.02	B>	0.04	0.02	0.00	A	0.06	0.06	0.00	A
16	1685.72	1.62	0.13	C>	36.43	0.54	0.04	B>	379.12	0.88	0.07	B>	63.78	0.72	0.05	B>	13.70	0.49	0.04	B>
17	26.47	0.20	0.02	B>	0.53	0.07	0.01	A	13.50	-0.16	-0.01	B<	0.04	-0.02	0.00	A	1.23	-0.15	-0.01	A
18	605.84	-0.95	-0.08	B<	15.77	-0.35	-0.03	B<	221.38	-0.64	-0.05	B<	61.52	-0.67	-0.06	B<	19.82	-0.59	-0.04	B<
19	4.58	-0.12	-0.01	A	0.25	-0.06	0.00	A	2.79	0.11	0.01	A	30.41	0.64	0.03	B>	0.01	-0.03	0.00	A
20	56.17	-0.32	-0.02	B<	4.47	0.20	0.01	A	10.08	0.15	0.01	B>	11.76	0.30	0.03	B>	0.99	0.16	0.01	A
21	14.12	0.14	0.01	B>	0.02	-0.01	0.00	A	3.61	-0.08	0.00	A	24.78	0.42	0.04	B>	0.04	-0.03	0.00	A
22	74.49	0.40	0.02	B>	18.53	-0.43	-0.03	B<	253.17	-0.83	-0.05	B<	85.23	-0.83	-0.06	B<	21.16	-0.83	-0.03	B<
23	523.68	-1.05	-0.06	B<	5.13	-0.23	-0.02	A	7.12	-0.14	-0.02	B<	34.21	-0.56	-0.05	B<	4.22	-0.35	-0.02	A
24	80.19	0.37	0.03	B>	29.70	0.51	0.04	B>	76.79	0.41	0.03	B>	117.86	0.98	0.08	B>	13.72	0.58	0.03	B>
25	5.00	-0.09	-0.01	A	21.81	0.42	0.03	B>	7.58	0.12	0.01	B>	5.35	-0.20	-0.02	A	18.19	0.59	0.04	B>
26	180.72	0.73	0.03	B>	0.09	-0.04	0.00	A	39.52	-0.40	-0.02	B<	93.91	-1.00	-0.06	B<	8.85	-0.65	-0.02	B<
27	552.83	-1.31	-0.05	B<	15.31	-0.46	-0.02	B<	47.59	-0.44	-0.02	B<	6.38	-0.28	-0.02	A	3.54	0.50	0.01	A
28	41.06	0.30	0.02	B>	1.21	-0.12	-0.01	A	28.42	-0.29	-0.02	B<	80.83	-0.83	-0.06	B<	16.38	-0.71	-0.03	B<
29	333.70	-0.84	-0.05	B<	70.05	-0.80	-0.06	B<	165.48	-0.66	-0.05	B<	28.17	-0.50	-0.04	B<	5.92	-0.44	-0.02	A
30	10.45	-0.13	-0.01	B<	9.94	-0.29	-0.02	B<	27.59	-0.24	-0.02	B<	1.30	-0.10	-0.01	A	2.71	0.27	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.6 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7

Item	Reference: Male N = 38952 Focal: Female N = 38033				Reference: White N = 35869 Focal: African Am. N = 4110				Reference: White N = 35869 Focal: Hispanic N = 30674				Reference: White N = 35869 Focal: Native Am. N = 4586				Reference: White N = 35869 Focal: Asian N = 1906			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	78.23	0.41	0.02	B>	1.18	-0.11	-0.01	A	9.47	-0.16	-0.01	B<	5.24	-0.22	-0.02	A	3.12	-0.33	-0.01	A
32	9.01	-0.12	-0.01	B<	19.83	0.42	0.03	B>	5.36	0.11	0.01	A	0.76	0.08	0.01	A	38.03	1.08	0.05	B>
33	62.11	0.37	0.02	B>	28.79	0.57	0.04	B>	2.50	-0.08	0.00	A	22.33	-0.44	-0.03	B<	4.57	0.45	0.01	A
34	16.10	0.16	0.01	B>	27.60	0.48	0.04	B>	123.73	0.51	0.04	B>	142.39	1.06	0.09	B>	6.62	0.39	0.02	A
35	42.82	-0.31	-0.02	B<	0.44	0.07	0.00	A	11.73	0.19	0.01	B>	0.10	0.03	0.00	A	1.24	0.22	0.01	A
36	71.46	0.36	0.03	B>	18.50	0.41	0.03	B>	252.59	0.77	0.06	B>	54.35	0.66	0.05	B>	11.58	0.57	0.03	B>
37	2.31	-0.07	0.00	A	6.19	-0.24	-0.02	A	44.96	-0.33	-0.02	B<	3.91	-0.18	-0.01	A	14.68	-0.66	-0.03	B<
38	96.59	0.53	0.02	B>	10.42	-0.36	-0.02	B<	41.17	-0.40	-0.02	B<	5.49	-0.24	-0.01	A	0.00	-0.03	0.00	A
39	101.27	0.43	0.03	B>	8.43	0.28	0.02	B>	2.44	0.08	0.01	A	1.07	-0.09	-0.01	A	0.31	0.10	0.00	A
40	4.85	-0.09	-0.01	A	32.69	0.54	0.04	B>	127.74	0.52	0.03	B>	17.76	0.40	0.03	B>	30.94	0.75	0.06	B>
41	535.74	1.07	0.06	B>	2.74	-0.17	-0.01	A	32.61	-0.30	-0.02	B<	20.33	-0.42	-0.03	B<	11.71	0.69	0.02	B>
42	269.19	0.64	0.05	B>	1.34	-0.10	-0.01	A	53.46	0.33	0.03	B>	85.36	0.80	0.07	B>	4.77	0.33	0.02	A
43	150.92	-0.56	-0.03	B<	14.23	-0.37	-0.03	B<	0.05	0.01	0.00	A	30.03	0.52	0.04	B>	0.04	0.04	0.00	A
44	110.18	-0.40	-0.03	B<	15.91	-0.38	-0.03	B<	0.36	0.03	0.00	A	38.66	0.54	0.04	B>	0.82	-0.11	-0.01	A
45	76.02	-0.32	-0.03	B<	3.72	-0.16	-0.02	A	6.46	0.11	0.00	A	2.25	0.12	0.01	A	28.78	-0.66	-0.06	B<
46	32.42	0.26	0.02	B>	2.41	0.16	0.01	A	37.72	-0.32	-0.02	B<	0.67	0.08	0.01	A	0.90	0.19	0.01	A
47	67.23	0.34	0.02	B>	4.72	0.20	0.02	A	16.40	0.19	0.02	B>	13.48	0.33	0.03	B>	0.13	-0.06	0.00	A
48	37.93	-0.25	-0.02	B<	0.15	-0.04	-0.01	A	0.76	0.04	0.00	A	63.60	0.71	0.06	B>	0.28	0.09	0.00	A
49	2.90	0.11	0.00	A	38.69	0.89	0.03	B>	82.89	0.67	0.03	B>	23.60	0.61	0.03	B>	1.63	0.38	0.01	A
50	24.77	0.23	0.01	B>	36.10	0.62	0.04	B>	0.39	0.03	0.00	A	9.02	-0.28	-0.02	B<	3.40	0.36	0.01	A
51	83.80	-0.39	-0.03	B<	36.66	0.58	0.04	B>	11.89	-0.16	-0.01	B<	17.93	-0.39	-0.03	B<	6.66	0.40	0.02	B>
52	68.06	0.39	0.02	B>	22.88	0.51	0.03	B>	23.37	0.27	0.02	B>	2.72	0.17	0.01	A	0.53	0.13	0.01	A
53	37.11	0.34	0.01	B>	11.12	0.41	0.02	B>	3.78	0.12	0.01	A	0.95	-0.11	0.00	A	0.75	-0.20	-0.01	A
54	24.36	0.28	0.01	B>	6.32	0.31	0.02	A	8.80	-0.19	-0.01	B<	7.71	-0.30	-0.02	B<	0.00	-0.03	0.00	A
55	100.73	-0.41	-0.03	B<	12.97	0.34	0.03	B>	63.90	-0.37	-0.03	B<	173.16	-1.15	-0.09	B<	8.76	-0.45	-0.03	B<
56	319.45	0.80	0.05	B>	1.16	0.11	0.01	A	23.66	-0.25	-0.02	B<	15.09	-0.35	-0.03	B<	7.56	-0.49	-0.02	B<
57	3.51	0.08	0.01	A	10.88	-0.31	-0.02	B<	91.21	-0.45	-0.04	B<	96.68	-0.89	-0.07	B<	12.27	-0.56	-0.03	B<
58	38.08	-0.22	-0.02	B<	5.96	-0.21	-0.02	A	111.48	-0.44	-0.04	B<	23.28	-0.40	-0.04	B<	14.71	-0.47	-0.04	B<
59	1378.11	-1.66	-0.11	C<	77.87	-0.85	-0.06	B<	306.86	-0.86	-0.06	B<	56.74	-0.68	-0.05	B<	0.13	-0.07	0.00	A
60	74.55	0.33	0.03	B>	0.66	-0.07	-0.01	A	176.37	0.58	0.05	B>	215.89	1.26	0.11	B>	9.16	0.42	0.03	B>

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.6 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7

Item	Reference: Male N = 38952 Focal: Female N = 38033				Reference: White N = 35869 Focal: African Am. N = 4110				Reference: White N = 35869 Focal: Hispanic N = 30674				Reference: White N = 35869 Focal: Native Am. N = 4586				Reference: White N = 35869 Focal: Asian N = 1906			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	9.66	0.12	0.01	B>	5.53	-0.20	-0.02	A	115.30	0.46	0.05	B>	1.67	-0.11	-0.01	A	6.27	0.34	0.02	A
62	79.22	0.41	0.02	B>	0.35	0.06	0.00	A	141.07	0.63	0.05	B>	40.66	0.61	0.05	B>	4.76	0.43	0.02	A
63	37.88	0.26	0.02	B>	0.80	-0.09	-0.01	A	43.29	-0.31	-0.02	B<	0.60	0.07	0.01	A	6.26	-0.38	-0.02	A
64	25.97	0.21	0.02	B>	0.06	-0.02	0.00	A	1.93	0.06	0.01	A	0.63	0.07	0.01	A	2.22	0.23	0.01	A
65	8.34	0.14	0.01	B>	0.33	0.06	0.00	A	98.83	0.53	0.04	B>	92.40	0.94	0.07	B>	17.27	0.84	0.03	B>
66	288.37	0.95	0.04	B>	1.23	-0.13	-0.01	A	26.64	0.33	0.02	B>	65.36	0.93	0.05	B>	1.04	0.25	0.01	A
67	7.69	0.13	0.01	B>	25.73	0.53	0.03	B>	41.89	0.35	0.02	B>	26.45	0.50	0.04	B>	11.09	0.70	0.02	B>
68	349.00	-0.70	-0.06	B<	7.34	-0.23	-0.02	B<	0.93	-0.04	0.00	A	38.18	0.51	0.05	B>	0.30	-0.07	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.7
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8

Item	Reference: Male N = 38857 Focal: Female N = 38122				Reference: White N = 36650 Focal: African Am. N = 4090				Reference: White N = 36650 Focal: Hispanic N = 30187				Reference: White N = 36650 Focal: Native Am. N = 4435				Reference: White N = 36650 Focal: Asian N = 1780			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	6.79	-0.10	-0.01	B<	46.99	-0.60	-0.05	B<	133.46	-0.50	-0.04	B<	0.00	0.00	0.00	A	11.18	-0.47	-0.03	B<
2	591.51	-0.97	-0.08	B<	11.78	-0.30	-0.03	B<	2.88	0.08	0.01	A	18.48	0.37	0.03	B>	0.00	0.02	0.00	A
3	156.60	-0.75	-0.03	B<	0.00	0.01	0.00	A	119.79	-0.76	-0.03	B<	23.67	-0.58	-0.03	B<	1.60	-0.34	-0.01	A
4	38.03	-0.26	-0.02	B<	20.42	-0.42	-0.03	B<	82.30	-0.43	-0.04	B<	84.01	-0.81	-0.07	B<	10.05	-0.52	-0.03	B<
5	150.75	0.46	0.04	B>	3.09	0.15	0.01	A	45.98	0.29	0.02	B>	5.39	0.19	0.02	A	13.22	0.52	0.04	B>
6	117.30	0.57	0.03	B>	0.70	-0.10	-0.01	A	0.57	-0.05	0.00	A	0.61	-0.09	-0.01	A	0.08	0.07	0.00	A
7	226.61	-0.73	-0.04	B<	57.56	-0.76	-0.05	B<	1.47	-0.07	0.00	A	24.51	0.52	0.03	B>	3.53	-0.36	-0.01	A
8	294.98	-0.68	-0.05	B<	17.81	-0.38	-0.03	B<	4.94	-0.10	-0.01	A	7.99	0.24	0.02	B>	14.71	-0.58	-0.04	B<
9	27.64	0.29	0.01	B>	31.44	0.69	0.03	B>	32.76	0.37	0.02	B>	8.01	0.32	0.02	B>	2.24	0.38	0.01	A
10	68.20	-0.35	-0.02	B<	2.90	-0.16	-0.01	A	49.30	-0.33	-0.02	B<	6.40	-0.23	-0.02	A	0.23	-0.09	0.00	A
11	0.87	-0.04	0.00	A	0.63	0.07	0.00	A	0.04	0.01	0.00	A	12.92	-0.31	-0.03	B<	1.60	0.19	0.01	A
12	72.18	0.34	0.03	B>	13.57	0.34	0.03	B>	24.77	0.23	0.02	B>	18.59	-0.37	-0.03	B<	3.56	0.30	0.02	A
13	5.39	-0.11	-0.01	A	0.01	-0.01	0.00	A	34.04	0.32	0.02	B>	9.55	0.31	0.02	B>	1.39	0.24	0.01	A
14	138.44	0.57	0.03	B>	1.47	0.13	0.01	A	31.70	-0.31	-0.02	B<	20.58	-0.44	-0.03	B<	0.20	-0.10	0.00	A
15	114.38	-0.40	-0.04	B<	0.03	0.02	0.00	A	54.01	0.32	0.03	B>	70.03	0.71	0.06	B>	1.09	-0.15	-0.01	A
16	421.35	-0.98	-0.05	B<	40.89	-0.63	-0.04	B<	88.80	-0.51	-0.03	B<	7.74	0.29	0.02	B>	13.18	-0.69	-0.02	B<
17	87.78	0.45	0.02	B>	28.30	0.57	0.04	B>	24.74	0.27	0.02	B>	15.72	0.39	0.03	B>	1.93	0.30	0.01	A
18	0.84	0.03	0.00	A	0.58	0.07	0.01	A	0.68	-0.03	-0.01	A	0.93	-0.08	-0.01	A	0.48	0.10	0.01	A
19	21.11	0.19	0.01	B>	16.72	0.39	0.03	B>	3.50	-0.09	-0.01	A	32.16	-0.53	-0.04	B<	8.89	0.48	0.03	B>
20	77.73	0.39	0.03	B>	44.16	0.66	0.04	B>	36.02	0.30	0.02	B>	0.04	-0.02	0.00	A	20.60	0.85	0.04	B>
21	147.20	-0.53	-0.03	B<	92.23	-0.89	-0.07	B<	15.19	-0.19	-0.01	B<	39.57	0.60	0.05	B>	8.24	-0.50	-0.02	B<
22	1.80	-0.06	0.00	A	13.84	-0.36	-0.03	B<	0.49	-0.04	-0.01	A	17.34	0.40	0.03	B>	0.59	-0.14	-0.01	A
23	282.51	0.82	0.04	B>	5.14	0.25	0.02	A	1.79	-0.07	0.00	A	5.00	-0.23	-0.02	A	2.46	0.34	0.01	A
24	110.43	0.51	0.03	B>	0.03	0.02	0.00	A	27.80	-0.29	-0.02	B<	38.98	-0.62	-0.04	B<	3.25	0.40	0.01	A
25	8.56	0.12	0.01	B>	18.40	0.38	0.03	B>	3.70	-0.09	-0.01	A	9.63	-0.26	-0.02	B<	0.16	-0.06	0.00	A
26	34.92	-0.26	-0.02	B<	7.80	0.27	0.02	B>	5.74	-0.12	-0.01	A	41.73	-0.59	-0.05	B<	2.81	-0.30	-0.01	A
27	7.29	0.12	0.01	B>	20.62	-0.43	-0.03	B<	0.04	-0.01	0.00	A	0.33	0.05	0.01	A	6.25	-0.43	-0.02	A
28	24.08	0.28	0.01	B>	10.70	0.41	0.02	B>	73.08	0.56	0.03	B>	4.33	0.24	0.01	A	1.22	0.29	0.01	A
29	86.56	0.34	0.03	B>	51.08	0.62	0.05	B>	235.06	0.65	0.06	B>	98.55	0.82	0.07	B>	0.65	0.11	0.01	A
30	245.70	-0.62	-0.05	B<	33.37	-0.56	-0.04	B<	32.49	-0.25	-0.02	B<	8.05	-0.27	-0.02	B<	4.44	-0.29	-0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.7 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8

Item	Reference: Male N = 38857 Focal: Female N = 38122				Reference: White N = 36650 Focal: African Am. N = 4090				Reference: White N = 36650 Focal: Hispanic N = 30187				Reference: White N = 36650 Focal: Native Am. N = 4435				Reference: White N = 36650 Focal: Asian N = 1780			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	0.52	-0.03	0.00	A	18.06	-0.38	-0.03	B<	172.80	-0.57	-0.04	B<	31.76	-0.48	-0.04	B<	5.84	-0.36	-0.02	A
32	8.97	0.14	0.01	B>	0.25	0.05	0.00	A	10.60	0.17	0.01	B>	0.50	0.07	0.00	A	0.01	-0.02	0.00	A
33	5.31	0.09	0.01	A	0.00	0.00	0.00	A	36.49	0.26	0.02	B>	4.93	0.19	0.01	A	3.07	0.24	0.02	A
34	17.24	0.19	0.01	B>	18.29	0.44	0.03	B>	4.83	0.11	0.01	A	3.10	0.17	0.01	A	0.59	0.15	0.01	A
35	5.26	-0.09	-0.01	A	0.00	0.00	0.00	A	5.13	-0.10	-0.01	A	0.96	-0.09	-0.01	A	10.41	-0.42	-0.04	B<
36	17.99	0.16	0.01	B>	10.38	0.30	0.02	B>	25.23	0.22	0.01	B>	6.55	-0.24	-0.02	A	8.84	0.38	0.03	B>
37	25.50	0.22	0.01	B>	1.06	-0.10	-0.01	A	11.64	0.17	0.01	B>	10.40	0.31	0.02	B>	3.80	-0.31	-0.02	A
38	91.42	-0.38	-0.03	B<	6.46	-0.23	-0.02	A	2.16	-0.07	0.00	A	0.22	0.04	0.00	A	2.38	-0.23	-0.01	A
39	24.05	-0.20	-0.02	B<	0.45	-0.06	0.00	A	54.27	-0.34	-0.03	B<	21.41	0.43	0.03	B>	3.31	-0.28	-0.02	A
40	3.76	-0.07	-0.01	A	4.71	-0.19	-0.02	A	35.99	-0.26	-0.03	B<	35.47	-0.52	-0.04	B<	24.39	-0.64	-0.05	B<
41	4.54	0.08	0.01	A	15.85	0.34	0.03	B>	77.78	0.37	0.04	B>	93.07	0.82	0.08	B>	10.87	0.48	0.03	B>
42	206.23	-0.96	-0.03	B<	29.28	-0.75	-0.03	B<	51.36	-0.57	-0.02	B<	82.13	-1.14	-0.05	B<	14.33	-1.05	-0.02	B<
43	0.88	0.04	0.00	A	8.66	0.27	0.02	B>	7.40	0.12	0.01	B>	12.55	-0.33	-0.02	B<	0.49	0.10	0.01	A
44	453.83	-0.84	-0.07	B<	90.84	-0.86	-0.07	B<	160.84	-0.56	-0.04	B<	31.94	-0.48	-0.04	B<	8.05	-0.43	-0.03	B<
45	0.65	-0.04	0.00	A	6.32	0.25	0.02	A	1.85	-0.07	0.00	A	37.67	-0.58	-0.04	B<	6.75	0.50	0.02	B>
46	158.84	0.48	0.04	B>	3.75	0.17	0.01	A	16.52	0.18	0.01	B>	27.11	0.45	0.04	B>	13.84	0.52	0.04	B>
47	125.86	0.47	0.03	B>	1.96	0.14	0.01	A	114.31	-0.50	-0.05	B<	217.17	-1.27	-0.11	B<	28.07	-0.79	-0.05	B<
48	93.36	0.40	0.03	B>	28.83	0.51	0.04	B>	10.02	0.15	0.02	B>	0.68	-0.07	0.00	A	1.56	0.21	0.01	A
49	181.16	0.54	0.04	B>	20.39	0.42	0.03	B>	0.06	0.01	0.00	A	0.66	0.07	0.01	A	2.09	0.23	0.01	A
50	59.02	-0.30	-0.02	B<	0.15	-0.04	0.00	A	9.40	-0.13	-0.01	B<	7.15	-0.23	-0.02	B<	0.17	-0.07	0.00	A
51	164.08	0.76	0.03	B>	20.71	0.59	0.03	B>	44.11	0.45	0.02	B>	35.21	-0.68	-0.04	B<	21.46	1.44	0.02	B>
52	5.80	-0.10	-0.01	A	5.37	0.21	0.02	A	6.97	0.12	0.01	B>	0.40	0.06	0.00	A	20.87	0.76	0.04	B>
53	498.36	-0.87	-0.07	B<	17.94	-0.40	-0.03	B<	45.85	-0.30	-0.03	B<	0.08	0.03	0.00	A	10.25	-0.41	-0.04	B<
54	13.15	0.14	0.01	B>	23.46	0.42	0.04	B>	112.27	0.45	0.04	B>	17.13	0.34	0.04	B>	17.53	0.61	0.04	B>
55	71.94	0.34	0.03	B>	11.65	0.31	0.03	B>	99.18	0.46	0.04	B>	38.04	0.54	0.05	B>	12.04	0.57	0.03	B>
56	175.61	0.66	0.03	B>	35.08	0.66	0.04	B>	26.11	0.29	0.02	B>	17.03	-0.42	-0.03	B<	4.86	0.48	0.01	A
57	30.46	-0.30	-0.01	B<	1.16	-0.12	-0.01	A	8.71	0.18	0.01	B>	38.93	0.72	0.04	B>	0.20	0.11	0.00	A
58	6.83	0.11	0.01	B>	14.82	-0.35	-0.03	B<	0.58	0.04	0.01	A	24.31	0.45	0.04	B>	1.64	-0.22	-0.01	A
59	116.80	-0.45	-0.03	B<	4.11	-0.19	-0.01	A	2.26	0.07	0.01	A	25.30	0.45	0.04	B>	0.40	0.11	0.01	A
60	89.25	0.38	0.03	B>	12.54	0.32	0.03	B>	182.48	0.63	0.05	B>	32.11	0.50	0.04	B>	4.97	0.36	0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.7 (continued)
2005 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8

Item	Reference: Male N = 38857 Focal: Female N = 38122				Reference: White N = 36650 Focal: African Am. N = 4090				Reference: White N = 36650 Focal: Hispanic N = 30187				Reference: White N = 36650 Focal: Native Am. N = 4435				Reference: White N = 36650 Focal: Asian N = 1780			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	102.32	0.42	0.03	B>	1.62	0.12	0.01	A	0.06	0.01	0.01	A	3.63	0.17	0.02	A	0.24	0.08	0.00	A
62	2.56	-0.06	-0.01	A	0.01	-0.01	0.00	A	12.23	-0.15	-0.01	B<	21.83	-0.38	-0.03	B<	0.93	-0.14	-0.01	A
63	13.78	0.14	0.01	B>	11.27	-0.32	-0.02	B<	1.21	-0.05	-0.01	A	3.62	-0.18	-0.01	A	3.94	-0.25	-0.02	A
64	35.30	0.28	0.02	B>	0.25	-0.05	0.00	A	120.43	-0.59	-0.04	B<	8.53	-0.28	-0.02	B<	3.75	-0.40	-0.01	A
65	73.02	0.35	0.03	B>	0.13	-0.03	0.00	A	5.79	0.11	0.01	A	0.26	-0.05	0.00	A	0.27	0.08	0.01	A
66	0.55	0.03	0.00	A	33.16	-0.54	-0.04	B<	4.07	0.10	0.01	A	47.51	0.66	0.05	B>	2.10	0.27	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.8
2006 Spring AIMS Differential Item Functioning Mathematics CRT High School

Item	Reference: Male N = 34485 Focal: Female N = 34634				Reference: White N = 35344 Focal: African Am. N = 3686				Reference: White N = 35344 Focal: Hispanic N = 24289				Reference: White N = 35344 Focal: Native Am. N = 4043				Reference: White N = 35344 Focal: Asian N = 1777			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	123.48	-1.25	-0.01	B<	30.32	-1.18	-0.02	B<	30.82	-0.74	-0.01	B<	1.81	-0.32	0.00	A	16.38	-1.52	-0.01	C<
2	194.83	-0.64	-0.04	B<	53.40	-0.71	-0.06	B<	75.26	-0.45	-0.04	B<	106.43	-0.94	-0.08	B<	33.76	-0.97	-0.05	B<
3	222.97	-0.71	-0.04	B<	16.73	-0.41	-0.03	B<	3.39	-0.10	0.00	A	23.33	-0.45	-0.04	B<	5.82	-0.44	-0.02	A
4	168.45	-0.87	-0.03	B<	34.98	-0.77	-0.03	B<	0.34	-0.04	0.00	A	8.30	0.40	0.02	B>	0.12	-0.11	0.00	A
5	5.52	0.17	0.00	A	1.55	0.19	0.01	A	20.30	0.36	0.01	B>	27.62	0.75	0.03	B>	1.56	0.39	0.01	A
6	36.49	0.29	0.02	B>	6.45	0.26	0.02	A	61.62	0.43	0.03	B>	0.62	-0.08	-0.01	A	14.56	0.75	0.03	B>
7	146.27	0.54	0.04	B>	0.60	-0.08	-0.01	A	1.07	0.05	0.01	A	0.48	-0.07	0.00	A	2.99	0.30	0.01	A
8	4.19	-0.10	-0.01	A	0.12	0.04	0.00	A	18.90	-0.24	-0.01	B<	6.08	-0.25	-0.02	A	4.07	-0.37	-0.02	A
9	34.13	0.24	0.02	B>	2.97	0.16	0.01	A	9.23	0.14	0.01	B>	0.01	0.01	0.00	A	15.17	0.59	0.04	B>
10	36.33	-0.24	-0.02	B<	27.26	-0.48	-0.04	B<	163.25	-0.59	-0.05	B<	7.67	-0.25	-0.02	B<	4.89	-0.31	-0.02	A
11	6.60	0.13	0.01	A	44.31	0.71	0.05	B>	124.35	0.62	0.05	B>	45.86	0.68	0.05	B>	13.59	0.74	0.03	B>
12	801.50	-1.12	-0.10	B<	41.94	-0.57	-0.05	B<	140.69	-0.53	-0.05	B<	32.34	-0.48	-0.05	B<	19.31	-0.62	-0.04	B<
13	60.41	0.33	0.03	B>	2.42	0.15	0.01	A	3.87	-0.10	0.00	A	1.20	0.11	0.01	A	26.24	0.79	0.05	B>
14	243.37	-0.66	-0.05	B<	2.80	-0.16	-0.01	A	0.44	-0.03	0.00	A	49.80	0.65	0.06	B>	0.57	0.12	0.01	A
15	61.30	-0.33	-0.03	B<	0.99	-0.10	-0.01	A	47.60	-0.33	-0.03	B<	38.96	-0.57	-0.05	B<	2.36	-0.23	-0.01	A
16	126.51	0.71	0.02	B>	0.01	-0.02	0.00	A	6.95	-0.19	-0.01	B<	1.11	-0.13	-0.01	A	8.43	-0.72	-0.02	B<
17	348.81	-0.85	-0.06	B<	131.41	-1.09	-0.08	B<	336.00	-0.93	-0.07	B<	73.52	-0.78	-0.06	B<	53.83	-1.12	-0.06	B<
18	105.77	0.41	0.04	B>	4.09	0.18	0.02	A	49.75	0.32	0.02	B>	1.26	0.10	0.01	A	22.26	0.68	0.05	B>
19	1.80	-0.05	0.00	A	1.38	0.11	0.01	A	17.36	0.19	0.01	B>	2.60	0.15	0.01	A	23.09	0.66	0.05	B>
20	39.22	-0.36	-0.01	B<	0.40	0.08	0.00	A	7.84	-0.19	-0.01	B<	2.51	-0.18	-0.01	A	2.91	-0.39	-0.01	A
21	13.71	-0.15	-0.01	B<	0.26	-0.05	-0.01	A	1.58	0.06	0.00	A	45.84	-0.58	-0.05	B<	29.94	-0.74	-0.05	B<
22	3.24	-0.07	-0.01	A	5.06	0.21	0.02	A	22.71	0.22	0.02	B>	2.99	0.16	0.01	A	6.20	0.32	0.03	A
23	122.35	0.44	0.04	B>	15.75	0.36	0.03	B>	63.85	0.37	0.03	B>	4.04	0.18	0.01	A	13.31	0.54	0.04	B>
24	201.40	0.62	0.05	B>	3.38	0.18	0.01	A	0.76	0.04	0.00	A	0.16	0.04	0.00	A	5.10	-0.35	-0.02	A
25	3.27	-0.07	-0.01	A	3.84	0.18	0.02	A	1.08	0.05	0.01	A	0.00	0.01	0.00	A	0.16	0.06	0.00	A
26	0.16	-0.03	0.00	A	20.73	-0.61	-0.03	B<	37.87	0.49	0.02	B>	66.30	1.20	0.05	B>	2.68	-0.45	-0.01	A
27	47.43	-0.40	-0.02	B<	21.11	-0.55	-0.03	B<	41.52	-0.43	-0.02	B<	2.35	-0.18	-0.01	A	8.85	-0.69	-0.02	B<
28	175.97	0.60	0.04	B>	0.65	0.08	0.01	A	0.17	0.02	0.00	A	0.28	0.05	0.00	A	9.40	0.51	0.03	B>
29	30.06	-0.29	-0.01	B<	8.91	0.34	0.02	B>	13.07	0.22	0.02	B>	3.10	0.19	0.01	A	1.39	0.28	0.01	A
30	53.65	0.36	0.02	B>	4.69	0.23	0.02	A	27.02	-0.28	-0.02	B<	37.22	-0.59	-0.04	B<	2.93	-0.32	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

(table continues)

Table 9.2.1.8 (continued)
2006 Spring AIMS Differential Item Functioning Mathematics CRT High School

Item	Reference: Male N = 34485 Focal: Female N = 34634				Reference: White N = 35344 Focal: African Am. N = 3686				Reference: White N = 35344 Focal: Hispanic N = 24289				Reference: White N = 35344 Focal: Native Am. N = 4043				Reference: White N = 35344 Focal: Asian N = 1777			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	285.83	0.70	0.06	B>	10.15	0.29	0.03	B>	0.05	-0.01	0.01	A	40.74	-0.55	-0.05	B<	0.05	0.04	0.00	A
32	72.73	0.38	0.03	B>	9.92	0.31	0.03	B>	101.09	0.51	0.05	B>	63.15	0.76	0.06	B>	14.06	0.65	0.03	B>
33	0.60	0.03	0.00	A	0.77	0.08	0.01	A	20.46	0.21	0.02	B>	21.61	0.42	0.03	B>	1.19	0.17	0.01	A
34	11.10	-0.23	-0.01	B<	1.65	-0.18	-0.01	A	70.70	0.66	0.03	B>	49.18	1.00	0.04	B>	0.83	0.28	0.00	A
35	109.62	-0.43	-0.04	B<	9.56	-0.28	-0.03	B<	94.27	-0.45	-0.04	B<	97.11	-0.84	-0.08	B<	10.15	-0.46	-0.03	B<
36	42.60	-0.26	-0.02	B<	0.01	0.01	0.00	A	0.65	-0.04	0.00	A	4.38	-0.19	-0.02	A	0.07	-0.04	0.00	A
37	8.12	0.11	0.01	B>	0.85	0.08	0.01	A	0.64	-0.04	0.00	A	5.28	-0.20	-0.02	A	0.00	-0.01	0.00	A
38	180.92	0.62	0.04	B>	4.72	0.23	0.02	A	0.94	0.05	0.00	A	4.10	0.20	0.01	A	6.17	-0.40	-0.02	A
39	52.04	0.29	0.03	B>	0.94	0.09	0.01	A	2.84	0.08	0.00	A	16.14	-0.36	-0.03	B<	0.03	-0.03	0.00	A
40	16.46	0.21	0.01	B>	13.93	-0.42	-0.02	B<	202.24	-0.84	-0.05	B<	252.18	-1.51	-0.11	C<	62.85	-1.54	-0.05	C<
41	24.63	0.22	0.02	B>	0.01	0.01	0.00	A	29.04	-0.27	-0.02	B<	3.37	0.17	0.02	A	4.35	-0.33	-0.02	A
42	43.93	-0.33	-0.02	B<	1.80	-0.14	-0.01	A	2.63	0.09	0.00	A	1.70	0.13	0.01	A	0.21	-0.09	0.00	A
43	69.21	-0.38	-0.02	B<	2.06	-0.14	-0.01	A	0.30	0.03	0.00	A	0.01	0.01	0.00	A	0.32	0.10	0.00	A
44	29.77	0.22	0.02	B>	0.82	0.08	0.01	A	54.15	0.34	0.03	B>	2.33	0.14	0.01	A	15.52	0.56	0.04	B>
45	158.99	0.80	0.03	B>	8.17	0.38	0.02	B>	42.62	0.47	0.03	B>	5.35	0.28	0.02	A	0.24	-0.14	0.00	A
46	106.80	0.44	0.03	B>	21.59	0.44	0.04	B>	274.97	0.82	0.06	B>	21.26	0.44	0.03	B>	35.01	0.93	0.06	B>
47	337.78	0.78	0.06	B>	12.96	0.35	0.03	B>	7.06	0.13	0.01	B>	18.60	0.40	0.04	B>	2.28	-0.22	-0.02	A
48	154.70	0.47	0.05	B>	6.13	0.22	0.02	A	67.86	0.37	0.03	B>	47.04	0.59	0.06	B>	0.49	0.09	0.01	A
49	781.15	-1.52	-0.07	C<	175.32	-1.42	-0.09	B<	302.77	-1.05	-0.06	B<	29.18	-0.57	-0.04	B<	77.44	-1.70	-0.05	C<
50	38.95	-0.27	-0.02	B<	7.81	-0.26	-0.02	B<	4.03	-0.10	-0.01	A	0.21	0.04	0.00	A	6.31	-0.40	-0.02	A
51	176.33	0.61	0.04	B>	51.36	0.75	0.05	B>	186.12	0.72	0.04	B>	19.40	0.46	0.03	B>	23.58	0.76	0.04	B>
52	153.38	0.53	0.04	B>	5.16	0.22	0.02	A	2.70	-0.08	0.00	A	0.70	-0.08	0.00	A	25.47	-0.75	-0.05	B<
53	52.04	-0.28	-0.03	B<	4.91	-0.20	-0.02	A	140.81	-0.53	-0.05	B<	91.68	-0.81	-0.08	B<	53.63	-0.91	-0.08	B<
54	16.13	-0.18	-0.01	B<	0.01	-0.01	0.00	A	27.12	-0.27	-0.02	B<	29.86	-0.50	-0.04	B<	1.45	-0.21	-0.01	A
55	99.15	0.46	0.03	B>	20.33	0.49	0.03	B>	28.06	0.28	0.01	B>	8.14	0.30	0.02	B>	54.52	1.21	0.07	B>
56	147.64	0.55	0.04	B>	18.49	0.48	0.03	B>	328.65	-0.93	-0.07	B<	2.13	0.15	0.01	A	46.71	-1.02	-0.06	B<
57	4.96	0.12	0.01	A	7.23	-0.30	-0.02	B<	10.93	0.20	0.01	B>	1.67	0.14	0.01	A	2.69	-0.33	-0.01	A
58	123.09	-0.55	-0.03	B<	60.99	-0.83	-0.06	B<	346.00	-1.02	-0.07	B<	123.32	-1.09	-0.08	B<	16.29	-0.79	-0.03	B<
59	2.20	0.09	0.00	A	0.60	-0.10	-0.01	A	2.20	-0.10	-0.01	A	0.00	0.01	0.00	A	3.49	-0.46	-0.01	A
60	14.35	-0.18	-0.01	B<	102.47	-1.00	-0.07	B<	253.99	-0.83	-0.06	B<	2.78	-0.16	-0.01	A	21.64	-0.78	-0.04	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

(table continues)

Table 9.2.1.8 (continued)
2005 Spring AIMS Differential Item Functioning Mathematics CRT High School

Item	Reference: Male N = 34485 Focal: Female N = 34634				Reference: White N = 35344 Focal: African Am. N = 3686				Reference: White N = 35344 Focal: Hispanic N = 24289				Reference: White N = 35344 Focal: Native Am. N = 4043				Reference: White N = 35344 Focal: Asian N = 1777			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
61	0.54	0.03	0.00	A	2.55	0.16	0.01	A	0.09	0.02	0.00	A	11.50	-0.32	-0.02	B<	1.24	0.18	0.01	A
62	5.53	0.10	0.01	A	6.48	0.24	0.02	A	43.08	0.32	0.03	B>	33.29	0.54	0.04	B>	23.51	0.79	0.04	B>
63	5.42	-0.10	-0.01	A	7.12	0.26	0.02	B>	18.47	0.22	0.02	B>	13.84	0.35	0.03	B>	13.20	0.62	0.03	B>
64	1.06	0.04	0.00	A	4.68	0.20	0.02	A	27.57	0.25	0.02	B>	0.04	0.02	0.00	A	18.06	0.65	0.04	B>
65	99.25	0.42	0.03	B>	21.79	0.45	0.04	B>	29.16	0.26	0.02	B>	0.95	0.09	0.01	A	13.30	0.58	0.03	B>
66	38.95	0.23	0.02	B>	0.98	-0.09	-0.01	A	0.41	0.03	0.01	A	3.80	0.16	0.02	A	2.19	0.19	0.02	A
67	26.60	-0.20	-0.02	B<	7.69	-0.24	-0.02	B<	1.68	-0.06	0.01	A	18.11	0.36	0.04	B>	6.08	-0.33	-0.03	A
68	24.49	0.21	0.02	B>	0.82	0.09	0.01	A	84.46	0.44	0.03	B>	27.84	0.48	0.04	B>	10.00	0.50	0.03	B>
69	4.28	-0.12	-0.01	A	2.05	0.18	0.01	A	10.30	-0.21	-0.01	B<	1.46	0.14	0.01	A	22.62	-0.93	-0.03	B<
70	52.66	-0.28	-0.03	B<	0.05	-0.02	0.00	A	93.55	-0.43	-0.04	B<	50.41	-0.62	-0.05	B<	13.01	-0.47	-0.04	B<
71	127.17	-0.45	-0.04	B<	25.42	0.48	0.04	B>	31.29	0.26	0.02	B>	7.29	0.25	0.02	B>	7.86	0.36	0.03	B>
72	13.85	-0.18	-0.01	B<	11.68	-0.36	-0.02	B<	154.79	-0.69	-0.04	B<	25.44	-0.50	-0.03	B<	7.21	-0.51	-0.02	B<
73	89.90	-0.41	-0.03	B<	0.04	0.02	0.00	A	3.93	0.10	0.00	A	0.11	0.03	0.00	A	1.83	0.22	0.01	A
74	264.00	-0.73	-0.05	B<	44.76	-0.66	-0.05	B<	26.99	-0.26	-0.02	B<	0.95	0.09	0.01	A	26.60	-0.78	-0.04	B<
75	24.32	-0.20	-0.02	B<	7.25	0.25	0.02	B>	0.13	0.02	0.00	A	4.86	0.20	0.02	A	2.11	-0.19	-0.02	A
76	138.80	0.59	0.03	B>	90.73	1.06	0.07	B>	158.87	0.72	0.05	B>	1.78	0.14	0.01	A	35.59	1.33	0.04	B>
77	20.30	0.19	0.01	B>	3.36	-0.17	-0.01	A	73.54	0.41	0.03	B>	146.86	1.10	0.10	B>	5.24	0.36	0.02	A
78	32.36	-0.23	-0.02	B<	14.28	0.34	0.03	B>	57.26	0.35	0.03	B>	2.94	0.15	0.01	A	0.78	-0.12	-0.01	A
79	0.35	-0.03	0.00	A	3.89	0.19	0.02	A	30.35	0.28	0.02	B>	12.95	0.34	0.03	B>	13.60	0.63	0.03	B>
80	273.25	0.83	0.05	B>	4.29	0.23	0.01	A	0.30	-0.03	0.00	A	25.32	0.50	0.04	B>	16.62	0.83	0.03	B>
81	69.38	0.32	0.03	B>	9.68	-0.27	-0.02	B<	0.41	-0.03	0.00	A	7.30	0.23	0.02	B>	0.80	0.12	0.01	A
82	4.44	0.09	0.01	A	33.98	0.55	0.05	B>	153.94	0.59	0.05	B>	19.31	0.39	0.03	B>	28.22	0.84	0.05	B>
83	591.31	-1.05	-0.08	B<	11.60	-0.34	-0.03	B<	11.21	-0.17	-0.01	B<	0.54	-0.07	-0.01	A	0.75	-0.13	-0.01	A
84	14.68	-0.17	-0.01	B<	6.99	-0.26	-0.02	B<	0.64	-0.04	-0.01	A	1.49	-0.11	-0.01	A	2.18	-0.26	-0.01	A

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

Table 9.2.1.9
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 3

Item	Reference: Male N = 39751 Focal: Female N = 38223				Reference: White N = 34400 Focal: African Am. N = 4094				Reference: White N = 34400 Focal: Hispanic N = 33798				Reference: White N = 34400 Focal: Native Am. N = 3867				Reference: White N = 34400 Focal: Asian N = 2032			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	12.75	0.28	0.00	B>	8.38	-0.48	-0.01	B<	5.95	0.23	0.01	A	1.98	0.24	0.01	A	0.07	0.11	0.00	A
2	22.07	0.24	0.01	B>	3.66	-0.23	-0.01	A	33.54	-0.35	-0.02	B<	11.56	-0.39	-0.02	B<	19.46	-0.79	-0.03	B<
3	4.54	0.17	0.00	A	0.01	-0.02	0.00	A	1.06	-0.10	0.00	A	7.32	0.48	0.01	B>	1.17	0.40	0.00	A
4	10.28	0.15	0.01	B>	31.55	-0.57	-0.03	B<	0.00	0.00	0.00	A	49.98	-0.70	-0.05	B<	1.46	-0.21	-0.01	A
5	6.47	0.13	0.01	A	7.64	-0.31	-0.02	B<	26.66	0.31	0.02	B>	9.83	0.36	0.02	B>	0.12	-0.07	0.00	A
6	50.01	0.45	0.01	B>	1.10	-0.15	-0.01	A	6.71	0.19	0.01	B>	0.03	-0.03	0.00	A	2.20	-0.35	-0.01	A
7	18.41	0.27	0.01	B>	3.09	0.25	0.01	A	22.39	0.34	0.01	B>	7.39	0.37	0.02	B>	1.54	0.33	0.01	A
8	0.21	-0.03	0.00	A	0.86	-0.14	-0.01	A	0.04	-0.02	0.00	A	0.16	0.06	0.00	A	2.02	0.47	0.01	A
9	26.39	0.25	0.01	B>	0.01	-0.01	0.00	A	37.09	0.34	0.01	B>	2.60	0.18	0.01	A	2.67	0.29	0.01	A
10	158.21	-0.48	-0.04	B<	0.94	0.09	0.01	A	15.13	0.17	0.01	B>	7.12	0.24	0.02	B>	6.52	0.34	0.03	A
11	114.48	0.43	0.03	B>	6.18	0.23	0.02	A	138.07	0.54	0.04	B>	4.98	0.21	0.02	A	8.56	0.41	0.03	B>
12	22.17	-0.24	-0.01	B<	5.08	-0.25	-0.01	A	72.66	-0.49	-0.03	B<	45.13	-0.71	-0.05	B<	4.03	-0.38	-0.01	A
13	65.94	-0.32	-0.03	B<	0.00	0.00	0.00	A	5.38	0.10	0.01	A	9.96	-0.31	-0.03	B<	2.89	0.21	0.02	A
14	24.04	-0.18	-0.02	B<	0.12	0.03	0.00	A	51.65	0.30	0.02	B>	6.30	0.23	0.02	A	2.41	0.19	0.02	A
15	45.95	0.27	0.02	B>	1.94	0.13	0.01	A	20.30	-0.21	-0.01	B<	0.71	0.09	0.01	A	0.02	0.02	0.00	A
16	59.42	0.27	0.03	B>	14.01	0.31	0.03	B>	14.80	0.15	0.00	B>	21.66	0.40	0.04	B>	4.15	-0.22	-0.02	A
17	3.06	0.08	0.00	A	12.85	0.37	0.03	B>	16.79	0.21	0.01	B>	13.18	0.38	0.03	B>	7.81	0.48	0.02	B>
18	0.45	0.03	0.00	A	4.19	0.18	0.01	A	76.54	-0.37	-0.03	B<	49.98	-0.64	-0.06	B<	0.02	-0.02	0.00	A
19	140.99	-0.62	-0.03	B<	12.25	-0.41	-0.02	B<	100.34	-0.60	-0.03	B<	46.42	-0.75	-0.04	B<	8.86	-0.57	-0.02	B<
20	82.77	0.32	0.03	B>	0.99	0.08	0.01	A	0.00	0.00	0.00	A	27.21	0.46	0.04	B>	0.97	-0.11	-0.01	A
21	4.82	-0.11	0.00	A	8.59	0.32	0.02	B>	53.21	0.40	0.02	B>	23.64	0.53	0.03	B>	23.30	0.95	0.03	B>
22	15.20	0.14	0.01	B>	1.08	-0.09	-0.01	A	41.92	0.27	0.03	B>	8.73	0.26	0.02	B>	2.24	0.17	0.02	A
23	19.26	0.18	0.01	B>	0.62	0.08	0.01	A	10.96	0.16	0.01	B>	1.40	0.11	0.01	A	1.99	0.21	0.01	A
24	0.00	0.00	0.00	A	5.65	0.24	0.02	A	26.54	-0.26	-0.01	B<	26.44	0.53	0.04	B>	0.00	0.02	0.00	A
25	39.36	-0.25	-0.02	B<	1.77	-0.12	-0.01	A	0.19	0.02	0.01	A	0.36	0.06	0.01	A	0.74	-0.12	-0.01	A
26	117.30	-0.53	-0.03	B<	7.12	-0.28	-0.02	B<	4.32	-0.12	0.00	A	159.08	1.47	0.09	B>	0.15	-0.08	0.00	A
27	322.43	-0.83	-0.05	B<	12.61	-0.38	-0.02	B<	898.73	-1.55	-0.10	C<	131.37	-1.15	-0.08	B<	13.02	-0.62	-0.02	B<
28	0.81	-0.04	0.00	A	8.84	-0.30	-0.02	B<	4.58	-0.11	-0.01	A	46.01	0.69	0.05	B>	4.59	0.38	0.02	A
29	23.35	0.38	0.01	B>	0.06	0.05	0.00	A	0.00	0.01	0.00	A	2.02	-0.23	-0.01	A	0.00	-0.03	0.00	A
30	2.40	0.08	0.00	A	2.70	-0.18	-0.01	A	101.55	-0.57	-0.03	B<	26.68	-0.55	-0.04	B<	0.00	0.01	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.9 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 3

Item	Reference: Male N = 39751 Focal: Female N = 38223				Reference: White N = 34400 Focal: African Am. N = 4094				Reference: White N = 34400 Focal: Hispanic N = 33798				Reference: White N = 34400 Focal: Native Am. N = 3867				Reference: White N = 34400 Focal: Asian N = 2032			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	0.31	0.02	0.00	A	7.17	0.25	0.02	B>	8.68	-0.13	-0.01	B<	26.49	-0.47	-0.04	B<	10.54	-0.40	-0.03	B<
32	0.39	0.04	0.00	A	1.29	0.15	0.01	A	4.14	0.14	0.01	A	10.16	-0.38	-0.02	B<	0.63	0.20	0.00	A
33	7.65	-0.11	-0.01	B<	0.61	0.08	0.01	A	13.34	0.17	0.01	B>	6.08	-0.23	-0.02	A	3.88	0.29	0.02	A
34	106.06	0.60	0.02	B>	0.06	0.03	0.00	A	0.01	0.01	0.00	A	20.63	-0.53	-0.03	B<	2.72	-0.37	-0.01	A
35	68.61	0.35	0.02	B>	16.05	0.39	0.03	B>	95.20	0.47	0.04	B>	2.49	0.15	0.01	A	3.07	0.28	0.01	A
36	88.21	0.53	0.02	B>	12.46	0.44	0.02	B>	109.83	0.67	0.03	B>	40.85	0.79	0.04	B>	4.75	0.48	0.01	A
37	0.71	0.04	0.00	A	0.00	0.00	0.00	A	0.91	0.05	0.00	A	0.20	0.05	0.00	A	0.01	-0.02	0.00	A
38	7.90	0.11	0.01	B>	0.89	-0.09	-0.01	A	1.18	-0.05	0.00	A	11.40	-0.31	-0.02	B<	22.76	-0.63	-0.04	B<
39	112.53	0.43	0.03	B>	26.55	0.49	0.04	B>	18.95	0.20	0.02	B>	0.64	0.08	0.00	A	0.16	-0.06	0.00	A
40	146.49	0.46	0.04	B>	33.66	0.52	0.04	B>	110.64	0.46	0.04	B>	40.00	0.57	0.05	B>	5.17	0.30	0.02	A
41	62.55	-0.35	-0.02	B<	2.81	-0.17	-0.01	A	80.02	-0.45	-0.02	B<	48.15	-0.67	-0.05	B<	18.57	-0.66	-0.03	B<
42	194.70	-0.59	-0.04	B<	56.61	-0.70	-0.05	B<	77.13	-0.42	-0.03	B<	45.74	0.71	0.05	B>	28.74	-0.74	-0.04	B<
43	24.70	-0.18	-0.02	B<	0.66	-0.07	-0.01	A	7.45	0.11	0.01	B>	1.00	0.09	0.01	A	27.00	0.61	0.06	B>
44	445.72	-0.80	-0.07	B<	0.05	0.02	0.00	A	2.12	-0.06	-0.01	A	43.21	-0.58	-0.05	B<	6.09	-0.30	-0.02	A
45	15.23	-0.16	-0.01	B<	7.89	-0.27	-0.02	B<	1.41	0.05	0.00	A	6.28	-0.25	-0.02	A	13.78	0.50	0.03	B>
46	8.20	0.12	0.01	B>	20.23	-0.43	-0.03	B<	60.17	-0.36	-0.02	B<	75.60	-0.82	-0.06	B<	7.88	-0.42	-0.02	B<
47	30.14	-0.20	-0.02	B<	2.43	-0.14	-0.01	A	167.53	-0.54	-0.05	B<	77.78	-0.80	-0.07	B<	36.57	-0.71	-0.06	B<
48	246.00	0.57	0.05	B>	15.28	0.33	0.03	B>	0.76	0.04	0.00	A	45.63	0.60	0.05	B>	2.64	0.19	0.02	A
49	10.88	-0.13	-0.01	B<	0.55	0.07	0.00	A	25.12	0.22	0.01	B>	0.95	0.09	0.01	A	9.68	0.41	0.03	B>
50	64.51	-0.37	-0.02	B<	0.52	-0.08	0.00	A	4.44	-0.11	-0.01	A	14.32	0.39	0.03	B>	1.80	0.23	0.01	A
51	37.42	0.31	0.01	B>	13.95	-0.42	-0.02	B<	11.64	0.20	0.01	B>	3.16	0.19	0.01	A	6.36	-0.48	-0.02	A
52	15.82	0.22	0.01	B>	0.05	0.03	0.00	A	46.51	0.44	0.02	B>	13.56	0.44	0.02	B>	1.00	0.23	0.01	A
53	27.90	-0.20	-0.02	B<	0.37	0.06	0.01	A	25.61	-0.22	-0.01	B<	35.79	-0.59	-0.04	B<	6.75	-0.32	-0.03	B<
54	2.12	-0.08	0.00	A	0.06	-0.03	0.00	A	43.54	0.43	0.02	B>	4.24	0.25	0.01	A	14.79	0.95	0.02	B>

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.10
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 4

Item	Reference: Male N = 39741 Focal: Female N = 38622				Reference: White N = 35504 Focal: African Am. N = 4143				Reference: White N = 35504 Focal: Hispanic N = 32909				Reference: White N = 35504 Focal: Native Am. N = 3994				Reference: White N = 35504 Focal: Asian N = 2050			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	6.25	-0.14	-0.01	A	1.92	0.18	0.01	A	17.13	-0.27	-0.02	B<	4.09	-0.24	-0.01	A	0.66	-0.18	0.00	A
2	2.15	-0.06	0.00	A	10.95	0.30	0.02	B>	139.21	0.53	0.04	B>	28.34	0.48	0.04	B>	29.39	0.76	0.05	B>
3	64.81	-0.33	-0.02	B<	21.46	0.44	0.03	B>	5.36	0.11	0.01	A	4.83	-0.20	-0.01	A	19.99	0.68	0.04	B>
4	8.28	-0.10	-0.01	B<	4.14	0.17	0.01	A	328.77	0.76	0.08	B>	48.28	-0.61	-0.06	B<	2.81	-0.20	-0.02	A
5	74.66	-0.43	-0.02	B<	2.41	0.17	0.01	A	58.45	0.44	0.02	B>	44.17	0.72	0.05	B>	7.62	0.55	0.02	B>
6	70.20	0.33	0.03	B>	6.33	0.23	0.02	A	0.29	-0.02	0.00	A	13.16	-0.32	-0.03	B<	2.11	0.20	0.01	A
7	1.35	-0.05	0.00	A	20.26	-0.41	-0.03	B<	61.24	-0.35	-0.02	B<	142.50	-1.07	-0.09	B<	13.13	-0.48	-0.03	B<
8	20.38	-0.17	-0.02	B<	13.03	0.33	0.03	B>	43.97	0.30	0.02	B>	0.48	0.07	0.01	A	4.00	0.24	0.02	A
9	91.60	-0.37	-0.03	B<	9.24	-0.27	-0.02	B<	69.55	-0.37	-0.03	B<	87.31	-0.81	-0.08	B<	33.91	-0.71	-0.06	B<
10	4.98	0.08	0.01	A	12.51	0.29	0.03	B>	88.30	0.37	0.02	B>	0.47	-0.06	-0.01	A	2.33	0.17	0.02	A
11	14.04	-0.17	-0.01	B<	42.95	-0.66	-0.04	B<	196.62	-0.74	-0.06	B<	51.25	-0.71	-0.06	B<	3.70	-0.33	-0.01	A
12	20.13	-0.20	-0.01	B<	1.58	-0.13	-0.01	A	0.23	0.02	-0.01	A	26.24	-0.50	-0.04	B<	0.45	-0.10	-0.01	A
13	299.98	0.71	0.05	B>	3.61	0.18	0.01	A	0.01	0.00	0.00	A	35.52	0.56	0.05	B>	17.57	0.63	0.04	B>
14	85.41	0.35	0.03	B>	0.47	0.06	0.01	A	51.58	0.31	0.03	B>	49.86	0.63	0.06	B>	1.62	-0.16	-0.01	A
15	28.75	-0.32	-0.01	B<	11.14	-0.44	-0.02	B<	5.75	-0.17	-0.01	A	0.43	-0.08	-0.01	A	0.13	0.10	0.00	A
16	3.68	0.09	0.00	A	5.17	-0.24	-0.01	A	0.94	0.05	0.00	A	6.68	-0.26	-0.02	B<	0.73	-0.15	-0.01	A
17	116.07	0.48	0.03	B>	0.05	0.03	0.00	A	8.48	0.15	0.01	B>	5.77	-0.23	-0.02	A	0.38	-0.10	-0.01	A
18	68.94	0.55	0.01	B>	3.43	-0.27	-0.01	A	4.00	0.16	0.01	A	0.09	-0.05	0.00	A	0.00	0.03	0.00	A
19	198.37	-0.54	-0.04	B<	0.10	0.03	0.00	A	124.21	-0.48	-0.05	B<	32.56	-0.51	-0.05	B<	3.59	0.24	0.02	A
20	191.48	0.62	0.04	B>	2.83	0.18	0.01	A	0.12	0.02	0.00	A	30.78	0.56	0.04	B>	0.03	0.03	0.00	A
21	95.60	0.55	0.02	B>	8.73	0.37	0.02	B>	32.49	0.36	0.02	B>	41.41	0.78	0.04	B>	0.11	-0.08	0.00	A
22	2.31	0.07	0.00	A	2.26	-0.17	-0.01	A	325.86	-1.00	-0.06	B<	213.09	-1.43	-0.10	B<	28.93	-0.91	-0.04	B<
23	346.78	0.71	0.06	B>	1.52	0.11	0.01	A	54.45	-0.32	-0.03	B<	14.51	-0.34	-0.03	B<	25.09	-0.59	-0.05	B<
24	99.20	0.40	0.03	B>	10.14	0.30	0.02	B>	6.32	0.11	0.00	A	0.24	0.05	0.00	A	2.95	0.24	0.02	A
25	0.14	0.02	0.00	A	5.67	-0.24	-0.01	A	262.25	-0.81	-0.05	B<	38.44	-0.60	-0.04	B<	47.09	-1.00	-0.05	B<
26	514.71	1.10	0.06	B>	12.73	0.38	0.02	B>	127.47	0.62	0.04	B>	14.84	0.41	0.03	B>	0.33	0.11	0.00	A
27	114.58	0.49	0.03	B>	1.52	0.13	0.01	A	33.19	0.30	0.03	B>	46.74	0.73	0.05	B>	0.55	0.12	0.01	A
28	1.30	-0.06	0.00	A	2.26	-0.16	-0.01	A	0.57	0.04	0.00	A	28.07	0.56	0.04	B>	1.71	-0.23	-0.01	A
29	42.24	0.28	0.02	B>	4.45	-0.21	-0.01	A	20.73	-0.22	-0.01	B<	138.45	1.17	0.09	B>	5.11	-0.34	-0.02	A
30	24.31	0.24	0.01	B>	6.93	0.30	0.02	B>	1.08	-0.06	-0.01	A	4.37	-0.22	-0.02	A	2.97	0.34	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.10 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 4

Item	Reference: Male N = 39741 Focal: Female N = 38622				Reference: White N = 35504 Focal: African Am. N = 4143				Reference: White N = 35504 Focal: Hispanic N = 32909				Reference: White N = 35504 Focal: Native Am. N = 3994				Reference: White N = 35504 Focal: Asian N = 2050			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	21.57	-0.21	-0.01	B<	5.80	0.24	0.02	A	10.51	0.16	0.01	B>	4.97	0.22	0.02	A	7.42	0.46	0.02	B>
32	117.36	-0.52	-0.03	B<	3.17	0.19	0.01	A	58.40	-0.41	-0.03	B<	4.68	-0.22	-0.02	A	6.28	-0.43	-0.02	A
33	23.02	-0.22	-0.01	B<	0.41	-0.07	0.00	A	0.00	0.00	0.00	A	11.56	0.35	0.03	B>	0.02	-0.03	0.00	A
34	26.71	-0.22	-0.01	B<	1.45	0.11	0.01	A	19.27	0.21	0.01	B>	17.50	0.40	0.03	B>	12.99	0.55	0.03	B>
35	6.58	-0.11	-0.01	A	6.19	-0.23	-0.02	A	0.82	0.04	0.01	A	17.40	0.40	0.03	B>	6.70	-0.36	-0.02	B<
36	4.61	0.10	0.01	A	1.10	-0.11	-0.01	A	6.87	-0.14	-0.02	B<	15.30	-0.40	-0.03	B<	1.43	0.21	0.01	A
37	8.45	-0.14	-0.01	B<	0.02	0.02	0.00	A	1.35	0.07	0.01	A	10.82	-0.35	-0.02	B<	5.19	0.45	0.01	A
38	243.03	-0.62	-0.05	B<	6.07	-0.22	-0.02	A	150.88	-0.55	-0.04	B<	66.81	-0.74	-0.07	B<	3.95	-0.27	-0.02	A
39	267.27	-0.76	-0.04	B<	53.90	-0.75	-0.05	B<	445.38	-1.13	-0.07	B<	98.69	-0.98	-0.07	B<	7.67	-0.48	-0.02	B<
40	89.37	-0.40	-0.03	B<	3.21	-0.17	-0.01	A	0.03	-0.01	0.00	A	12.59	-0.34	-0.03	B<	3.01	0.26	0.02	A
41	203.16	-0.62	-0.04	B<	31.85	-0.53	-0.04	B<	122.83	-0.55	-0.03	B<	29.08	-0.51	-0.04	B<	13.60	-0.56	-0.03	B<
42	0.18	0.02	0.00	A	0.49	-0.07	0.00	A	14.45	0.18	0.02	B>	1.17	0.10	0.01	A	0.04	0.03	0.00	A
43	14.28	0.19	0.01	B>	0.13	-0.04	0.00	A	117.23	0.63	0.04	B>	25.44	0.55	0.04	B>	21.42	0.93	0.03	B>
44	0.19	0.02	0.00	A	15.10	0.42	0.02	B>	34.80	0.32	0.02	B>	85.71	0.97	0.07	B>	10.76	0.61	0.02	B>
45	116.97	0.59	0.02	B>	29.63	0.67	0.03	B>	422.48	1.30	0.07	B>	140.00	1.43	0.08	B>	60.90	1.86	0.05	C>
46	0.09	-0.01	0.00	A	10.61	-0.32	-0.02	B<	105.42	-0.52	-0.04	B<	13.33	-0.36	-0.03	B<	11.69	-0.55	-0.03	B<
47	87.02	0.39	0.03	B>	2.64	-0.15	-0.01	A	1.78	-0.06	0.00	A	24.52	0.48	0.04	B>	3.39	-0.26	-0.02	A
48	4.30	-0.08	-0.01	A	7.16	0.23	0.02	B>	2.02	0.06	0.00	A	3.97	-0.18	-0.01	A	8.62	-0.34	-0.03	B<
49	20.86	-0.19	-0.01	B<	22.05	-0.44	-0.03	B<	19.70	-0.21	-0.01	B<	9.45	-0.28	-0.02	B<	0.43	0.10	0.01	A
50	7.87	0.16	0.01	B>	0.19	0.06	0.00	A	229.18	1.03	0.05	B>	103.87	1.30	0.07	B>	14.23	0.89	0.02	B>
51	49.61	-0.35	-0.02	B<	0.04	-0.03	0.00	A	11.52	0.20	0.01	B>	6.99	0.29	0.02	B>	0.08	-0.06	0.00	A
52	13.38	-0.23	-0.01	B<	0.04	0.03	0.00	A	22.23	0.34	0.01	B>	18.75	0.57	0.03	B>	8.37	0.78	0.01	B>
53	125.57	-0.67	-0.02	B<	2.29	0.20	0.01	A	1.75	-0.09	-0.01	A	18.88	0.57	0.03	B>	0.75	0.23	0.00	A
54	3.97	-0.09	-0.01	A	1.91	-0.14	-0.01	A	6.81	0.14	0.01	B>	43.95	0.68	0.05	B>	0.59	0.14	0.01	A

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.11
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 5

Item	Reference: Male N = 39359 Focal: Female N = 38237				Reference: White N = 35567 Focal: African Am. N = 4078				Reference: White N = 35567 Focal: Hispanic N = 32120				Reference: White N = 35567 Focal: Native Am. N = 3932				Reference: White N = 35567 Focal: Asian N = 2108			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	4.92	0.10	0.01	A	26.19	-0.55	-0.03	B<	550.45	-1.25	-0.09	B<	202.31	-1.38	-0.10	B<	38.72	-1.00	-0.04	B<
2	27.94	0.37	0.01	B>	29.77	-0.84	-0.02	B<	174.57	-1.11	-0.04	B<	0.94	0.17	0.00	A	9.24	-0.80	-0.01	B<
3	94.48	-0.48	-0.02	B<	1.70	-0.14	-0.01	A	37.54	-0.35	-0.03	B<	56.48	-0.77	-0.05	B<	2.71	-0.30	-0.01	A
4	10.81	-0.12	-0.01	B<	1.75	-0.11	-0.01	A	6.11	-0.10	-0.01	A	22.51	0.41	0.04	B>	1.90	0.16	0.02	A
5	46.48	-0.36	-0.01	B<	6.99	-0.31	-0.02	B<	1.30	-0.07	-0.01	A	0.00	0.01	0.00	A	0.10	0.07	0.00	A
6	126.88	0.49	0.03	B>	1.69	0.13	0.01	A	41.26	0.32	0.02	B>	13.17	-0.34	-0.03	B<	2.95	-0.25	-0.01	A
7	11.97	0.13	0.01	B>	29.06	-0.47	-0.04	B<	38.34	-0.27	-0.02	B<	14.71	0.34	0.03	B>	5.19	-0.28	-0.02	A
8	157.75	-0.52	-0.04	B<	44.79	-0.63	-0.05	B<	985.68	-1.45	-0.11	B<	273.24	-1.46	-0.12	B<	70.60	-1.14	-0.07	B<
9	11.22	-0.18	-0.01	B<	22.67	-0.57	-0.03	B<	192.86	-0.88	-0.05	B<	54.17	-0.84	-0.05	B<	7.66	-0.60	-0.02	B<
10	63.69	0.36	0.02	B>	0.23	-0.05	0.00	A	16.46	0.21	0.02	B>	0.15	0.04	0.00	A	1.27	0.19	0.01	A
11	183.56	0.83	0.02	B>	0.09	0.04	0.00	A	133.69	0.81	0.04	B>	2.01	0.18	0.01	A	4.10	0.49	0.01	A
12	109.47	0.48	0.03	B>	15.15	-0.39	-0.03	B<	0.54	-0.04	0.00	A	4.22	-0.20	-0.01	A	0.33	-0.10	0.00	A
13	65.23	0.37	0.02	B>	3.89	0.21	0.01	A	47.71	-0.36	-0.02	B<	1.16	-0.11	-0.01	A	4.98	-0.35	-0.02	A
14	173.20	0.51	0.04	B>	1.73	0.12	0.01	A	55.19	0.33	0.03	B>	0.62	-0.07	-0.01	A	8.30	0.38	0.03	B>
15	1.18	-0.04	0.00	A	20.28	-0.42	-0.03	B<	392.42	-0.89	-0.07	B<	65.00	-0.74	-0.06	B<	14.62	-0.51	-0.03	B<
16	12.15	0.13	0.01	B>	3.99	0.17	0.02	A	175.94	0.57	0.05	B>	61.33	0.69	0.06	B>	4.19	0.25	0.02	A
17	97.98	0.38	0.03	B>	0.37	0.06	0.00	A	26.36	0.23	0.01	B>	0.66	0.08	0.01	A	24.49	0.63	0.05	B>
18	37.91	0.22	0.02	B>	9.72	0.27	0.02	B>	22.41	0.20	0.01	B>	11.71	0.30	0.03	B>	5.46	0.28	0.02	A
19	64.86	0.32	0.03	B>	2.10	-0.13	-0.01	A	18.88	-0.20	-0.01	B<	117.94	-0.97	-0.08	B<	7.17	-0.36	-0.02	B<
20	88.97	-0.40	-0.03	B<	2.21	0.15	0.01	A	36.31	0.30	0.02	B>	10.91	0.32	0.03	B>	3.74	0.29	0.02	A
21	300.49	-0.72	-0.05	B<	4.24	-0.19	-0.01	A	0.43	-0.03	0.00	A	1.81	-0.12	-0.01	A	6.06	0.36	0.02	A
22	156.76	-0.68	-0.03	B<	1.86	-0.17	-0.01	A	109.73	-0.67	-0.04	B<	98.41	-1.08	-0.06	B<	14.85	-0.76	-0.02	B<
23	118.86	-0.39	-0.04	B<	4.56	0.18	0.02	A	221.56	-0.60	-0.06	B<	23.72	-0.41	-0.04	B<	1.33	-0.13	-0.01	A
24	1.20	0.04	0.00	A	3.78	0.17	0.01	A	261.54	0.69	0.06	B>	3.55	-0.17	-0.02	A	16.10	-0.47	-0.04	B<
25	33.30	0.32	0.01	B>	4.08	0.25	0.01	A	128.01	0.73	0.04	B>	43.61	0.82	0.04	B>	3.80	0.40	0.01	A
26	25.89	-0.20	-0.02	B<	0.00	0.00	0.00	A	10.96	0.15	0.01	B>	12.15	0.32	0.03	B>	2.27	0.20	0.01	A
27	12.61	-0.15	-0.01	B<	36.07	0.57	0.04	B>	92.87	0.45	0.03	B>	79.74	0.86	0.07	B>	18.50	0.62	0.04	B>
28	2.85	0.07	0.01	A	45.23	0.62	0.05	B>	124.84	0.50	0.04	B>	42.55	0.60	0.05	B>	3.82	0.26	0.02	A
29	4.26	0.08	0.01	A	12.84	0.33	0.03	B>	0.50	0.03	0.01	A	5.14	0.21	0.02	A	12.76	0.51	0.03	B>
30	178.76	-0.63	-0.03	B<	11.93	-0.37	-0.02	B<	689.00	-1.39	-0.09	B<	91.23	-0.96	-0.07	B<	16.91	-0.70	-0.03	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.11 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 5

Item	Reference: Male N = 39359 Focal: Female N = 38237				Reference: White N = 35567 Focal: African Am. N = 4078				Reference: White N = 35567 Focal: Hispanic N = 32120				Reference: White N = 35567 Focal: Native Am. N = 3932				Reference: White N = 35567 Focal: Asian N = 2108			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	0.25	0.02	0.00	A	9.00	-0.25	-0.02	B<	75.05	0.36	0.04	B>	2.73	0.14	0.02	A	0.00	-0.01	0.00	A
32	399.97	-0.80	-0.06	B<	0.72	-0.08	0.00	A	41.62	-0.29	-0.02	B<	13.16	0.33	0.03	B>	0.82	-0.12	-0.01	A
33	46.27	-0.26	-0.02	B<	0.67	0.07	0.01	A	134.69	-0.49	-0.04	B<	28.21	-0.50	-0.04	B<	19.14	-0.51	-0.05	B<
34	8.94	0.13	0.01	B>	12.68	-0.35	-0.03	B<	0.60	-0.04	-0.01	A	1.87	-0.13	-0.01	A	0.11	0.05	0.00	A
35	92.47	-0.35	-0.03	B<	37.38	-0.52	-0.05	B<	218.20	-0.62	-0.06	B<	0.52	0.06	0.00	A	34.42	-0.69	-0.06	B<
36	27.77	0.19	0.02	B>	94.76	0.84	0.08	B>	92.28	0.41	0.03	B>	49.87	0.62	0.06	B>	0.69	0.10	0.01	A
37	11.20	0.12	0.01	B>	21.23	0.40	0.04	B>	24.72	0.21	0.02	B>	13.87	0.33	0.03	B>	0.29	-0.07	-0.01	A
38	96.31	-0.55	-0.02	B<	2.88	-0.21	-0.01	A	0.62	-0.05	0.00	A	3.72	0.24	0.01	A	1.54	-0.27	-0.01	A
39	59.74	0.28	0.03	B>	5.15	-0.19	-0.02	A	9.64	-0.13	-0.01	B<	1.65	-0.11	-0.01	A	0.00	0.00	0.00	A
40	139.69	0.59	0.03	B>	12.81	0.40	0.02	B>	79.97	0.51	0.03	B>	11.02	0.36	0.02	B>	0.75	0.16	0.01	A
41	88.32	0.38	0.03	B>	2.78	0.16	0.01	A	50.21	0.33	0.03	B>	0.10	-0.03	0.00	A	0.01	0.01	0.00	A
42	4.60	0.11	0.00	A	0.68	-0.10	-0.01	A	13.64	0.22	0.02	B>	10.80	0.36	0.02	B>	5.98	0.51	0.01	A
43	93.14	0.45	0.02	B>	1.30	0.12	0.01	A	83.47	0.50	0.03	B>	0.68	0.09	0.01	A	0.53	0.12	0.01	A
44	99.35	-0.42	-0.03	B<	0.67	-0.08	-0.01	A	16.78	0.20	0.02	B>	0.66	0.08	0.01	A	9.21	0.44	0.03	B>
45	4.65	-0.09	-0.01	A	2.64	0.15	0.01	A	6.13	0.11	0.01	A	45.67	-0.64	-0.05	B<	0.10	0.04	0.00	A
46	2.49	-0.07	0.00	A	3.89	0.19	0.01	A	0.18	0.02	0.00	A	10.58	-0.31	-0.02	B<	0.25	0.07	0.00	A
47	14.36	-0.18	-0.01	B<	0.81	0.10	0.01	A	3.24	-0.10	-0.01	A	2.92	0.17	0.01	A	3.98	0.35	0.01	A
48	7.80	0.13	0.01	B>	0.21	-0.05	0.00	A	6.89	0.14	0.01	B>	0.21	-0.05	0.00	A	2.03	0.25	0.01	A
49	0.33	-0.02	0.00	A	0.10	-0.03	0.00	A	86.67	0.44	0.03	B>	49.14	0.68	0.05	B>	0.97	0.14	0.01	A
50	12.06	-0.16	-0.01	B<	0.11	-0.04	0.00	A	28.76	0.28	0.01	B>	45.82	0.69	0.05	B>	26.95	0.88	0.04	B>
51	244.46	0.63	0.05	B>	51.56	0.66	0.05	B>	352.54	0.87	0.07	B>	224.75	1.42	0.12	B>	61.80	1.10	0.07	B>
52	0.75	0.04	0.00	A	7.91	-0.27	-0.02	B<	1.79	0.07	0.01	A	0.38	0.06	0.01	A	0.12	-0.06	0.00	A
53	4.43	-0.09	-0.01	A	2.89	-0.16	-0.01	A	1.18	-0.05	0.00	A	21.53	-0.43	-0.03	B<	28.19	-0.75	-0.04	B<
54	15.45	-0.15	-0.01	B<	0.24	-0.04	0.00	A	22.72	0.21	0.03	B>	12.13	0.31	0.03	B>	1.03	0.13	0.01	A

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.12
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 6

Item	Reference: Male N = 39594 Focal: Female N = 38539				Reference: White N = 35895 Focal: African Am. N = 4220				Reference: White N = 35895 Focal: Hispanic N = 31984				Reference: White N = 35895 Focal: Native Am. N = 4302				Reference: White N = 35895 Focal: Asian N = 1926			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	0.45	0.03	0.00	A	0.43	-0.06	0.00	A	24.62	-0.23	-0.02	B<	54.05	-0.66	-0.06	B<	7.09	-0.38	-0.02	B<
2	7.57	0.20	0.00	B>	0.29	-0.09	0.00	A	0.00	0.00	0.00	A	0.00	0.01	0.00	A	3.62	-0.59	-0.01	A
3	441.90	-1.06	-0.05	B<	0.24	-0.06	0.00	A	44.73	-0.38	-0.03	B<	7.47	-0.29	-0.02	B<	0.73	-0.17	-0.01	A
4	237.11	-0.88	-0.03	B<	5.44	-0.29	-0.01	A	48.74	-0.47	-0.02	B<	18.12	0.53	0.03	B>	0.04	-0.06	0.00	A
5	16.30	-0.16	-0.01	B<	0.17	-0.04	0.00	A	103.57	-0.46	-0.04	B<	29.06	-0.47	-0.04	B<	24.31	-0.65	-0.05	B<
6	29.04	-0.31	-0.01	B<	0.19	-0.06	0.00	A	0.80	0.06	0.01	A	2.70	0.20	0.01	A	5.70	0.60	0.01	A
7	215.43	-0.63	-0.04	B<	1.32	0.11	0.01	A	8.17	0.14	0.01	B>	13.70	0.35	0.03	B>	0.78	-0.14	-0.01	A
8	182.38	-0.67	-0.03	B<	9.00	0.34	0.02	B>	28.43	0.31	0.02	B>	86.88	1.03	0.06	B>	9.93	0.63	0.02	B>
9	122.36	-0.61	-0.02	B<	0.74	0.11	0.00	A	25.14	0.32	0.01	B>	14.67	0.46	0.02	B>	0.13	0.08	0.00	A
10	66.19	0.37	0.02	B>	1.34	0.12	0.01	A	6.07	0.13	0.01	A	1.97	0.14	0.01	A	30.32	-0.81	-0.04	B<
11	0.01	-0.01	0.00	A	0.14	0.06	0.00	A	34.92	0.49	0.02	B>	36.86	0.91	0.03	B>	7.41	0.87	0.01	B>
12	1.27	-0.07	0.00	A	0.01	-0.02	0.00	A	9.35	-0.21	-0.01	B<	0.00	-0.01	0.00	A	0.00	-0.02	0.00	A
13	10.92	0.14	0.01	B>	2.61	-0.16	-0.01	A	54.90	-0.36	-0.02	B<	1.05	-0.10	-0.01	A	0.00	0.01	0.00	A
14	4.70	-0.10	-0.01	A	0.07	-0.03	0.00	A	2.81	-0.09	-0.01	A	61.00	-0.75	-0.05	B<	0.00	0.00	0.00	A
15	2.89	-0.06	-0.01	A	5.08	-0.19	-0.02	A	5.02	0.10	0.01	A	7.43	0.24	0.02	B>	1.63	-0.16	-0.01	A
16	115.84	0.46	0.03	B>	2.27	0.15	0.01	A	0.20	-0.02	0.00	A	1.98	-0.13	-0.01	A	1.20	0.18	0.01	A
17	77.37	0.36	0.03	B>	0.15	-0.04	0.00	A	17.80	-0.19	-0.01	B<	27.82	-0.47	-0.04	B<	8.37	-0.41	-0.03	B<
18	5.13	-0.09	-0.01	A	15.11	0.36	0.03	B>	11.43	0.16	0.02	B>	0.00	0.01	0.00	A	0.17	0.06	0.00	A
19	3.36	0.08	0.00	A	9.32	-0.28	-0.02	B<	3.44	0.09	0.00	A	2.92	-0.16	-0.01	A	2.16	0.22	0.01	A
20	62.32	0.37	0.02	B>	3.14	-0.18	-0.01	A	17.12	0.22	0.02	B>	7.66	0.28	0.02	B>	4.53	0.40	0.02	A
21	78.31	0.34	0.03	B>	9.03	0.26	0.02	B>	29.40	-0.24	-0.02	B<	4.27	-0.19	-0.02	A	1.58	0.16	0.01	A
22	74.38	0.32	0.03	B>	8.42	-0.25	-0.02	B<	11.02	-0.14	-0.02	B<	100.61	-0.86	-0.08	B<	18.12	-0.53	-0.04	B<
23	0.03	-0.01	0.00	A	50.27	0.64	0.05	B>	100.09	0.45	0.02	B>	6.09	0.22	0.02	A	4.40	0.27	0.02	A
24	30.80	-0.25	-0.01	B<	1.63	-0.13	-0.01	A	38.03	-0.33	-0.02	B<	0.66	0.08	0.01	A	1.48	-0.21	-0.01	A
25	49.39	0.43	0.01	B>	2.53	-0.20	-0.01	A	0.39	0.05	0.00	A	10.63	0.42	0.02	B>	10.75	-0.73	-0.02	B<
26	0.06	-0.01	0.00	A	190.04	-1.40	-0.08	B<	926.84	-1.75	-0.09	C<	112.09	-1.07	-0.07	B<	68.99	-1.45	-0.05	B<
27	23.14	0.21	0.01	B>	0.77	0.09	0.01	A	0.12	0.02	0.00	A	2.86	-0.16	-0.01	A	9.82	-0.47	-0.03	B<
28	9.45	0.11	0.01	B>	17.96	0.36	0.03	B>	152.45	0.53	0.05	B>	9.22	0.26	0.02	B>	4.12	0.26	0.02	A
29	205.52	-0.60	-0.04	B<	0.00	0.01	0.00	A	24.87	0.24	0.02	B>	8.10	0.26	0.02	B>	8.67	0.44	0.03	B>
30	450.67	-0.79	-0.07	B<	0.44	-0.06	0.00	A	22.96	-0.20	-0.02	B<	5.22	0.20	0.02	A	3.30	0.23	0.02	A

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.12 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 6

Item	Reference: Male N = 39594 Focal: Female N = 38539				Reference: White N = 35895 Focal: African Am. N = 4220				Reference: White N = 35895 Focal: Hispanic N = 31984				Reference: White N = 35895 Focal: Native Am. N = 4302				Reference: White N = 35895 Focal: Asian N = 1926			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	1435.56	-1.63	-0.11	C<	4.08	0.19	0.01	A	7.90	0.14	0.01	B>	0.63	-0.07	-0.01	A	7.13	0.43	0.02	B>
32	1.12	-0.04	0.00	A	2.27	-0.14	-0.01	A	443.71	-0.99	-0.07	B<	35.44	-0.54	-0.05	B<	23.50	-0.71	-0.04	B<
33	59.64	0.32	0.02	B>	14.97	0.37	0.03	B>	2.42	0.07	0.00	A	3.91	-0.18	-0.02	A	0.21	-0.07	0.00	A
34	165.35	0.49	0.04	B>	6.99	0.23	0.02	B>	37.02	0.27	0.03	B>	26.04	0.44	0.04	B>	2.56	0.21	0.02	A
35	16.91	0.15	0.01	B>	55.48	0.62	0.06	B>	149.79	0.52	0.05	B>	0.21	0.04	0.00	A	22.25	0.58	0.05	B>
36	16.76	0.25	0.01	B>	0.39	-0.08	0.00	A	21.55	0.33	0.02	B>	15.84	0.52	0.02	B>	0.00	0.02	0.00	A
37	203.74	-0.53	-0.05	B<	1.12	0.09	0.01	A	35.80	-0.26	-0.03	B<	13.89	-0.34	-0.03	B<	10.45	-0.38	-0.04	B<
38	6.81	-0.12	-0.01	B<	0.03	-0.02	0.00	A	0.57	-0.04	0.01	A	74.24	0.85	0.07	B>	2.27	-0.24	-0.01	A
39	376.00	0.74	0.06	B>	10.97	-0.29	-0.03	B<	10.86	-0.14	-0.02	B<	3.77	-0.17	-0.02	A	1.10	-0.13	-0.01	A
40	138.10	0.55	0.03	B>	0.50	-0.07	0.00	A	0.48	0.04	0.01	A	42.84	0.68	0.05	B>	2.93	-0.29	-0.01	A
41	11.35	0.14	0.01	B>	3.67	-0.17	-0.01	A	22.03	-0.22	-0.01	B<	0.00	0.00	0.00	A	3.11	-0.25	-0.02	A
42	9.97	0.12	0.01	B>	0.52	0.06	0.01	A	22.70	0.22	0.02	B>	47.79	0.61	0.05	B>	8.75	0.42	0.03	B>
43	1.70	0.05	0.00	A	1.72	-0.12	-0.01	A	23.63	0.22	0.02	B>	1.48	0.11	0.01	A	2.73	0.23	0.02	A
44	9.38	0.11	0.01	B>	19.61	0.37	0.03	B>	0.01	0.01	0.01	A	19.38	0.38	0.03	B>	7.91	0.34	0.03	B>
45	4.71	0.08	0.01	A	1.66	0.11	0.01	A	0.24	0.02	0.01	A	0.21	0.04	0.01	A	3.38	-0.22	-0.02	A
46	39.62	0.23	0.02	B>	1.54	-0.11	-0.01	A	19.58	0.19	0.02	B>	82.13	0.77	0.07	B>	20.54	0.56	0.05	B>
47	3.15	0.08	0.00	A	0.00	-0.01	0.00	A	7.67	0.14	0.00	B>	14.31	0.36	0.03	B>	5.40	0.39	0.02	A
48	0.40	-0.03	0.00	A	37.83	-0.61	-0.04	B<	15.93	-0.21	-0.01	B<	11.18	-0.33	-0.02	B<	19.65	-0.75	-0.03	B<
49	166.01	0.50	0.04	B>	5.72	-0.21	-0.02	A	68.19	0.37	0.03	B>	18.57	0.38	0.03	B>	6.82	0.36	0.03	B>
50	117.50	0.48	0.03	B>	0.13	0.04	0.00	A	2.32	-0.08	0.00	A	99.22	-0.90	-0.07	B<	0.47	0.12	0.01	A
51	190.70	-0.51	-0.05	B<	0.90	-0.08	-0.01	A	2.32	-0.06	0.00	A	22.77	-0.43	-0.04	B<	3.33	0.22	0.02	A
52	7.88	0.11	0.01	B>	10.07	0.28	0.02	B>	86.54	0.42	0.04	B>	35.29	-0.52	-0.05	B<	0.36	-0.08	-0.01	A
53	81.41	0.44	0.02	B>	20.79	-0.48	-0.03	B<	8.72	-0.16	-0.01	B<	171.81	-1.28	-0.09	B<	0.02	-0.04	0.00	A
54	5.56	0.08	0.01	A	2.93	-0.14	-0.01	A	61.02	0.32	0.03	B>	35.35	0.50	0.05	B>	11.06	0.39	0.04	B>

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.13
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 7

Item	Reference: Male N = 39233 Focal: Female N = 38246				Reference: White N = 36160 Focal: African Am. N = 4155				Reference: White N = 36160 Focal: Hispanic N = 30805				Reference: White N = 36160 Focal: Native Am. N = 4604				Reference: White N = 36160 Focal: Asian N = 1915			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	23.00	0.31	0.01	B>	0.04	0.03	0.00	A	1.36	-0.09	0.00	A	0.48	-0.09	0.00	A	0.01	-0.04	0.00	A
2	221.11	0.55	0.05	B>	1.19	-0.09	-0.01	A	88.13	-0.39	-0.04	B<	11.91	-0.28	-0.03	B<	0.71	-0.11	-0.01	A
3	550.90	-1.24	-0.05	B<	32.88	-0.67	-0.03	B<	485.82	-1.35	-0.08	B<	199.40	-1.44	-0.09	B<	25.01	-1.03	-0.03	B<
4	351.53	-0.82	-0.05	B<	27.72	-0.50	-0.04	B<	489.06	-1.08	-0.09	B<	245.42	-1.39	-0.11	B<	20.12	-0.70	-0.04	B<
5	2.53	-0.07	0.00	A	1.01	0.10	0.01	A	25.79	0.26	0.02	B>	1.91	0.13	0.01	A	32.98	1.04	0.05	B>
6	86.28	-0.46	-0.02	B<	83.87	-0.97	-0.05	B<	81.99	-0.53	-0.03	B<	60.14	-0.79	-0.05	B<	3.11	-0.33	-0.01	A
7	58.92	-0.32	-0.02	B<	2.83	0.16	0.01	A	30.95	-0.26	-0.02	B<	1.08	-0.09	-0.01	A	0.06	-0.04	0.00	A
8	8.50	-0.16	-0.01	B<	11.92	0.45	0.02	B>	8.89	-0.19	-0.01	B<	28.69	-0.57	-0.03	B<	0.03	-0.05	0.00	A
9	29.47	0.21	0.02	B>	0.83	0.08	0.01	A	0.87	-0.04	-0.01	A	28.95	-0.45	-0.04	B<	2.78	0.23	0.02	A
10	4.96	0.13	0.00	A	0.00	-0.01	0.00	A	3.90	-0.14	-0.01	A	0.11	0.04	0.00	A	0.82	0.23	0.01	A
11	681.73	0.99	0.08	B>	171.08	1.17	0.10	B>	236.28	0.67	0.07	B>	4.84	0.18	0.02	A	16.42	0.55	0.04	B>
12	80.83	0.36	0.03	B>	1.21	0.10	0.01	A	0.33	0.03	0.00	A	33.13	-0.49	-0.04	B<	6.85	-0.36	-0.02	B<
13	458.05	0.79	0.08	B>	3.26	0.15	0.01	A	0.00	0.00	0.00	A	9.36	-0.26	-0.02	B<	3.02	-0.21	-0.02	A
14	403.74	-0.87	-0.06	B<	7.10	0.26	0.02	B>	288.26	-0.81	-0.06	B<	87.81	-0.82	-0.07	B<	15.58	-0.60	-0.03	B<
15	27.23	-0.26	-0.01	B<	2.77	-0.19	-0.01	A	62.49	-0.46	-0.03	B<	3.59	-0.19	-0.01	A	1.45	-0.24	-0.01	A
16	35.45	0.23	0.02	B>	5.17	-0.20	-0.02	A	5.86	-0.11	-0.01	A	6.83	-0.22	-0.02	B<	6.04	-0.32	-0.02	A
17	22.49	0.21	0.01	B>	3.56	-0.19	-0.01	A	7.06	0.13	0.01	B>	25.31	0.46	0.04	B>	4.08	-0.32	-0.02	A
18	0.70	0.04	0.00	A	7.90	-0.32	-0.02	B<	0.65	-0.05	-0.01	A	61.95	-0.79	-0.05	B<	0.40	-0.14	0.00	A
19	32.78	0.31	0.01	B>	33.22	0.68	0.04	B>	82.59	0.56	0.03	B>	37.44	0.66	0.04	B>	3.54	0.40	0.01	A
20	70.11	-0.39	-0.02	B<	2.09	0.15	0.01	A	42.54	0.35	0.02	B>	3.09	0.17	0.01	A	0.34	-0.10	0.00	A
21	115.32	-0.43	-0.03	B<	13.81	-0.33	-0.03	B<	5.18	-0.10	-0.01	A	1.47	0.11	0.01	A	2.86	-0.24	-0.02	A
22	37.11	-0.34	-0.01	B<	5.16	-0.27	-0.01	A	0.00	0.00	0.00	A	14.68	0.45	0.02	B>	0.38	-0.14	0.00	A
23	0.21	0.02	0.00	A	0.13	-0.03	0.00	A	31.06	-0.25	-0.02	B<	8.35	-0.24	-0.02	B<	1.13	0.15	0.01	A
24	5.29	0.09	0.01	A	0.76	-0.08	-0.01	A	0.31	0.03	0.01	A	2.85	-0.14	-0.01	A	5.70	0.36	0.02	A
25	4.27	-0.08	-0.01	A	1.33	0.10	0.01	A	0.95	0.04	0.01	A	4.28	-0.17	-0.02	A	0.56	0.10	0.01	A
26	9.72	-0.14	-0.01	B<	0.76	-0.08	0.00	A	6.35	0.12	0.02	A	0.63	0.07	0.01	A	7.59	-0.41	-0.02	B<
27	236.74	0.65	0.05	B>	3.68	-0.18	-0.01	A	4.25	-0.10	-0.01	A	0.62	0.07	0.00	A	15.03	-0.56	-0.03	B<
28	92.39	0.35	0.03	B>	36.86	0.51	0.05	B>	112.11	0.44	0.04	B>	61.42	0.63	0.06	B>	6.32	0.32	0.03	A
29	8.25	0.11	0.01	B>	6.36	0.22	0.02	A	80.46	0.39	0.03	B>	37.93	0.51	0.04	B>	3.47	0.25	0.02	A
30	94.76	0.42	0.03	B>	1.13	0.11	0.01	A	0.71	-0.04	-0.01	A	11.76	-0.31	-0.03	B<	15.40	-0.60	-0.03	B<

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.13 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 7

Item	Reference: Male N = 39233 Focal: Female N = 38246				Reference: White N = 36160 Focal: African Am. N = 4155				Reference: White N = 36160 Focal: Hispanic N = 30805				Reference: White N = 36160 Focal: Native Am. N = 4604				Reference: White N = 36160 Focal: Asian N = 1915			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	63.89	0.34	0.02	B>	1.43	-0.12	-0.01	A	5.05	-0.11	-0.01	A	0.08	-0.03	0.00	A	4.73	-0.33	-0.02	A
32	18.25	-0.16	-0.01	B<	0.59	0.07	0.01	A	34.90	0.26	0.01	B>	1.51	0.10	0.01	A	5.07	0.30	0.02	A
33	98.31	0.46	0.02	B>	14.82	-0.39	-0.02	B<	26.57	0.28	0.02	B>	0.01	-0.01	0.00	A	6.42	0.50	0.02	A
34	12.24	-0.13	-0.01	B<	19.81	-0.37	-0.03	B<	19.32	-0.19	-0.01	B<	13.33	-0.30	-0.03	B<	16.64	-0.50	-0.04	B<
35	84.28	0.39	0.02	B>	0.22	0.05	0.00	A	36.03	0.29	0.02	B>	19.11	0.39	0.03	B>	0.94	0.15	0.01	A
36	1055.05	-1.29	-0.11	B<	14.73	-0.35	-0.03	B<	126.64	-0.51	-0.04	B<	24.78	-0.46	-0.03	B<	9.74	-0.40	-0.03	B<
37	93.26	-0.34	-0.04	B<	6.73	0.21	0.02	B>	1.85	-0.06	0.00	A	94.56	0.77	0.08	B>	7.97	-0.32	-0.03	B<
38	10.68	0.14	0.01	B>	0.47	-0.07	0.00	A	67.26	0.41	0.03	B>	314.31	1.76	0.13	C>	0.15	-0.06	0.00	A
39	58.18	-0.28	-0.03	B<	2.24	-0.13	-0.01	A	54.21	-0.31	-0.02	B<	1.25	-0.09	-0.01	A	2.63	-0.20	-0.02	A
40	60.80	0.35	0.02	B>	1.42	0.12	0.01	A	19.86	0.23	0.02	B>	100.36	0.96	0.07	B>	6.89	0.45	0.02	B>
41	75.95	0.34	0.03	B>	0.31	-0.05	0.00	A	1.07	0.05	0.01	A	0.27	0.05	0.01	A	0.94	0.14	0.01	A
42	87.80	-0.33	-0.03	B<	0.78	0.07	0.01	A	0.85	0.04	0.00	A	5.08	-0.18	-0.02	A	0.31	0.07	0.01	A
43	55.64	0.30	0.02	B>	0.85	0.08	0.01	A	48.37	0.32	0.03	B>	0.16	-0.04	0.00	A	2.13	-0.20	-0.01	A
44	1.14	-0.04	0.00	A	1.26	0.10	0.01	A	227.95	0.70	0.06	B>	86.69	0.81	0.07	B>	20.98	0.67	0.04	B>
45	81.41	0.33	0.03	B>	12.55	0.30	0.03	B>	49.52	0.30	0.03	B>	16.50	0.33	0.03	B>	1.94	0.17	0.01	A
46	9.17	0.12	0.01	B>	0.34	0.05	0.00	A	34.01	-0.26	-0.02	B<	20.20	-0.38	-0.03	B<	5.60	0.34	0.02	A
47	27.85	-0.20	-0.02	B<	0.89	-0.09	-0.01	A	43.06	0.29	0.02	B>	15.97	-0.36	-0.03	B<	2.56	0.21	0.02	A
48	1.22	0.06	0.00	A	4.56	-0.23	-0.01	A	21.79	-0.27	-0.01	B<	0.92	-0.10	0.00	A	2.72	0.34	0.01	A
49	128.96	-0.44	-0.04	B<	18.61	0.38	0.03	B>	17.87	0.19	0.01	B>	0.80	0.08	0.00	A	18.27	0.58	0.04	B>
50	14.33	0.16	0.01	B>	0.22	-0.04	0.00	A	9.29	0.14	0.02	B>	4.28	0.18	0.02	A	0.08	0.05	0.00	A
51	3.84	0.09	0.00	A	7.35	-0.26	-0.02	B<	3.84	-0.10	0.00	A	3.20	-0.16	-0.01	A	2.01	-0.23	-0.01	A
52	2.27	0.07	0.01	A	1.31	-0.11	-0.01	A	27.39	0.27	0.02	B>	45.17	0.63	0.05	B>	24.62	0.90	0.04	B>
53	27.58	-0.23	-0.02	B<	0.00	-0.01	0.00	A	5.22	0.11	0.01	A	16.57	0.37	0.03	B>	0.07	0.05	0.00	A
54	191.34	-0.53	-0.05	B<	6.35	-0.22	-0.02	A	2.89	-0.07	-0.01	A	20.73	0.38	0.03	B>	2.99	0.22	0.02	A

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.14
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 8

Item	Reference: Male N = 39324 Focal: Female N = 38403				Reference: White N = 37074 Focal: African Am. N = 4137				Reference: White N = 37074 Focal: Hispanic N = 30433				Reference: White N = 37074 Focal: Native Am. N = 4460				Reference: White N = 37074 Focal: Asian N = 1785			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	66.76	0.46	0.02	B>	9.70	-0.38	-0.02	B<	65.55	-0.53	-0.03	B<	0.85	0.12	0.00	A	24.10	-0.98	-0.03	B<
2	24.58	0.18	0.02	B>	35.70	0.51	0.05	B>	125.31	0.48	0.04	B>	71.72	0.71	0.07	B>	40.07	0.87	0.07	B>
3	301.01	-0.72	-0.05	B<	4.91	-0.21	-0.02	A	454.49	-0.98	-0.07	B<	202.93	-1.21	-0.11	B<	9.73	-0.50	-0.03	B<
4	175.74	0.57	0.04	B>	1.73	0.13	0.01	A	35.67	0.30	0.02	B>	20.96	0.43	0.03	B>	0.05	0.04	0.00	A
5	18.59	0.21	0.01	B>	3.13	0.20	0.01	A	3.53	0.11	0.00	A	29.91	-0.54	-0.04	B<	1.71	0.26	0.01	A
6	348.34	-0.79	-0.05	B<	28.20	0.52	0.04	B>	6.75	0.12	0.01	B>	3.89	0.18	0.02	A	4.78	0.37	0.02	A
7	6.85	0.12	0.01	B>	0.35	-0.06	0.00	A	54.15	0.39	0.03	B>	24.76	0.49	0.04	B>	11.69	0.65	0.03	B>
8	7.32	-0.10	-0.01	B<	0.25	-0.04	0.00	A	0.87	0.04	0.01	A	10.29	0.26	0.03	B>	2.00	0.18	0.02	A
9	305.56	-0.69	-0.06	B<	29.78	-0.48	-0.04	B<	207.16	-0.64	-0.05	B<	55.84	-0.63	-0.06	B<	22.53	-0.65	-0.05	B<
10	110.63	-0.46	-0.03	B<	32.48	-0.53	-0.04	B<	11.25	-0.17	-0.01	B<	2.62	-0.15	-0.01	A	0.52	-0.12	-0.01	A
11	98.08	-0.40	-0.03	B<	0.00	0.00	0.00	A	13.29	-0.16	-0.01	B<	60.81	0.68	0.06	B>	8.60	0.44	0.03	B>
12	3.87	-0.08	0.00	A	5.10	-0.20	-0.02	A	7.38	-0.12	-0.02	B<	16.57	-0.35	-0.03	B<	41.95	-0.85	-0.06	B<
13	25.96	-0.19	-0.02	B<	13.18	0.31	0.03	B>	3.92	0.09	0.01	A	26.10	0.43	0.04	B>	32.83	0.80	0.06	B>
14	0.01	-0.01	0.00	A	1.54	-0.14	-0.01	A	37.92	-0.35	-0.02	B<	109.07	-0.98	-0.07	B<	0.78	0.19	0.01	A
15	27.62	0.20	0.02	B>	4.61	0.19	0.02	A	10.11	0.14	0.01	B>	4.56	0.18	0.02	A	0.09	0.05	0.00	A
16	52.99	0.30	0.02	B>	14.68	0.36	0.03	B>	60.09	0.37	0.03	B>	15.33	0.35	0.03	B>	1.14	0.16	0.01	A
17	244.73	0.68	0.05	B>	41.42	-0.61	-0.04	B<	182.65	-0.65	-0.04	B<	81.24	-0.80	-0.06	B<	3.80	-0.32	-0.02	A
18	177.90	0.65	0.03	B>	1.79	-0.14	-0.01	A	15.01	0.22	0.02	B>	42.51	0.70	0.04	B>	6.01	-0.41	-0.02	A
19	402.57	-0.79	-0.06	B<	63.42	-0.70	-0.06	B<	428.74	-0.91	-0.07	B<	262.72	-1.40	-0.12	B<	46.50	-0.94	-0.07	B<
20	29.79	0.20	0.02	B>	14.17	-0.32	-0.03	B<	12.98	-0.15	-0.02	B<	0.93	-0.08	-0.01	A	3.41	0.24	0.02	A
21	17.73	0.15	0.01	B>	2.26	0.13	0.01	A	24.04	0.20	0.03	B>	1.30	0.09	0.01	A	1.24	0.14	0.01	A
22	4.43	-0.09	-0.01	A	78.28	-0.80	-0.06	B<	339.26	-0.85	-0.07	B<	263.79	-1.34	-0.12	B<	140.05	-1.63	-0.11	C<
23	38.75	0.42	0.01	B>	1.56	-0.18	-0.01	A	0.98	-0.08	0.00	A	94.54	-1.15	-0.05	B<	0.04	-0.08	0.00	A
24	34.36	-0.22	-0.02	B<	53.23	0.63	0.05	B>	176.03	0.58	0.05	B>	3.93	0.18	0.01	A	10.62	-0.41	-0.04	B<
25	26.26	-0.19	-0.02	B<	10.23	-0.27	-0.02	B<	52.68	-0.31	-0.03	B<	21.69	-0.40	-0.04	B<	0.57	0.10	0.01	A
26	457.24	-1.15	-0.05	B<	16.57	-0.48	-0.02	B<	85.34	-0.57	-0.03	B<	69.16	-0.88	-0.05	B<	25.30	-0.99	-0.03	B<
27	980.05	-1.16	-0.11	B<	49.26	-0.59	-0.06	B<	135.66	-0.49	-0.05	B<	10.19	-0.26	-0.03	B<	10.99	-0.43	-0.04	B<
28	33.16	0.23	0.02	B>	10.67	-0.29	-0.02	B<	75.26	-0.40	-0.03	B<	13.83	-0.32	-0.03	B<	0.60	-0.12	-0.01	A
29	68.84	-0.37	-0.02	B<	0.26	-0.05	0.00	A	0.72	0.04	0.00	A	0.71	-0.08	-0.01	A	3.95	0.35	0.02	A
30	289.78	-0.80	-0.04	B<	16.72	-0.43	-0.03	B<	582.67	-1.26	-0.08	B<	0.00	0.01	0.00	A	40.96	-1.10	-0.05	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

Table 9.2.1.14 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT Grade 8

Item	Reference: Male N = 39324 Focal: Female N = 38403				Reference: White N = 37074 Focal: African Am. N = 4137				Reference: White N = 37074 Focal: Hispanic N = 30433				Reference: White N = 37074 Focal: Native Am. N = 4460				Reference: White N = 37074 Focal: Asian N = 1785			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	188.99	0.58	0.04	B>	1.69	-0.12	-0.01	A	61.77	-0.37	-0.03	B<	2.49	0.15	0.01	A	0.77	-0.14	-0.01	A
32	35.59	0.23	0.02	B>	2.17	-0.13	-0.01	A	24.26	0.22	0.02	B>	0.66	0.07	0.01	A	8.81	-0.39	-0.03	B<
33	83.74	0.37	0.03	B>	1.62	-0.12	-0.01	A	26.85	0.24	0.02	B>	132.39	1.04	0.09	B>	0.39	-0.09	-0.01	A
34	117.98	0.39	0.04	B>	7.64	0.23	0.02	B>	18.10	0.18	0.02	B>	14.46	0.31	0.03	B>	0.08	-0.04	0.00	A
35	99.82	0.37	0.04	B>	3.64	-0.16	-0.01	A	10.68	-0.14	-0.01	B<	5.67	-0.20	-0.02	A	0.96	0.12	0.01	A
36	7.57	-0.12	-0.01	B<	1.66	0.13	0.01	A	22.70	-0.23	-0.02	B<	20.72	0.42	0.03	B>	14.11	-0.60	-0.03	B<
37	28.81	0.24	0.01	B>	7.11	0.26	0.02	B>	108.18	0.53	0.04	B>	0.90	-0.09	-0.01	A	0.11	-0.06	0.00	A
38	78.35	0.32	0.03	B>	66.44	0.67	0.06	B>	32.79	0.24	0.01	B>	7.74	0.23	0.02	B>	9.29	0.38	0.04	B>
39	23.27	0.18	0.02	B>	2.08	-0.13	-0.01	A	0.00	0.00	0.00	A	20.67	0.38	0.03	B>	6.30	-0.31	-0.03	A
40	95.82	0.52	0.02	B>	1.39	0.14	0.01	A	43.54	0.40	0.02	B>	59.00	0.86	0.05	B>	0.04	-0.05	0.00	A
41	346.86	-0.72	-0.06	B<	27.77	-0.46	-0.04	B<	0.80	0.04	0.00	A	21.44	-0.39	-0.03	B<	7.09	0.38	0.03	B>
42	0.05	-0.01	0.00	A	0.89	0.11	0.01	A	9.56	0.18	0.02	B>	6.31	-0.26	-0.02	A	0.01	-0.03	0.00	A
43	214.48	-0.55	-0.05	B<	1.02	0.09	0.01	A	1.26	0.05	0.00	A	13.19	-0.32	-0.03	B<	3.82	-0.25	-0.02	A
44	1.09	-0.04	0.00	A	2.62	0.14	0.01	A	8.53	0.13	0.02	B>	2.64	0.14	0.01	A	16.09	0.58	0.04	B>
45	8.34	-0.10	-0.01	B<	41.32	0.53	0.05	B>	135.77	0.48	0.04	B>	0.81	0.07	0.01	A	22.13	0.59	0.05	B>
46	0.74	0.04	0.00	A	12.66	0.33	0.03	B>	52.47	0.34	0.03	B>	77.28	0.78	0.07	B>	15.43	0.63	0.04	B>
47	4.63	0.09	0.01	A	0.33	-0.06	0.00	A	9.35	0.15	0.01	B>	5.28	0.21	0.02	A	0.21	0.08	0.00	A
48	0.25	-0.02	0.00	A	7.57	-0.25	-0.02	B<	29.18	-0.24	-0.02	B<	0.74	-0.08	-0.01	A	6.41	0.35	0.03	A
49	107.15	0.47	0.03	B>	15.10	0.39	0.03	B>	73.12	0.44	0.03	B>	12.26	-0.32	-0.02	B<	1.93	0.25	0.01	A
50	106.89	0.42	0.03	B>	7.49	0.25	0.02	B>	64.34	0.37	0.03	B>	33.53	0.51	0.04	B>	11.32	0.52	0.03	B>
51	156.51	0.54	0.04	B>	0.12	-0.03	0.00	A	91.99	0.47	0.04	B>	11.41	0.31	0.02	B>	7.73	0.47	0.02	B>
52	475.25	0.91	0.06	B>	17.77	0.39	0.03	B>	377.02	0.93	0.07	B>	151.09	1.10	0.09	B>	25.29	0.83	0.05	B>
53	5.73	0.10	0.01	A	61.39	0.75	0.06	B>	9.70	0.15	0.01	B>	18.21	-0.37	-0.03	B<	0.44	0.11	0.01	A
54	79.25	0.37	0.03	B>	16.20	0.37	0.03	B>	149.17	0.57	0.05	B>	62.10	0.69	0.06	B>	3.04	0.27	0.02	A

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

Table 9.2.1.15
2006 Spring AIMS Differential Item Functioning Reading CRT High School

Item	Reference: Male N = 36011 Focal: Female N = 35618				Reference: White N = 36578 Focal: African Am. N = 3871				Reference: White N = 36578 Focal: Hispanic N = 25494				Reference: White N = 36578 Focal: Native Am. N = 3993				Reference: White N = 36578 Focal: Asian N = 1795			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
1	5.45	-0.10	-0.01	A	29.84	-0.52	-0.04	B<	149.22	-0.61	-0.05	B<	18.75	-0.41	-0.04	B<	3.79	-0.30	-0.02	A
2	29.42	0.22	0.02	B>	10.23	-0.29	-0.03	B<	6.06	0.12	0.00	A	17.59	-0.37	-0.04	B<	6.32	-0.35	-0.02	A
3	20.33	-0.23	-0.01	B<	1.05	-0.11	-0.01	A	17.28	-0.24	-0.02	B<	0.03	-0.02	0.00	A	0.05	0.05	0.00	A
4	10.46	0.14	0.01	B>	2.97	-0.17	-0.01	A	58.21	-0.39	-0.04	B<	16.80	-0.39	-0.04	B<	8.27	-0.44	-0.03	B<
5	84.14	0.36	0.03	B>	42.95	0.59	0.05	B>	75.35	0.40	0.03	B>	34.46	0.52	0.05	B>	37.70	0.89	0.06	B>
6	199.33	-0.83	-0.03	B<	18.48	-0.54	-0.03	B<	85.96	-0.64	-0.04	B<	29.28	-0.65	-0.04	B<	13.95	-0.79	-0.02	B<
7	21.52	-0.22	-0.01	B<	14.80	-0.39	-0.03	B<	46.36	-0.37	-0.04	B<	51.25	-0.70	-0.06	B<	2.44	-0.26	-0.01	A
8	241.97	-0.62	-0.05	B<	53.80	-0.68	-0.06	B<	7.29	-0.13	-0.02	B<	119.62	-1.08	-0.08	B<	6.61	-0.34	-0.03	A
9	66.50	-0.39	-0.02	B<	0.26	-0.05	0.00	A	25.76	0.28	0.02	B>	4.73	0.21	0.02	A	10.14	0.57	0.03	B>
10	52.40	0.28	0.03	B>	1.85	0.12	0.01	A	5.26	-0.10	-0.01	A	43.81	-0.57	-0.06	B<	0.01	0.02	0.00	A
11	23.82	-0.19	-0.02	B<	21.85	-0.40	-0.04	B<	3.52	0.08	0.02	A	11.17	-0.29	-0.03	B<	2.65	-0.21	-0.02	A
12	16.69	-0.21	-0.01	B<	4.17	0.23	0.01	A	0.08	-0.02	0.00	A	9.55	0.33	0.02	B>	3.35	0.35	0.01	A
13	68.65	-0.34	-0.03	B<	8.45	0.27	0.02	B>	35.75	0.29	0.02	B>	53.11	0.69	0.06	B>	3.07	0.25	0.02	A
14	0.52	0.04	0.00	A	29.98	-0.57	-0.04	B<	154.07	-0.70	-0.04	B<	60.72	-0.78	-0.06	B<	0.01	0.03	0.00	A
15	288.39	-0.91	-0.04	B<	156.11	-1.34	-0.08	B<	86.33	-0.58	-0.04	B<	2.71	0.19	0.01	A	26.57	-0.96	-0.04	B<
16	63.85	-0.31	-0.03	B<	1.29	-0.10	-0.01	A	9.91	-0.14	-0.01	B<	1.53	-0.12	-0.01	A	0.77	0.11	0.01	A
17	7.62	-0.16	-0.01	B<	41.73	-0.75	-0.04	B<	34.28	-0.39	-0.02	B<	17.36	-0.47	-0.03	B<	4.64	-0.46	-0.01	A
18	59.19	-0.34	-0.02	B<	50.68	-0.66	-0.05	B<	275.14	-0.82	-0.06	B<	61.03	-0.73	-0.06	B<	6.87	-0.41	-0.02	B<
19	0.33	-0.02	0.00	A	0.28	-0.05	0.00	A	71.44	-0.37	-0.03	B<	89.14	-0.81	-0.08	B<	22.35	-0.59	-0.05	B<
20	33.81	0.22	0.02	B>	6.26	0.22	0.02	A	7.64	0.13	0.01	B>	0.22	-0.04	-0.01	A	1.33	0.15	0.01	A
21	112.10	0.51	0.03	B>	3.88	0.21	0.01	A	4.01	0.11	0.00	A	2.89	0.17	0.01	A	0.57	0.14	0.01	A
22	19.58	-0.17	-0.02	B<	1.66	0.11	0.01	A	4.25	-0.09	-0.01	A	15.23	-0.34	-0.03	B<	0.40	-0.09	-0.01	A
23	17.55	-0.19	-0.02	B<	6.75	-0.25	-0.02	B<	22.06	0.25	0.02	B>	25.11	0.51	0.04	B>	0.19	0.07	0.00	A
24	19.24	0.17	0.01	B>	0.20	0.04	0.00	A	91.69	-0.44	-0.05	B<	1.20	-0.10	-0.01	A	11.00	-0.42	-0.04	B<
25	60.60	0.33	0.02	B>	21.55	0.45	0.03	B>	157.63	0.63	0.05	B>	52.69	0.68	0.06	B>	8.77	0.45	0.03	B>
26	82.12	0.35	0.03	B>	0.10	-0.03	0.00	A	24.73	0.23	0.02	B>	11.21	0.31	0.02	B>	1.55	0.16	0.01	A
27	27.70	0.26	0.01	B>	5.37	0.25	0.02	A	0.57	-0.04	-0.01	A	45.75	0.69	0.05	B>	21.11	-0.77	-0.04	B<
28	23.30	0.22	0.01	B>	24.06	0.53	0.03	B>	15.44	0.21	0.01	B>	0.25	0.05	0.00	A	5.03	-0.35	-0.02	A
29	139.73	0.48	0.04	B>	86.93	0.89	0.07	B>	115.42	0.52	0.03	B>	7.59	-0.25	-0.02	B<	7.79	-0.37	-0.03	B<
30	1.47	-0.05	0.00	A	1.41	0.12	0.01	A	0.02	-0.01	-0.01	A	39.86	-0.60	-0.05	B<	50.74	-0.97	-0.07	B<

Note. African Am. = African American, Native Am.= Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

(table continues)

Table 9.2.1.15 (continued)
2006 Spring AIMS Differential Item Functioning Reading CRT High School

Item	Reference: Male N = 36011 Focal: Female N = 35618				Reference: White N = 36578 Focal: African Am. N = 3871				Reference: White N = 36578 Focal: Hispanic N = 25494				Reference: White N = 36578 Focal: Native Am. N = 3993				Reference: White N = 36578 Focal: Asian N = 1795			
	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag	MH χ^2	Δ MH	SMD	Flag
31	3342.38	-2.60	-0.18	C<	7.97	-0.27	-0.02	B<	220.92	-0.72	-0.05	B<	189.31	-1.25	-0.11	B<	13.96	-0.57	-0.03	B<
32	60.94	-0.33	-0.02	B<	0.27	0.05	0.01	A	31.83	-0.27	-0.01	B<	12.88	0.33	0.03	B>	2.37	0.24	0.01	A
33	5.58	-0.10	-0.01	A	38.60	-0.59	-0.05	B<	0.56	-0.04	0.00	A	107.06	0.98	0.09	B>	0.03	0.03	0.00	A
34	3.03	0.08	0.01	A	16.95	0.43	0.03	B>	17.56	0.23	0.02	B>	22.72	0.48	0.04	B>	3.27	0.32	0.02	A
35	319.54	-0.76	-0.06	B<	14.31	-0.35	-0.03	B<	106.97	-0.50	-0.03	B<	13.29	-0.34	-0.03	B<	0.02	0.03	0.00	A
36	173.40	0.65	0.03	B>	4.40	0.23	0.01	A	51.66	0.41	0.03	B>	2.87	0.17	0.01	A	4.11	0.36	0.02	A
37	15.09	0.15	0.01	B>	56.68	0.67	0.06	B>	91.02	0.44	0.04	B>	36.64	0.55	0.05	B>	74.29	1.13	0.09	B>
38	184.82	0.93	0.02	B>	26.39	0.75	0.03	B>	239.83	1.21	0.06	B>	152.88	1.71	0.08	C>	41.94	1.99	0.04	C>
39	209.59	0.91	0.03	B>	7.00	0.35	0.02	B>	85.78	0.68	0.03	B>	41.12	0.80	0.04	B>	0.15	-0.10	0.00	A
40	0.01	0.00	0.00	A	2.00	-0.15	-0.01	A	7.24	-0.15	-0.01	B<	45.69	-0.65	-0.05	B<	6.72	-0.44	-0.02	B<
41	54.79	0.31	0.02	B>	11.21	0.31	0.03	B>	7.87	0.14	0.01	B>	6.30	-0.23	-0.02	A	23.85	-0.67	-0.05	B<
42	2.49	0.06	0.01	A	0.17	-0.04	0.00	A	1.47	-0.06	-0.01	A	7.19	-0.25	-0.03	B<	3.56	0.26	0.02	A
43	0.64	-0.04	0.00	A	16.24	-0.41	-0.03	B<	21.13	-0.25	-0.02	B<	0.64	0.08	0.01	A	15.69	-0.67	-0.03	B<
44	8.79	0.12	0.01	B>	5.44	-0.21	-0.02	A	6.44	-0.12	-0.01	A	38.55	-0.59	-0.04	B<	4.55	-0.28	-0.02	A
45	5.29	-0.10	-0.01	A	1.25	-0.11	-0.01	A	27.92	-0.27	-0.02	B<	7.50	-0.30	-0.02	B<	17.08	0.53	0.04	B>
46	5.91	-0.10	-0.01	A	0.00	0.00	0.00	A	13.90	-0.17	-0.01	B<	109.11	0.94	0.09	B>	1.83	0.19	0.01	A
47	723.77	1.36	0.07	B>	6.34	0.28	0.02	A	126.46	0.65	0.04	B>	77.54	0.91	0.07	B>	33.09	1.08	0.04	B>
48	362.73	0.71	0.07	B>	21.26	0.40	0.04	B>	26.46	0.23	0.03	B>	22.08	0.41	0.04	B>	23.52	0.59	0.05	B>
49	0.49	0.03	0.00	A	11.83	0.31	0.03	B>	34.33	0.27	0.03	B>	0.93	0.09	0.01	A	3.03	-0.24	-0.02	A
50	53.76	0.30	0.02	B>	36.66	0.58	0.05	B>	112.81	0.51	0.05	B>	114.65	0.99	0.09	B>	9.28	0.44	0.03	B>
51	176.82	0.50	0.05	B>	1.12	0.09	0.01	A	20.68	0.20	0.02	B>	4.38	0.18	0.02	A	1.20	0.14	0.01	A
52	10.40	0.14	0.01	B>	2.42	-0.15	-0.01	A	51.54	0.36	0.03	B>	9.54	0.29	0.03	B>	0.05	-0.04	0.00	A
53	148.55	-0.50	-0.04	B<	4.03	0.19	0.01	A	5.65	0.11	0.01	A	3.54	-0.18	-0.01	A	18.01	0.58	0.04	B>
54	5.45	0.12	0.01	A	0.34	0.07	0.00	A	28.89	0.33	0.02	B>	12.76	0.38	0.03	B>	0.81	0.18	0.01	A

Note. African Am. = African American, Native Am. = Native American, MH χ^2 = Mantel-Haenszel Chi-Square, Δ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A = No DIF, B = Weak DIF, C = Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

9.2.2 Correlations among AIMS Assessments

Correlations were examined between scale scores on 2006 Spring AIMS tests by grade level. Note that data used for the calculation of correlation included records with valid scale scores in all content areas and tests in each grade level. Sample sizes are therefore slightly lower than presented in other parts of this technical report.

In addition, because students in high school had different testing windows for the reading, writing and mathematics tests, data merging was necessary to match reading and writing records with mathematics records. Once valid records were selected for each of the high school content areas, and records with duplicate student identification numbers were removed, data was merged based on student identification number. Table 9.2.3.1 presents the resulting reduction in N size for each step of the merge. Scale score means and distributions prior to and after the merge were compared to ensure that the match did not substantially alter the data. Only slight increases in mean and decreases in standard deviation occurred after the merge, and density plots illustrated that the shape of the distribution prior to and after merging matched reasonably well. Therefore, correlations presented for the high school tests are based on the matched data, with a total N size of 64,670.

All correlations are presented in Tables 9.2.3.2 through 9.2.3.8. The patterns of correlation presented in the tables are consistent with expectations given the constructs measured. Correlations were consistently high between tests designed to measure the same or very similar constructs (i.e., CRT Math and NRT Math or CRT Reading and NRT Reading). Correlations were much lower between tests designed to measure dissimilar constructs such as Math and Writing.

Table 9.2.3.1
Matching Process for High School Test Correlations Calculations

Content	N Total Valid	N Valid in Both Reading and Writing	N with Missing or Duplicate SAIS	N Valid Prior to Merge	N Valid All Content with Matched SAIS
Reading	72,191	70,546	352	70,194	
Writing	71,958				64,670
Math	70,193	NA	376	69,817	

Table 9.2.3.2
2006 Spring AIMS Correlations Among Tests
Grade 3

Test	N	1	2	3	4	5	6
1. RD CRT	77834	--	0.60	0.81	0.85	0.79	0.74
2. WR CRT	77834		--	0.54	0.55	0.57	0.52
3. MA CRT	77834			--	0.71	0.72	0.84
4. RD NRT	77834				--	0.74	0.66
5. LA NRT	77834					--	0.66
6. MA NRT	77834						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

Table 9.2.3.3
2006 Spring AIMS Correlations Among Tests
Grade 4

Test	N	1	2	3	4	5	6
1. RD CRT	78287	--	0.60	0.78	0.80	0.75	0.69
2. WR CRT	78287		--	0.57	0.56	0.57	0.51
3. MA CRT	78287			--	0.66	0.70	0.82
4. RD NRT	78287				--	0.67	0.60
5. LA NRT	78287					--	0.63
6. MA NRT	78287						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

Table 9.2.3.4
2006 Spring AIMS Correlations Among Tests
Grade 5

Test	N	1	2	3	4	5	6
1. RD CRT	77468	--	0.60	0.78	0.84	0.74	0.71
2. WR CRT	77468		--	0.55	0.54	0.54	0.51
3. MA CRT	77468			--	0.67	0.68	0.83
4. RD NRT	77468				--	0.68	0.63
5. LA NRT	77468					--	0.63
6. MA NRT	77468						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

Table 9.2.3.5
2006 Spring AIMS Correlations Among Tests
Grade 6

Test	N	1	2	3	4	5	6
1. RD CRT	77605	--	0.59	0.79	0.85	0.72	0.72
2. WR CRT	77605		--	0.54	0.55	0.52	0.52
3. MA CRT	77605			--	0.71	0.68	0.84
4. RD NRT	77605				--	0.66	0.67
5. LA NRT	77605					--	0.63
6. MA NRT	77605						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

Table 9.2.3.6
2006 Spring AIMS Correlations Among Tests
Grade 7

Test	N	1	2	3	4	5	6
1. RD CRT	76604	--	0.56	0.78	0.85	0.73	0.70
2. WR CRT	76604		--	0.52	0.53	0.52	0.50
3. MA CRT	76604			--	0.69	0.69	0.85
4. RD NRT	76604				--	0.67	0.64
5. LA NRT	76604					--	0.63
6. MA NRT	76604						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

Table 9.2.3.7
2006 Spring AIMS Correlations Among Tests
Grade 8

Test	N	1	2	3	4	5	6
1. RD CRT	76591	--	0.63	0.77	0.86	0.75	0.71
2. WR CRT	76591		--	0.57	0.60	0.59	0.56
3. MA CRT	76591			--	0.69	0.69	0.86
4. RD NRT	76591				--	0.70	0.65
5. LA NRT	76591					--	0.65
6. MA NRT	76591						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

Table 9.2.3.8
2006 Spring AIMS Correlations Among Tests
High School

Test	N	1	2	3
1. RD CRT	64670	--	0.64	0.77
2. WR CRT	64670		--	0.57
3. MA CRT	64670			--

Note. N size will be less than presented in other parts of this Technical Report due to 1) missing or invalid test records in some but not all content areas and 2) matching reading, writing and math records according to student identification number.

Part 10: Classification

Part 10 of this technical report provides information regarding classifying students into proficiency categories. The following AERA/APA/NCME standards are covered in this part: 1.5, 1.7, 2.14, 2.15, 4.9, 4.19, 4.20, 4.21, and 6.5.

Scores from the 2006 Spring AIMS assessments are used to classify students into one of four performance categories: Falls Far Below the Standard, Approaches the Standard, Meets the Standard, and Exceeds the Standard. This part of the technical report provides information regarding classifying students into these four performance categories. Arizona educators made recommendations for cut scores for each category in standard setting workshops facilitated by CTB. Analyses were conducted to examine the consistency and accuracy with which students were assigned to performance categories.

10.1 Standard Setting Technical Documentation

Standard setting for the AIMS CRT mathematics and reading tests was conducted in early May, 2005 using the Bookmark Standard Setting Procedure. All technical documentation regarding the standard setting is available in the Bookmark Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in June 2005.

Standard setting for the AIMS CRT writing tests was also conducted in May, 2005. The Body of Work Standard Setting Procedure was used for this standard setting. Technical documentation is available in the Body of Work Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in June 2005.

Final scale score ranges for each of the four performance level categories for the AIMS CRT tests are presented below in Table 10.1.1.

Table 10.1.1
2006 Spring AIMS
Final Scale Score Ranges by Performance Level

Test		FFBS	AS	MS	ES
Mathematics	3	200-385	386-419	420-491	492-650
	4	230-413	414-447	448-520	521-675
	5	255-441	442-475	476-549	550-700
	6	270-462	463-495	496-573	574-725
	7	290-483	484-516	517-598	599-740
	8	300-504	505-536	537-622	623-800
	HS	500-667	668-682	683-749	750-900
	Reading	3	200-378	379-430	431-515
4		220-401	402-449	450-535	536-660
5		240-423	424-467	468-555	556-675
6		250-432	433-477	478-570	571-690
7		260-442	443-488	489-586	587-720
8		270-451	452-498	499-601	602-800
HS		500-626	627-673	674-772	773-900
Writing		3	200-336	337-423	424-528
	4	230-365	366-460	461-571	572-700
	5	255-393	394-496	497-614	615-740
	6	275-399	400-503	504-629	630-760
	7	290-406	407-509	510-644	645-770
	8	300-412	413-516	517-659	660-800
	HS	500-609	610-677	678-753	754-900

Note. FFBS = Falls Far Below the Standard; AS = Approaches the Standard; MS = Meets the Standard; ES = Exceeds the Standard.

10.2 Classification Consistency and Accuracy

This section describes the analyses conducted to estimate classification consistency and accuracy for the 2006 AIMS DPA and high school test administrations. Classification consistency can be defined as the agreement between examinees' performance category classification from two independent administrations of the same test (or two parallel forms of the test). Classification accuracy can be defined as the agreement between the actual classifications using observed cut scores and true classifications based on known true cut scores (Livingston & Lewis, 1995).

In conjunction with internal consistency, classification consistency is an important type of reliability and is particularly relevant to high stakes pass/fail tests such as the AIMS high school tests. As a form of reliability, classification consistency represents how reliably students can be classified into performance categories. Please see Part 9 of this report for more information on the internal consistency of the AIMS assessments.

For tests such as the AIMS high school assessments, classification consistency is most important for students whose ability is near the pass/fail cut score. Students whose ability is far above or far below the value established for passing are unlikely to be misclassified because repeated administration of the test will nearly always result in the same classification. Examinees whose true

scores are close to the cut score are a more serious concern. These students' true scores will likely lie within the standard error of measurement of the cut score. For this reason, the measurement error at the cut scores should be considered when evaluating the classification consistency of a test. For convenience, the cut scores and their associated standard errors are presented in Table 10.2.3.1. Furthermore, the number of students near the cut scores should also be considered when evaluating classification consistency; these numbers show the number of students who are most likely to be misclassified. The number of students near the cut scores for each grade and content area can be found in the state scale score frequency distributions presented in Part 8 of this report.

Classification consistency and accuracy were estimated using the IRT procedure suggested by Lee, Hanson, and Brennan (2002) and Wang, Kolen and Harris (2000) for the AIMS assessments in Reading and Mathematics. For the AIMS Writing assessment, procedures described by Livingston and Lewis (1995) were used to estimate classification consistency and accuracy. The following description of classification consistency and accuracy is based on the paper by Lee et al. (2002).

10.2.1 Classification Consistency

Assume that θ is a single latent trait measured by a test and denote Φ as a latent random variable. When a test X consists of K items and its maximum number-correct score is N , the marginal probability of the number-correct (NC) score x is

$$P(X = x) = \int P(X = x | \Phi = \theta)g(\theta)d\theta, \quad x = 0,1,\dots,N.$$

where $g(\theta)$ is the density of θ .

In this report, the marginal distribution $P(X = x)$ is denoted as $f(x)$, and the conditional error distribution $P(X = x | \Phi = \theta)$ is denoted as $f(x | \theta)$. It is assumed that examinees are classified into one of H mutually exclusive categories on the basis of predetermined $H-1$ observed score cutoffs, C_1, C_2, \dots, C_{H-1} . Let L_h represent the h^{th} category into which examinees with $C_{h-1} \leq X \leq C_h$ are classified. $C_0 = 0$ and $C_H =$ the maximum number-correct score. Then, the conditional and marginal probabilities of each category classification are as follows:

$$P(X \in L_h | \theta) = \sum_{x=C_{h-1}}^{C_h} f(x | \theta), \quad h = 1, 2, \dots, H.$$

$$P(X \in L_h) = \int \sum_{x=C_{h-1}}^{C_h} f(x | \theta)g(\theta)d\theta, \quad h = 1, 2, \dots, H.$$

Because obtaining test scores from two independent administrations of AIMS was not feasible due to security, logistic, and cost constraints, a psychometric model was used to obtain the estimated classification consistency indices using test scores from a single administration. Based on the psychometric model, a symmetric $H \times H$ contingency table can be constructed. The elements of $H \times H$ contingency table consist of the joint probabilities of the row and column observed category classifications.

That two administrations are independent implies that if X_1 and X_2 represent the raw score random variables on the two administrations, then, conditioned on θ , X_1 and X_2 are independent and identically distributed. Consequently, the conditional bivariate distribution of X_1 and X_2 is

$$f(x_1, x_2 | \theta) = f(x_1 | \theta)f(x_2 | \theta).$$

The marginal bivariate distribution of X_1 and X_2 can be expressed as follows:

$$f(x_1, x_2) = \int f(x_1, x_2 | \theta)f(\theta)d\theta.$$

Consistent classification means that both X_1 and X_2 fall in the same category. The conditional probability of falling in the same category on the two administrations is

$$P(X_1 \in L_h, X_2 \in L_h | \theta) = \left[\sum_{x_1=C_{h-1}}^{C_h} f(x_1 | \theta) \right]^2, \quad h = 1, 2, \dots, H.$$

The agreement index P , conditional on theta, is obtained by

$$P(\theta) = \sum_{h=1}^H P(X_1 \in L_h, X_2 \in L_h | \theta).$$

The agreement index (classification consistency) can be computed as

$$P = \int P(\theta)g(\theta)d(\theta).$$

The probability of consistent classification by chance, P_C , is the sum of squared marginal probabilities of each category classification.

$$P_C = \sum_{h=1}^H P(X_1 \in L_h)P(X_2 \in L_h) = \sum_{h=1}^H [P(X_1 \in L_h)]^2.$$

Then, the coefficient kappa (Cohen, 1960) is

$$k = \frac{P - P_C}{1 - P_C}$$

10.2.2 Classification Accuracy

Let Γ_w denote true category. When an examinee has an observed score, $x \in L_h$ ($h = 1, 2, \dots, H$), and a latent score, $\theta \in \Gamma_w$ ($w = 1, 2, \dots, H$), an accurate classification is made when $h = w$. The conditional probability of accurate classification is

$$\gamma(\theta) = P(X \in L_w | \theta),$$

where w is the category such that $\theta \in \Gamma_w$.

10.2.3 Classification Consistency and Accuracy Results

As mentioned above, for convenience, the cut scores and their associated standard errors are presented in table 10.2.3.1. Table 10.2.3.2 presents results from the classification consistency and classification accuracy analyses. These results are for classifying students into four performance levels. Included in the table for each grade and content area are case counts (N), classification consistency (Agreement), classification inconsistency (Inconsistency), probability of consistent classification by chance (Chance), Cohen's Kappa (Kappa), and classification accuracy (Accuracy). Inconsistency is defined as 1-agreement.

The 2006 AIMS classification consistency and accuracy results are consistent with classification analyses from the previous AIMS administration. It is important to note that the classification results are dependent on the number of cut scores maintained in a testing program. Moreover, the acceptability of the classification results should be evaluated with respect to the associated stakes of the testing program. The results for the AIMS assessments are quite consistent with other testing programs with similar structure and purpose.

Table 10.2.3.1
2006 Spring AIMS
Standard Error of Measurement at Cut Scores

Test	AS		MS		ES	
	Cut Score	SEM	Cut Score	SEM	Cut Score	SEM
Mathematics						
3	386	11	420	11	492	15
4	414	12	448	12	521	16
5	442	11	476	11	550	16
6	463	12	496	12	574	18
7	484	11	517	11	599	18
8	505	13	537	13	623	20
HS	668	8	683	8	750	12
Reading						
3	379	13	431	13	516	20
4	402	11	450	11	536	22
5	424	12	468	12	556	21
6	433	12	478	12	571	22
7	443	13	489	13	587	22
8	452	15	499	14	602	24
HS	627	13	674	13	773	21
Writing						
3	337	14	424	16	529	13
4	366	15	461	15	572	14
5	394	17	497	16	615	14
6	400	17	504	17	630	15
7	407	17	510	17	645	12
8	413	18	517	19	660	13
HS	610	9	678	9	754	8

Note. FFBS = Falls Far Below the Standard; AS = Approaches the Standard;
MS = Meets the Standard; ES = Exceeds the Standard.

Table 10.2.3.2
2006 Spring AIMS Reading and Mathematics
Classification Consistency and Accuracy

Test	N	Agreement	Inconsistency	Chance	Kappa	Accuracy
Mathematics						
3	79060	0.80	0.20	0.35	0.69	0.86
4	79384	0.79	0.21	0.33	0.69	0.85
5	78460	0.80	0.20	0.32	0.70	0.86
6	78455	0.78	0.22	0.30	0.69	0.85
7	77414	0.80	0.20	0.34	0.69	0.86
8	77311	0.78	0.22	0.31	0.68	0.84
HS	92796	0.80	0.20	0.32	0.70	0.85
Reading						
3	78487	0.80	0.20	0.37	0.67	0.86
4	78924	0.80	0.20	0.38	0.68	0.86
5	78157	0.79	0.21	0.39	0.65	0.85
6	78631	0.81	0.19	0.42	0.68	0.87
7	77917	0.80	0.20	0.40	0.66	0.86
8	78067	0.79	0.21	0.40	0.65	0.85
HS	92047	0.79	0.21	0.40	0.66	0.86
Writing						
3	79024	0.81	0.19	0.42	0.68	0.85
4	79612	0.88	0.12	0.52	0.75	0.91
5	78769	0.84	0.16	0.46	0.70	0.88
6	79415	0.82	0.18	0.64	0.50	0.86
7	78537	0.95	0.05	0.79	0.79	0.97
8	78641	0.93	0.07	0.65	0.79	0.95
HS-A	85054	0.84	0.16	0.43	0.71	0.87
HS-T	3738	0.85	0.15	0.37	0.76	0.88

Note. High school results include students in all cohorts. Results for reading and mathematics were computed with the IRT method suggested by Lee, Hanson and Brennan (2002) and Wang, Kolen, and Harris (2000). Results for writing were computed using the Livingston-Lewis procedure (1995), implemented with BB-CLASS (Brennan, 2004).

References

- Allen, M. J., & Yen, W. M. (1979). *Introduction to measurement theory*. Monterey, CA: Brooks/Cole.
- American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- Angoff, W. (1993). Perspectives on differential item functioning methodology. In P.W. Holland and H. Warner (Eds.), *Differential Item Functioning* (pp. 3-24). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Arizona Department of Education. (2005). *Body of Work Standard Setting Technical Report for Grades 3,5,8 and High School Writing*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2005). *Bookmark Standard Setting Technical Report for Grades 3,5,8, and High School Reading and Mathematics*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2005). *Test Administration Directions*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2006). *Test Administration Directions*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2005). *Test Coordinator's Manual*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2006). *Test Coordinator's Manual*. Monterey, CA: CTB/McGraw-Hill.
- Brennan, R.L. (2004). BB-CLASS: A computer program that uses the beta-binomial model for classification consistency and accuracy [Computer program]. Iowa City, IA: The University of Iowa Center for Advanced Studies in Measurement and Assessment.
- Brennan, R. L., & Prediger, D. J. (1981). Coefficient kappa: some uses, misuses, and alternatives. *Educational and Psychological Measurement, 41*, 687-699.
- Burket, G. R. (1991). PARDUX [Computer program]. Unpublished.
- Camilli, G., & Shepard, L. A. (1994). *Methods for identifying biased test items*. Newbury Park, CA: Sage.
- Choi, S. (2005). CalcSEM_Rasch.sas [Computer program]. Unpublished.
- Clauser, B. E. & Mazor, K.M. (1998). Using statistical procedures to identify differentially functioning test items. *Educational Measurement: Issues and practice, 17*, 31-44.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement, 20*, 37-46.
- Crocker, L. & Algina, J. (1986). *Introduction to classical and modern test theory*. Belmont, CA: Wadsworth Group/Thompson Learning.
- CTB/McGraw-Hill. (2001). *TerraNova, The Second Edition, California Achievement Tests®*. Monterey, CA: Author.
- CTB/McGraw-Hill. (2001). *TerraNova, The Second Edition, Norms Book*. Monterey, CA: Author.
- CTB/McGraw-Hill. (2003). *TerraNova®, The Second Edition: California Achievement Tests® Technical Report*. Monterey, CA: Author.
- Green, D.R. (1975, December). *Procedures for assessing bias in achievement tests*. Presented at the National Institute of Education Conference on Test Bias, Annapolis, MD.

- Holland, P. W. & Thayer, D. T. (1988). Differential item performance and the Mantel-Haenszel procedure. In H. Wainer & H. I. Braun (Eds.), *Test validity* (pp. 129-145). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lee, W., Hanson, B. A., Brennan, R. L. (2002). Estimating consistency and accuracy indices for multiple classifications. *Applied Psychological Measurement*, 26, 412-432.
- Linacre, J. M. (2002). What do infit and outfit, mean-square and standardized mean? *Rasch Measurement Transactions*, 16(2), 878.
- Linacre, J. M. (2005). WINSTEPS Rasch measurement [Computer software]. Chicago: Winsteps.com.
- Livingston, S. A., & Lewis, C. (1995). Estimating the consistency and accuracy of classification consistency and accuracy based on test scores. *Journal of Educational Measurement*, 32, 179-197.
- Lord, F. M. (1980). *Applications of item response theory to practical testing programs*. Hillsdale, NJ: Lawrence Erlbaum.
- Lord, F. M., & Novick, M. R. (1968). *Statistical theories of mental test scores*. Reading MA: Addison-Wesley.
- Rasch, G. (1960). *Probabilistic models for some intelligence and attainment tests*. Copenhagen, Denmark: Danmarks Paedagogiske Institut.
- Shrout, P. E., & Fleiss, J. L. (1979). *Intraclass correlations: uses in assessing rater reliability*. *Psychological Bulletin*, 86(2), 420-428.
- Wang, T. W., Kolen, M. J., Harris, D. J. (2000). Psychometric properties of scale scores and performance levels for performance assessments using polytomous IRT. *Journal of Educational Measurement*, 37, 141-162.
- Wright, B.D. (1977). Solving measurement problems with the Rasch model. *Journal of Educational Measurement*, 14(2), 97-116.
- Wright, B. D., & Linacre, J. M. (1992). *BIGSTEPS Rasch Analysis* [Computer software]. Chicago, IL: MESA Press.
- Wright, B. D. & Linacre, J.M. (1994). Reasonable mean-square fit values. *Rasch Measurement Transactions*, 8, 370.
- Wright, B. D., & Masters, G. N., (1982). *Rating scale analysis: Rasch Measurement*. Chicago: MESA Press.
- Yen, W. M. & Burket, G. R. (1997). Comparison of item response theory and Thurstone methods of vertical scaling. *Journal of Educational Measurement*, 34(4), 293-313.
- Zieky, M. (1993). Practical questions in the use of DIF statistics in test development. In Holland, P.W. & Wainer, H. (Eds.) *Differential Item Functioning* (pp. 337-348). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Zwick, R., Donoghue, J. R., & Grima, A. (1993). Assessment of differential item functioning for performance tasks. *Journal of Educational Measurement*, 26, 44-66.

APPENDIX A

Fall 2005 AIMS Administration

Overview:

The 2005 Fall AIMS assessments were administered in reading, writing and mathematics to students in high school who were in grades 11 and 12 and had not yet obtained a passing score on one of the content areas. These assessments were written to the Arizona content standards and were designed to measure student performance with respect to these standards. The 2005 Fall AIMS assessments in reading and mathematics were multiple choice, criterion-referenced tests. The 2005 Fall AIMS writing assessment consisted of a single extended response essay prompt.

Test Design, Development, and Administration:

The design and development of the 2005 Fall AIMS assessments reflect the same guiding principals that were followed for the 2006 Spring AIMS assessments. Arizona teachers, curriculum specialists and administrators from across the state were an integral part of the AIMS test development process. More information regarding the committee meetings, the test blueprints, and the test development process is contained in Parts 3 and 4 of this technical report.

The test design and structure of the 2005 Fall AIMS assessment mirrored the structure of the AIMS assessments administered in spring. That is, the reading test consisted of 54 multiple choice items developed by Arizona teachers. Raw scores range from 0-54 and scale scores range from 500 to 900. Similarly, the mathematics test consisted of 85 multiple choice items developed by Arizona teachers. Raw scores range from 0-85 and scale scores range from 500 to 900. Finally, the AIMS writing assessment consisted of one extended response writing prompt. Responses to the prompt were scored on the 6-trait analytic rubric. Each trait received two ratings. Final scores for traits with adjacent ratings were derived by averaging the two ratings. The raw scores ranged from 0-36 and scale scores were designed to range from 500 to 900. There are no norm-referenced items included in the high school AIMS assessments.

The test selection process for the 2005 Fall AIMS was designed such that resulting tests matched the 2005 Spring AIMS in overall test difficulty and content coverage. The test selection process is described in Part 4 of this report.

Test administration procedures for the Fall 2005 AIMS are described in Part 5 of this report.

Scaling and Equating:

The 2005 Fall AIMS administration was designed for students who were retaking the assessment because they had not obtained a passing score on one of the content areas. The population of students that retake the AIMS assessments varies from administration to administration in terms of its composition and achievement. Moreover, expediency in the reporting of results to the population of students who are retaking the AIMS assessments was considered to be a priority. For these reasons, a pre-equating model was adopted for the Fall AIMS administration.

Pre-equating takes advantage of an existing bank of previously calibrated and scaled items such that an equated form and an associated number correct to scale score conversion table can be constructed prior to operational administration. The Fall 2005 assessment was constructed from

items that had been previously administered in the 2005 Spring AIMS administration and had been calibrated and linked to the operational scale of measurement using the Rasch measurement model. Using the existing item parameters for the items selected to be on 2005 Fall AIMS assessment, the number correct to AIMS scale score conversion tables were created. The raw score to scale score conversions, including the standard error of measurement (SEM) for each scaled score, are presented in Tables A.1 through A.3.

2006 Fall AIMS Test Results:

The results of the 2006 Fall AIMS are reported in Tables A.4 through A.6. Results presented below are based on population data contained within the final electronic data files. The results presented in this part of the technical report may differ slightly from final testing results presented on the Arizona Department of Education website due to slight differences in the application of exclusion rules. Official final results typically use more detailed school-level information than is used to conduct research analyses. The results in the following tables are presented as evidence of reliability and validity of the AIMS assessments and should not be used for state accountability purposes.

Results for AIMS high school assessments are reported by graduating cohort. Cohort 07 is defined as the group of students that will be graduating in 2007, and typically includes 11th grade students. Cohort 06 is defined as the group of students that will be graduating in 2006, and is typically comprised of seniors. Cohort 05 is defined as the group of students that were expected to have graduated in 2005 or prior. For each cohort, scale score means and standard deviations as well as the percentages of students in each performance level are presented for the state as a whole and disaggregated into various demographic groups. Disaggregated results were produced for the various groups by using demographic data on student answer documents.

Table A.1
2005 Fall AIMS Raw Score to Scale Score Table
Mathematics CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	34	43	668	8
1	500	34	44	670	8
2	522	25	45	672	8
3	537	21	46	673	8
4	548	18	47	675	8
5	557	16	48	677	8
6	564	15	49	679	8
7	571	14	50	681	8
8	576	13	51	683	8
9	581	13	52	685	8
10	586	12	53	687	8
11	590	12	54	689	8
12	594	11	55	691	8
13	598	11	56	693	8
14	601	11	57	695	9
15	604	11	58	697	9
16	608	10	59	700	9
17	611	10	60	702	9
18	613	10	61	704	9
19	616	10	62	706	9
20	619	9	63	709	9
21	621	9	64	711	9
22	624	9	65	714	9
23	626	9	66	716	9
24	629	9	67	719	10
25	631	9	68	722	10
26	633	9	69	725	10
27	636	9	70	728	10
28	638	9	71	731	11
29	640	9	72	734	11
30	642	8	73	738	11
31	644	8	74	741	12
32	646	8	75	745	12
33	648	8	76	750	13
34	650	8	77	755	13
35	652	8	78	760	14
36	654	8	79	766	15
37	656	8	80	773	16
38	658	8	81	782	18
39	660	8	82	792	20
40	662	8	83	807	25
41	664	8	84	832	35
42	666	8	85	900	92

Note. SEM is the standard error of measurement for the scale score. High school mathematics scale scores are not on the same vertical scale as grades 3-8.

Table A.2
2005 Fall AIMS Raw Score to Scale Score Table
Reading CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	34	28	660	12
1	500	34	29	663	12
2	507	31	30	667	12
3	526	26	31	670	12
4	540	23	32	674	12
5	550	21	33	677	13
6	559	19	34	681	13
7	567	18	35	685	13
8	574	17	36	689	13
9	581	16	37	693	13
10	587	16	38	697	13
11	592	15	39	701	14
12	597	15	40	706	14
13	602	14	41	710	14
14	606	14	42	715	15
15	611	14	43	720	15
16	615	13	44	726	16
17	619	13	45	731	16
18	623	13	46	738	17
19	627	13	47	745	18
20	631	13	48	753	19
21	635	13	49	762	21
22	638	12	50	773	23
23	642	12	51	786	26
24	645	12	52	805	31
25	649	12	53	836	44
26	652	12	54	900	90
27	656	12			

Note. SEM is the standard error of measurement for the scale score. High school reading scale scores are not on the same vertical scale as grades 3-8.

Table A.3
2005 Fall AIMS Raw Score to Scale Score Table
Writing CRT High School

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	24	18.5	655	10
0.5	500	24	19	662	10
1	500	24	19.5	668	9
1.5	500	24	20	673	9
2	500	24	20.5	678	9
2.5	500	24	21	683	9
3	500	24	21.5	688	9
3.5	500	24	22	693	9
4	500	24	22.5	699	10
4.5	500	24	23	705	10
5	500	24	23.5	712	11
5.5	500	24	24	720	11
6	501	23	24.5	728	11
6.5	513	17	25	735	10
7	526	12	25.5	741	10
7.5	534	11	26	747	9
8	540	10	26.5	752	9
8.5	546	9	27	756	8
9	551	9	27.5	760	8
9.5	556	9	28	765	8
10	561	9	28.5	769	8
10.5	566	9	29	773	8
11	571	9	29.5	777	8
11.5	577	10	30	781	8
12	583	10	30.5	786	8
12.5	589	10	31	790	8
13	595	9	31.5	794	8
13.5	600	9	32	798	8
14	605	9	32.5	803	8
14.5	610	9	33	807	9
15	615	9	33.5	812	9
15.5	620	9	34	817	9
16	625	9	34.5	823	10
16.5	630	9	35	831	12
17	636	10	35.5	844	17
17.5	642	10	36	900	90
18	649	10			

Note. SEM is the standard error of measurement for the scale score. High school writing scale scores are not on the same vertical scale as grades 3-8.

Table A.4
2005 Fall AIMS Results
Mathematics CRT High School

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Cohort 07							
Total	21444	677.86	30.60	37	24	36	3
Ethnic Background							
White (Not Hispanic)	6947	686.98	34.79	28	21	45	6
Black or African American	1484	674.00	29.23	42	23	33	2
Hispanic or Latino	10245	673.20	26.46	42	26	31	1
American Indian or Alaskan Native	2250	669.98	24.68	46	26	27	1
Asian or Pacific Islander	425	697.39	39.16	24	15	50	11
Special Program Membership							
Title 1	2641	672.19	26.90	44	24	31	1
English Learner Program	973	661.54	23.53	62	21	16	1
Special Education	1014	652.55	23.20	77	12	11	0
Cohort 06							
Total	12937	678.33	31.43	37	22	38	3
Ethnic Background							
White (Not Hispanic)	3688	687.73	36.21	29	19	46	7
Black or African American	921	672.90	29.22	42	22	33	2
Hispanic or Latino	6536	674.63	28.00	40	24	35	1
American Indian or Alaskan Native	1453	672.20	24.94	43	25	31	1
Asian or Pacific Islander	257	695.65	42.06	26	13	52	9
Special Program Membership							
Title 1	1725	675.88	28.90	38	23	38	2
English Learner Program	699	662.47	25.91	61	20	19	0
Special Education	633	650.77	23.34	77	13	11	0
Cohort 05							
Total	2952	669.23	29.44	50	20	28	1
Ethnic Background							
White (Not Hispanic)	751	680.56	34.17	36	19	41	4
Black or African American	153	663.56	27.57	61	14	24	1
Hispanic or Latino	1672	664.35	26.31	56	21	22	0
American Indian or Alaskan Native	303	668.19	24.55	50	23	27	0
Asian or Pacific Islander	50	685.00	33.79	32	8	58	2
Special Program Membership							
Title 1	400	662.47	23.81	58	23	19	1
English Learner Program	326	660.59	24.07	64	16	20	0
Special Education	123	652.23	21.95	76	14	11	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

Table A.5
2005 Fall AIMS Results
Reading CRT High School

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Cohort 07							
Total	21342	677.61	47.38	12	38	45	5
Ethnic Background							
White (Not Hispanic)	7079	699.37	52.77	7	26	56	11
Black or African American	1357	673.30	42.14	12	38	47	3
Hispanic or Latino	10010	664.73	39.68	16	44	38	2
American Indian or Alaskan Native	2231	663.80	32.68	10	51	38	1
Asian or Pacific Islander	545	701.30	55.30	7	27	51	15
Special Program Membership							
Title 1	2504	664.78	41.40	17	43	39	2
English Learner Program	1010	639.85	31.01	35	51	14	0
Special Education	1489	645.48	34.72	30	49	21	0
Cohort 06							
Total	11661	675.87	47.98	13	40	43	5
Ethnic Background							
White (Not Hispanic)	3162	699.95	57.32	9	26	52	13
Black or African American	743	669.38	42.77	14	41	42	3
Hispanic or Latino	6133	665.19	40.16	15	45	38	2
American Indian or Alaskan Native	1224	665.93	32.97	11	47	42	1
Asian or Pacific Islander	331	697.81	53.17	7	28	54	11
Special Program Membership							
Title 1	1593	666.81	40.10	15	42	41	2
English Learner Program	754	642.93	31.71	30	53	17	0
Special Education	907	645.52	33.72	29	50	21	0
Cohort 05							
Total	2773	663.94	44.47	20	41	36	3
Ethnic Background							
White (Not Hispanic)	659	688.66	53.97	12	27	52	9
Black or African American	159	663.26	42.47	21	37	40	2
Hispanic or Latino	1589	652.55	36.96	24	47	28	1
American Indian or Alaskan Native	287	667.09	32.51	10	46	43	1
Asian or Pacific Islander	60	682.40	49.16	18	25	55	2
Special Program Membership							
Title 1	403	651.99	34.80	24	49	27	0
English Learner Program	416	639.90	33.30	37	46	17	0
Special Education	227	640.70	34.23	37	43	20	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

Table A.6
2005 Fall AIMS Results
Writing CRT High School

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
Cohort 07							
Total	21087	673.52	56.70	11	37	44	7
Ethnic Background							
White (Not Hispanic)	7933	692.37	55.52	7	27	52	14
Black or African American	1202	668.36	57.92	13	37	45	5
Hispanic or Latino	9277	660.25	53.94	15	43	39	3
American Indian or Alaskan Native	2096	659.75	49.79	12	48	38	2
Asian or Pacific Islander	476	695.20	60.40	8	29	43	20
Special Program Membership							
Title 1	2400	660.82	51.94	14	45	39	3
English Learner Program	974	622.28	53.98	33	54	13	0
Special Education	1548	628.07	52.83	32	49	18	0
Cohort 06							
Total	10784	672.06	60.47	13	37	40	9
Ethnic Background							
White (Not Hispanic)	3523	695.05	62.23	9	25	47	20
Black or African American	605	665.75	61.02	16	40	38	6
Hispanic or Latino	5227	658.95	55.26	16	44	37	4
American Indian or Alaskan Native	1074	658.78	52.88	14	46	38	3
Asian or Pacific Islander	288	695.47	64.48	9	24	46	20
Special Program Membership							
Title 1	1377	661.62	55.41	15	41	40	4
English Learner Program	686	622.55	54.91	36	47	17	0
Special Education	871	624.44	53.91	34	48	17	0
Cohort 05							
Total	2580	654.78	62.04	20	39	36	5
Ethnic Background							
White (Not Hispanic)	646	687.60	61.76	10	28	48	15
Black or African American	149	652.89	61.03	21	38	37	4
Hispanic or Latino	1450	638.90	57.65	26	44	29	1
American Indian or Alaskan Native	266	661.27	49.60	12	45	41	2
Asian or Pacific Islander	55	672.05	69.62	16	35	36	13
Special Program Membership							
Title 1	382	644.57	56.67	23	44	32	1
English Learner Program	386	609.61	62.39	45	39	15	1
Special Education	204	622.85	58.30	37	44	18	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

APPENDIX B
Item Writer Selection Criteria

ARIZONA DEPARTMENT OF EDUCATION

PROCEDURE FOR SELECTION OF EDUCATOR COMMITTEES
ARIZONA ASSESSMENT SECTION

Although our database has contained over 1000 educators, after performing an update searching for current information, there are approximately 600-700 educators remaining. The Assessment Section is always recruiting new teachers to serve on the committees, and have prevailed upon veteran teachers to become Ambassadors of the Assessment by encouraging their colleagues to apply.

Once Arizona educators are identified and entered into the database, the Assessment Section uses the following procedures for selecting membership for a committee:

- Identify the purpose/function of the committee
- Establish the date and time of the committee
- Determine the criteria for membership on the committee:
 - Content area of expertise
 - Grade level experience
 - Specific skill or knowledge expertise for committee function
 - Prior experience on ADE committees—a minimum 50% of each committee will have prior experience
 - Location of district/school
 - Rural/urban/suburban
 - Approximately 50% of committee members from Maricopa County when appropriate for purpose of committee
 - Ethnicity of school population or committee member
 - SES of school population
 - Number of committees served on recently—a committee member cannot serve on a series of committees used to develop items. Otherwise, they would be passing judgment on their own prior work. (This is a change in procedure)*
- Review the database for educators that meet the criteria established
- Select committee members based on criteria for particular committee for primary and alternate list
- Invitations are sent to selected committee members on primary list **
- After decline and accept emails are received by established deadline, additional invitations issued to members on alternate list
- Committee meeting held
- Review performance of participants

* ADE is concerned that utilizing the same committee members on a series of committees will reduce the input from a variety of educators and have requested that past committee participation be part of the selection process. As the pool of teachers expands, individual members will serve on fewer committees.

** It is not the policy to inform all members in our database of scheduled committee meetings, but only those invited to a particular meeting.

In April of 2006, all past participants were invited to reapply in order to update the database. The application identifies the demographics of each committee member: geographic location in Arizona, ethnicity of school/district population and/or committee participant, and a detailed biographical background including participation on AIMS committees. In order to replace past participants who have moved, changed positions, or no longer possess the time to serve, a recruitment letter was sent in October to solicit recommendations from District Superintendents regarding prospective Arizona educators whose expertise and participation could be of great benefit.

Recognition of existing AIMS committee participants is an important aspect of retaining our Ambassadors of the Assessment. Beginning with the Anchor Setting – Conventions Committee (September 16, 2006), participants received a letter recognizing their excellent contributions to the AIMS assessments and to all Arizona students. These Letters of Recognition were sent to the educators' school boards, superintendents, and principals. This practice is anticipated to continue throughout the life of the AIMS project.

APPENDIX C
Writing Pre-Equating Study

Following is the AIMS Writing Assessment Pre-equating Study technical report, delivered to the Arizona Department of Education in February 2006.

**Arizona Instrument to Measure Standards (AIMS)
Writing Assessment Pre-Equating Study**

CTB Research
February, 2006

Overview

This memorandum describes technical procedures used for the pre-equating of Arizona Instrument to Measure Standards (AIMS) writing prompts. The technical information included in this report is intended by those who evaluate tests, interpret scores, or use test results in making educational decisions. It is assumed that the reader has technical knowledge of test construction and measurement procedures, as stated in the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999).

The pre-equating analyses were designed to link performance on the field test writing prompts that were administered in Fall 2003 and Spring 2004 to the operational reporting scale defined in 2005 for the AIMS Writing program. These analyses result in a set of writing prompts that can be used in future administrations without requiring additional post-administration equating. The goals of this study were to a) link field test forms to a common scale for a given grade, b) link all forms to the operational reporting scale, and c) produce raw score to scale score conversion tables based on the equating analyses.

Method

Field Test Administration

Data for these analyses were collected in two field test studies. Grades 3-5-8-10 participated in the field testing of writing prompts in Fall 2003. Grades 4-6-7 participated in field testing the following Spring¹.

Prompts and Scoring

Twelve field test prompts were administered in Grades 3-8 and twenty prompts were administered in Grade 10 using within-classroom spiraling². Each prompt required each student to produce an extended sample of writing. Each student paper was scored with respect to six traits using a rating scale that ranges 1 through 6. The six trait scores were unweighted, thus the total raw scores for each prompt ranges from 6 through 36. Each paper was scored by a single rater for each trait by the previous AIMS contractor.

¹ The two field test administrations were conducted by the previous contractor.

² The current pre-equating study relies on the premise that the spiraling resulted in randomly equivalent groups.

Data

The available data for the pre-equating analyses varies by field test administration. Student scores on writing prompts ranged from approximately 1300 per form to 1500 per form for Grades 3-5-8-10. Student scores for prompts administered were closer to 2000 per form for Grades 4-6-7. Note that prompts were spiraled within the classroom resulting in equivalent groups of students taking each prompt within a grade.

Data Cleaning. For all available grades/forms, we cleaned the data in the following manner. Students with condition codes (e.g., blank, off-topic) instead of scores were removed from the analyses. Students that were flagged as having a non-standard administration were removed from the analyses. Finally, students for which the test form could not be determined were removed.

Linking Scores on Writing Prompts to a Common Scale

Equating analyses were based on the random groups equating design. All writing prompts administered in the field tests were spiraled within classroom resulting in randomly equivalent groups taking each prompt. Given the inherent difficulties in linking scores from administration of a single writing prompt and the moderate sample sizes that were available, we employed a variety of methods to link the prompts to a common scale. Three different approaches were implemented: 1) Rasch models – using mean/sigma scale transformations, 2) Rasch model – using fixed parameter scale transformation, and 3) classical linking procedures, with a test characteristic curve (TCC) scale conversion. The comparability of the different methods is evaluated with respect to the resulting score conversions and equated score distributions.

Method 1: Rasch Models – Mean/Sigma Equating. Rasch measurement models were estimated using the WINSTEPS (Linacre, 2005) software. In particular, field test data for the writing prompts were calibrated using the Rating Scale and Partial Credit models. The following steps were followed for a given grade for both models:

1. Each test form was independently calibrated using WINSTEPS. Item parameters and student ability estimates were produced for each form. Note that the six traits were treated as separate items in the calibration analyses.
2. Means and standard deviations of student ability estimates in logits were computed for a non-target form and a target form (i.e., the form administered operationally in 2005) and the transformation constants were derived using mean/sigma methods (Kolen & Brennan, 1995, pp. 168). The transformation was then applied to the item difficulty parameters and student ability estimates for the non-target form so that the resulting person ability means and standard deviations were matched to those of the target form. This procedure was repeated for each form and resulted in all prompts linked to a common logit scale.

3. The common logit scale developed in step 2 was then linked to the 2005 operational logit scale using a common item, non-equivalent group design. That is, the operationally logit item parameters for the target writing prompt were used as anchors and the transformation to convert field test item parameters to the operationally scaled parameters was estimated using the mean/sigma method. The transformation to the operational logit scale was applied to all parameters and resulted in all prompts linked to the operational scale.
4. The scale defined in step 3 was linearly transformed to the operational reporting metric using the transformations defined in 2005, final raw score to scale score conversion tables were produced and the LOSS and HOSS values were applied to the scoring table.
5. The scoring tables were used to score the field test data in order to further evaluate the comparability of the equated prompts.

Method 2: Rasch Models – Fixed Parameter Equating. Rasch measurement models were estimated using the WINSTEPS (Linacre, 2005) software. In particular, field test data for the writing prompts were calibrated using the Rating Scale and Partial Credit models. The following steps were followed for a given grade for both models:

1. Each test form was independently calibrated using WINSTEPS. Item parameters and student ability estimates were produced for each form. Note that the six traits were treated as separate items in the calibration analyses.
2. Means and standard deviations of student ability estimates were computed for a non-target form and a target form. Student ability estimates for the target form were estimated using the parameters obtained in the operational calibration analyses conducted in 2005. The transformation from non-target to target was then obtained using the mean/sigma method and was applied to the non-target form. This was repeated for all forms and resulted in a set of forms linked to the operational 2005 scale.
3. The scale defined in step 2 was linearly transformed to the operational reporting metric using the transformations defined in 2005, final raw score to scale score conversion tables were produced and the LOSS and HOSS values were applied to the scoring tables.
4. The scoring tables are used to score the field test data in order to further evaluate the comparability of the equated prompts.

Method 3: Classical Linking Methods (With TCC Conversion). Conventional raw score equating techniques (e.g., mean equating, linear equating, equipercentile, equipercentile with smoothing) were implemented using the LEGS (Brennan, 2004)³ software. This software is specifically designed to estimate raw score equivalents between two forms when the groups of students taking the two forms can be considered equivalent. The following steps were followed for a given grade:

1. Compute raw score frequency distributions for each form.

³ The LEGS program is available at: <http://www.education.uiowa.edu/casma/EquatingLinkingPrograms.htm>

2. Link each form to a target form (i.e., used in operational analyses) using the LEGS software. Equated raw score conversion tables based on mean, linear, equipercentile and equipercentile with distribution smoothing were produced. This was repeated for all non-target forms.
3. The equated raw scores (unrounded) for a given form were then converted to a scale score value using the test characteristic curve (TCC) defined for the target form in the 2005 operational analyses. This conversion required taking each equated score and looking for an exact match within a table containing expected raw scores (ranging from 6 to 36) for each and every operational scale score point (i.e., the TCC). If an exact match of an expected raw score was not found for the equated raw score, the next highest expected raw score was chosen and the associated scale score was then assigned to the equated raw score. This conversion was repeated for each equated raw score for each form.
4. For Grade 10 an additional process was used to interpolate scale scores for unobserved raw scores. Two raters were used in operational assessments resulting in raw scores ranging from 12 to 72. However, the equated raw scores from Step 2 above ranged roughly from 6 to 36 because field test papers were scored by a single rater. Thus, the equated raw scores were multiplied by 2 and used for the TCC inversion process described in Step 3. The scale scores for the remaining unobserved raw scores were linearly interpolated.
5. After obtaining scale scores for each equated raw score, final raw score to scale score conversion tables were produced and the LOSS and HOSS values were applied to the scoring tables.
6. The scoring tables were used to score the field test data in order to further evaluate the comparability of equated writing prompts.

Results

Rasch Analyses – Mean/Sigma Equating

Appendix A presents the scoring tables for all grades and prompts based on the mean-sigma equating approach for both the Rating Scale and Partial Credit models. Each table in this appendix contains the raw score to scale score conversion tables for the operational scale (i.e., defined in 2005) as well as the equated forms. The proficiency levels have been color coded to facilitate review of the equated table relative to operational scale.

We encountered a number of difficulties in estimating the Rasch models for the field test prompts due to the sparseness of the available data. In particular, the raw data available tended to show a consistent “halo” effect where scorers tended to assign a single score across all traits (i.e., 111111, 222222, 333333, 444444, 555555, and 666666) with little or no variability between. Given the treatment of traits as separate items during calibration, the significant dependence among trait scores constitutes a violation of assumptions for the Rasch models.

Moreover, this tendency for uniform scoring was particularly prevalent at the uppermost score points and consequently WINSTEPS was unable to estimate some threshold parameters for some prompts. This occurred more frequently in the Partial Credit model analyses because it estimates separate thresholds (step difficulties) for each trait

instead of across traits. However, in several cases WINSTEPS was unable to estimate some threshold parameters using the simpler Rating Scale model as well.

The impact of such estimation problems can be seen in the Grade 6-Prompt 6 scoring tables presented below. A complete scoring table is available when the Rating Scale model is applied to the data for this form. However, when the Partial Credit model is applied to the same data, the uppermost threshold cannot be estimated for some of the traits. Consequently, the estimated scoring table ends at 31 points and the remaining raw scores are set to equal the highest obtainable scale score (HOSS).

Table 1. Scoring Table for Grade 6 – Prompt 6.

Raw	Rating Scale Prompt 6	Partial Credit Prompt 6	Raw	Rating Scale Prompt 6	Partial Credit Prompt 6
0	275	275	18	544	546
1	275	275	19	569	571
2	275	275	20	577	579
3	275	275	21	583	584
4	275	275	22	588	590
5	275	275	23	596	597
6	275	275	24	626	627
7	392	395	25	656	657
8	400	403	26	664	664
9	405	408	27	670	670
10	411	414	28	676	676
11	419	422	29	683	683
12	455	458	30	704	703
13	492	494	31	725	722
14	499	502	32	733	760
15	505	508	33	738	760
16	511	514	34	744	760
17	518	521	35	752	760
			36	760	760

The difficulties inherent in estimating the parameters of the Rasch model are especially problematic for the Grade 7 linking analyses. A full set of item difficulty parameters could not be estimated for the form that is the target (i.e., the form used in the 2005 operational administration) for the form to form linking analyses. Moreover, the mean and standard deviation of item parameters for this target form are used to define the transformation of all forms to the operational scale. For this reason, the resulting scoring tables for this grade look particularly strange in Grade 7.

An example is presented below for Grade 7-Prompt 5 in Table 2. The RSM1 and PCM1 columns present the raw to scale score conversions developed using the Rating Scale and Partial Credit models. Also note that this table contains the operational raw to scale conversions defined in 2005 and has the proficiency levels color coded to facilitate comparison across different scoring tables.

Note that the raw score associated with the lowest cut score is 10 in the operational assessment – meaning that students with a score of 11 and above are considered to be “approaching proficiency” instead of “far below proficiency”. However, for the equated forms – the raw score associated with the lowest cut score is typically 6 (the minimum score on all traits). This suggests that students need only to get one additional point in any of the six traits in order to be demonstrating performance that is “approaching proficiency”. This pattern is seen for the majority of forms in Grade 7 (see Appendix A, Tables 9 & 10).

Table 2. Scoring Tables for Method 1: Rating Scale and Partial Credit Models

Grade 7		2005	RSM1	PCM1
	raw	scale	Prompt 5	Prompt 5
	0	290	290	290
	1	290	290	290
	2	290	290	290
	3	290	290	290
	4	290	290	290
	5	290	290	290
	6	290	290	290
	7	360	422	417
	8	378	430	428
	9	392	436	435
Cut 1	10	405	442	442
	11	420	450	450
	12	439	469	470
	13	458	490	490
	14	472	498	498
	15	485	504	504
Cut 2	16	498	510	510
	17	512	518	517
	18	528	546	545
	19	545	574	574
	20	558	582	582
	21	570	589	589
	22	582	595	595
	23	594	602	602
	24	606	632	632
	25	618	663	664
	26	628	671	673
Cut 3	27	637	677	681
	28	645	683	688
	29	652	691	696
	30	659	717	723
	31	667	743	751
	32	674	752	760
	33	683	758	769
	34	694	764	770
	35	710	770	770
	36	770	770	770

The scoring tables for Grade 7 also tended to look strange. Rather than a smooth progression of scale scores associated with each raw score, we see significant jumps in scale scores around certain raw score points (e.g., 12, 18, 24, and 30) and plateaus in other score points. That is, the scoring tables seem to reflect the tendency of scorers to assign a single score across traits. This can also be seen in the Table 2 for Prompt 5 and in Appendix A, Tables A9 and A10 for all prompts.

Although these issues appeared to be most prevalent in the Grade 7 analyses, we saw similar issues with other grades/forms. Given that scoring of all field test prompts utilized a single rater scoring all traits, we believe that the analyses for all prompts are impacted to varying degrees. For this reason, alternative methods for linking the forms to a common scale were explored.

Rasch Models – Fixed Parameter Equating

Appendix B presents the scoring tables for all grades, prompts based on the second method, fixed parameter equating using the Rating Scale and Partial Credit models. Again, each table in this appendix contains the raw score to scale score conversion tables for the operational scale (i.e., defined in 2005) as well as the equated forms. The proficiency levels have been color coded to facilitate review of the equated table relative to operational scoring table.

This approach utilizes the same item calibrations produced in WINSTEPS and is subject to the same parameter estimation issues described in the previous section. However, the procedure involved a more direct link to the operational reporting scale, which we believed may circumvent some the impact of these problems on the linking analyses seen in Method 1.

However, the problems noted with Method 1 were still prevalent using Method 2. That is, the location of the cut scores for the equated forms and the operational test form varied significantly and the scoring tables did not show a smooth progression of scale scores over the different raw scores. Table 3 presents the Grade 7-Prompt 5 scoring tables for both Method 1 and Method 2 to illustrate. As with Method 1, these problems were not isolated to a single form/grade (see Appendix B) and led us to explore classical equating methods.

Table 3. Scoring Tables for Methods 1 and 2: Rating Scale and Partial Credit Models

Grade 7	raw	2005 scale	RSM1 Prompt 5	PCM1 Prompt 5	RSM2 Prompt 5	PCM2 Prompt 5
	0	290	290	290	290	290
	1	290	290	290	290	290
	2	290	290	290	290	290
	3	290	290	290	290	290
	4	290	290	290	290	290
	5	290	290	290	290	290
	6	290	290	290	290	290
	7	360	422	417	421	418
	8	378	430	428	428	428
	9	392	436	435	433	434
Cut 1	10	405	442	442	438	440
	11	420	450	450	445	446
	12	439	469	470	462	464
	13	458	490	490	479	481
	14	472	498	498	486	487
	15	485	504	504	492	492
Cut 2	16	498	510	510	497	497
	17	512	518	517	503	504
	18	528	546	545	527	527
	19	545	574	574	552	552
	20	558	582	582	559	559
	21	570	589	589	565	564
	22	582	595	595	570	570
	23	594	602	602	576	576
	24	606	632	632	602	601
	25	618	663	664	629	628
	26	628	671	673	636	637
Cut 3	27	637	677	681	641	643
	28	645	683	688	646	649
	29	652	691	696	653	656
	30	659	717	723	675	679
	31	667	743	751	698	702
	32	674	752	760	705	711
	33	683	758	769	711	718
	34	694	764	770	716	726
	35	710	770	770	722	732
	36	770	770	770	770	770

Classical Linking Methods (With TCC Conversions)

Appendix C presents the scoring tables for all grades and prompts based on mean, linear, equipercentile, and smoothed equipercentile equating procedures. Again, each table in this appendix contains the raw score to scale score conversion tables for the operational scale (i.e., defined in 2005) as well as the equated forms. The proficiency levels have been color coded to facilitate review of the equated table relative to operational scoring table.

By definition, these linking procedures use all available raw score data and do not require the estimation of Rasch item parameters. The substantial amount of uniform scoring present in the field testing is reflected in frequency distributions. However, it poses less of a problem for classical linking procedures than the Rasch model procedures implemented in Method 1 and Method 2.

The resulting raw to scale score conversions showed a smoother progression over all score points and a greater consistency with the operational scoring tables than other methods. Table 4 presents the Grade 7-Prompt 5 scoring tables with the addition of scale scores based on mean, linear, equipercentile, and smoothed equipercentile equating procedures.

Table 3. Scoring Tables for Methods 1 and 2 using Rating Scale and Partial Credit models and Classical Equating Methods (Mean, Linear, Equipercentile, Smoothed Equipercentile).

Grade 7	2005	RSM1	PCM1	RSM2	PCM2	Mean	Linear	Equi%	Smoothed	
raw	scale	Prompt 5	Prompt 5	Prompt 5	Prompt 5	Prompt 5	Prompt 5	Prompt 5	Prompt 5	
	0	290	290	290	290	290	290	290	290	
	1	290	290	290	290	290	290	290	290	
	2	290	290	290	290	290	290	290	290	
	3	290	290	290	290	290	290	290	290	
	4	290	290	290	290	290	290	290	290	
	5	290	290	290	290	290	290	290	290	
	6	290	290	290	290	290	290	290	290	
	7	360	422	417	421	418	358	384	345	327
	8	378	430	428	428	428	377	396	357	363
	9	392	436	435	433	434	391	408	371	384
Cut 1	10	405	442	442	438	440	404	422	396	403
	11	420	450	450	445	446	419	439	418	427
	12	439	469	470	462	464	438	456	451	455
	13	458	490	490	479	481	457	469	483	479
	14	472	498	498	486	487	472	481	489	490
	15	485	504	504	492	492	485	492	497	499
Cut 2	16	498	510	510	497	497	497	504	509	509
	17	512	518	517	503	504	511	517	521	520
	18	528	546	545	527	527	527	532	530	530
	19	545	574	574	552	552	544	546	546	544
	20	558	582	582	559	559	558	558	557	557
	21	570	589	589	565	564	570	569	569	569
	22	582	595	595	570	570	581	579	581	581
	23	594	602	602	576	576	593	590	591	593
	24	606	632	632	602	601	605	600	604	604
	25	618	663	664	629	628	617	611	610	611
	26	628	671	673	636	637	628	621	611	614
Cut 3	27	637	677	681	641	643	636	630	612	617
	28	645	683	688	646	649	644	638	620	623
	29	652	691	696	653	656	652	645	631	631
	30	659	717	723	675	679	659	651	641	640
	31	667	743	751	698	702	666	658	661	656
	32	674	752	760	705	711	674	664	663	670
	33	683	758	769	711	718	683	671	663	688
	34	694	764	770	716	726	693	678	770	725
	35	710	770	770	722	732	732	724	770	748
	36	770	770	770	770	770	770	770	770	770

Comparison of Score Means

Appendix D presents a comparison of means across all forms for a given grade for the different linking procedures. In order to compute the means presented in this appendix the scoring tables associated with the different methods were used to score the field test data. Included in the appendices for each prompt are: number of students, raw score means, equated raw score means for the four equating procedures, scale score means for the four equating procedures, scale score means for Method 2 Rating Scale model, and scale score means for the Method 2 Partial Credit model. Note, due to the similarity of results for Method 1 and Method 2 we decided to exclude Method 1 from these summary tables.

As can be seen at each grade, the averages of equated scores are quite similar across prompts for each method. Note that the small differences in mean scale scores reported in these tables are an artifact of applying the arbitrary LOSS and HOSS values. When computing the means without application of these values, the scale score averages across each prompt are nearly identical for a given grade.

Interpretation and Recommendations

The purpose of this study was to link prompts field tested in 2003 and 2004 to an operational writing scale defined in 2005 for the purpose of pre-equating. The important results of the study can be summarized as follows:

- The data available for the pre-equating is based on a scoring system that tends to produce uniform pattern of scores (111111, 222222, etc.).
- Estimation of IRT models and linking procedures using these data can yield scoring functions that are not smooth across all score points and are inconsistent with operational scoring functions already in place in Arizona.
- Conventional equating procedures combined with a test characteristic curve conversion to obtain equated scale scores tended to exhibit such problems to a lesser extent. For this reason CTB suggests using one of the conventional linking methods for all grades and forms.

Of the four conventional linking methods implemented, CTB advocates using the mean equating procedure over other methods for the following reasons. The amount of data we have available is barely sufficient for equipercentile equating procedures. The equipercentile method uses the first four moments of a distribution and as such requires larger case counts. Also, the cumulative frequency distributions for the prompts we are linking have somewhat of a step-like shape (i.e., reflecting the tendency for uniform scoring over traits) and identifying the appropriate equipercentile relationships using these distributions is more difficult. For these reasons, CTB does not recommend the use of the equipercentile methods.

The linear equating method aims to set the first two moments of the distributions equal and can make large corrections at both extremes. That is, this method will prioritize the alignment of the distributions in the center of the scale and tend not to fit as well in the

tails of the distribution. Given the desire of ADE to maintain consistency across forms at all three cut scores, the linear procedure is less desirable.

The mean equating method is attractive in the current context in that a constant adjustment is made across all raw score points instead of a varying adjustment in certain parts of the distribution. Based on our review of the different conventional methods, mean equating tends to provide consistent linkage across forms relative to the existing operational scale. It also has the advantage of being simple to explain to education stakeholders and is easily replicable.

Appendix E presents all scoring tables for the forms administered in 2006 based on mean equating procedures. These are the tables for which CTB seeks approval on February 27, 2006 in order to maintain the scoring and reporting schedules for the 2006 operational administration. Once a particular method has been approved CTB can help facilitate the selection of the 2007 writing prompt by providing supporting documentation.

Appendix F provides the necessary test characteristic function tables required to convert any of the equated raw scores obtained by conventional equating procedures as implemented in the LEGS software. Note that the LEGS software is available for download at: <http://www.education.uiowa.edu/casma/EquatingLinkingPrograms.htm>.

Caveats

The scoring model used for the field test data is quite different than what is currently used for the operational writing assessment. Traits are scored independently by raters and the resulting data from the administration of writing prompts is of higher quality in the operational program. The pre-equating analyses are based on data collected two years ago using a less desirable scoring model and the results of our analyses reflect this to some extent. Under these constraints, conscientious efforts were made to explore various equating techniques for cross-validation and reasonability checks. The field test design implemented by the previous contractor necessitated the use of a random-groups design for the current equating study. The quality of the equating results is directly tied to the premise that the groups are randomly equivalent. The resulting pool of item prompts from these analyses should be examined carefully and used cautiously in subsequent operational administrations. As additional prompts are field tested using the current scoring models, these prompts should be refield tested or eventually retired.

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A1 Grade 3 Rating Scale Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 9	Form 10	Form 11	Form 12
0	200	200	200	200	200	200	200	200	200	200	200	200
1	200	200	200	200	200	200	200	200	200	200	200	200
2	200	200	200	200	200	200	200	200	200	200	200	200
3	200	200	200	200	200	200	200	200	200	200	200	200
4	200	200	200	200	200	200	200	200	200	200	200	200
5	200	200	200	200	200	200	200	200	200	200	200	200
6	200	200	200	200	200	200	200	200	200	200	200	200
7	296	330	330	328	335	334	324	308	303	335	333	337
8	314	341	342	339	345	344	334	319	314	344	341	346
9	326	349	350	348	352	352	342	327	323	350	348	352
10	337	357	359	356	360	360	350	335	331	356	354	358
11	347	367	369	366	369	368	360	345	342	364	362	366
12	358	384	387	382	385	383	376	366	362	380	381	384
13	369	402	404	398	401	398	394	387	381	396	401	402
14	379	412	414	409	410	408	404	397	392	404	409	410
15	389	420	423	417	418	416	412	405	400	411	415	416
16	400	428	431	426	425	423	419	412	408	417	421	423
17	411	437	441	435	434	432	428	422	418	425	429	430
18	424	451	454	448	446	445	443	438	431	438	446	445
19	437	465	467	461	459	459	457	453	444	452	463	459
20	449	474	477	471	468	469	467	463	454	460	471	468
21	460	482	485	480	475	477	475	471	462	466	477	474
22	471	490	493	488	483	484	482	479	470	473	483	480
23	483	499	503	499	492	493	491	488	480	481	491	488
24	496	512	519	518	507	508	506	504	495	499	506	501
25	509	525	534	539	523	524	520	520	509	517	521	514
26	520	534	545	549	533	534	530	529	519	525	529	522
27	529	542	553	558	540	541	538	537	527	531	536	528
28	538	549	562	567	548	548	545	545	536	537	542	534
29	546	558	573	577	557	556	553	553	545	545	549	541
30	554	570	623	601	574	566	563	563	558	561	563	550
31	562	582	650	625	591	577	574	574	571	576	576	560
32	571	591	650	637	601	585	583	582	580	584	584	567
33	580	599	650	645	608	593	590	590	589	591	590	573
34	591	607	650	650	615	600	598	597	597	597	596	579
35	608	617	650	650	625	610	608	608	608	605	604	587
36	650	650	650	650	650	650	650	650	650	650	650	650

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A2 Grade 3 Partial Credit Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 9	Form 10	Form 11	Form 12
0	200	200	200	200	200	200	200	200	200	200	200	200
1	200	200	200	200	200	200	200	200	200	200	200	200
2	200	200	200	200	200	200	200	200	200	200	200	200
3	200	200	200	200	200	200	200	200	200	200	200	200
4	200	200	200	200	200	200	200	200	200	200	200	200
5	200	200	200	200	200	200	200	200	200	200	200	200
6	200	200	200	200	200	200	200	200	200	200	200	200
7	296	329	327	328	330	328	319	303	299	333	331	337
8	314	340	338	339	340	339	330	314	310	342	340	345
9	326	348	347	348	349	349	339	323	319	349	346	352
10	337	356	356	357	358	358	348	332	328	355	353	358
11	347	367	367	367	368	368	358	342	339	364	362	367
12	358	385	384	383	385	383	376	363	359	380	382	385
13	369	403	402	398	402	399	394	385	379	397	401	402
14	379	413	413	409	411	408	404	396	391	405	409	410
15	389	420	422	417	419	416	412	405	400	411	416	417
16	400	428	431	425	427	424	420	414	409	417	422	423
17	411	437	442	435	436	434	430	424	420	425	430	430
18	424	451	456	448	448	448	444	440	433	439	446	445
19	437	465	470	462	461	462	459	455	446	453	463	460
20	449	475	481	473	470	471	469	465	456	461	471	468
21	460	484	490	482	477	478	477	473	464	467	478	474
22	471	492	499	491	483	485	484	480	472	474	485	480
23	483	501	510	502	492	494	493	490	482	482	493	488
24	496	514	527	522	507	509	507	506	496	501	509	501
25	509	528	543	542	524	525	522	521	511	519	524	515
26	520	538	554	553	534	535	531	530	521	527	532	523
27	529	546	563	561	541	542	538	537	529	533	539	530
28	538	554	572	569	548	549	545	544	537	539	545	536
29	546	563	584	579	557	557	553	552	546	547	553	543
30	554	575	594	603	574	566	563	562	559	563	566	552
31	562	587	650	629	594	577	574	573	571	579	579	564
32	571	596	650	642	605	586	583	583	581	588	588	574
33	580	605	650	650	613	593	591	592	590	594	594	582
34	591	614	650	650	621	600	600	603	599	601	601	590
35	608	626	650	650	630	609	610	611	611	610	609	600
36	650	650	650	650	650	650	650	650	650	650	650	650

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A3 Grade 4 Rating Scale Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 12
0	230	230	230	230	230	230	230	230	230	230	230	230
1	230	230	230	230	230	230	230	230	230	230	230	230
2	230	230	230	230	230	230	230	230	230	230	230	230
3	230	230	230	230	230	230	230	230	230	230	230	230
4	230	230	230	230	230	230	230	230	230	230	230	230
5	230	230	230	230	230	230	230	230	230	230	230	230
6	230	230	230	230	230	230	230	230	230	230	230	230
7	331	413	421	411	410	378	369	364	372	384	367	342
8	348	421	426	419	416	383	374	369	378	389	372	348
9	361	427	431	424	422	388	378	374	382	393	377	353
10	373	433	435	430	427	392	383	378	387	397	381	358
11	385	441	440	436	433	397	388	384	393	402	387	364
12	399	458	457	453	454	419	413	406	409	425	409	390
13	412	476	474	471	476	440	439	428	426	447	430	415
14	425	484	480	478	482	446	444	433	431	453	436	422
15	435	490	484	483	488	450	448	437	435	456	440	427
16	446	496	488	489	493	454	452	442	440	460	445	432
17	457	504	493	496	499	459	458	447	446	465	451	438
18	469	521	509	514	515	477	478	469	464	484	470	457
19	481	539	525	533	530	496	499	492	481	502	489	475
20	492	547	531	541	537	501	504	497	486	507	495	482
21	503	553	535	546	542	505	509	501	491	511	500	487
22	514	559	539	552	547	509	513	506	495	515	504	491
23	526	567	544	558	554	515	518	511	501	520	510	498
24	539	581	563	577	571	532	536	531	521	538	528	516
25	553	595	582	596	589	549	554	551	540	556	545	533
26	564	603	587	603	596	554	559	557	546	561	551	540
27	575	609	592	609	601	558	563	561	550	565	556	545
28	584	615	596	614	606	563	567	566	555	569	560	550
29	594	622	601	621	613	568	573	571	561	574	566	556
30	603	639	620	654	636	592	592	596	580	593	597	587
31	612	657	638	687	659	616	612	621	598	613	627	617
32	622	665	644	694	666	621	617	626	603	618	633	623
33	632	671	648	700	671	625	621	631	608	622	638	628
34	644	677	652	700	676	629	625	635	612	625	642	633
35	660	685	657	700	682	635	630	641	618	631	648	640
36	700	700	700	700	700	700	700	700	700	700	700	700

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A4 Grade 4 Partial Credit Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 12
0	230	230	230	230	230	230	230	230	230	230	230	230
1	230	230	230	230	230	230	230	230	230	230	230	230
2	230	230	230	230	230	230	230	230	230	230	230	230
3	230	230	230	230	230	230	230	230	230	230	230	230
4	230	230	230	230	230	230	230	230	230	230	230	230
5	230	230	230	230	230	230	230	230	230	230	230	230
6	230	230	230	230	230	230	230	230	230	230	230	230
7	331	414	422	411	410	375	369	363	365	378	364	330
8	348	422	428	419	417	383	375	369	371	384	371	339
9	361	428	433	425	422	388	379	374	377	389	376	346
10	373	435	437	431	428	393	384	379	383	395	382	354
11	385	443	442	438	435	399	390	385	391	402	389	364
12	399	460	459	455	456	421	416	408	409	427	410	391
13	412	477	475	472	477	442	441	429	425	449	431	416
14	425	485	481	479	483	448	446	435	431	455	437	423
15	435	491	485	484	489	452	450	439	436	459	442	429
16	446	497	489	490	494	456	454	444	441	463	447	434
17	457	505	495	497	501	461	459	449	448	468	453	441
18	469	522	511	516	516	479	480	471	466	486	472	459
19	481	540	526	536	531	497	500	493	483	504	491	477
20	492	548	531	543	537	502	506	498	488	508	496	483
21	503	554	535	548	541	506	510	503	493	512	501	488
22	514	560	539	553	546	510	514	507	497	516	505	493
23	526	567	544	560	552	516	519	512	502	521	511	499
24	539	580	563	580	569	532	537	532	522	538	528	516
25	553	594	581	601	587	549	554	552	541	555	545	533
26	564	601	586	608	594	554	559	557	546	560	551	540
27	575	607	590	614	600	558	563	561	550	564	556	544
28	584	613	594	620	606	563	567	566	554	568	560	549
29	594	621	599	627	613	568	572	571	560	573	566	555
30	603	638	618	633	635	591	591	595	578	592	596	584
31	612	655	638	700	667	615	611	620	596	611	626	616
32	622	664	644	700	684	621	617	626	601	616	632	624
33	632	673	649	700	694	626	621	630	605	620	637	630
34	644	679	657	700	700	631	625	635	609	624	642	637
35	660	700	664	700	700	637	630	640	614	630	648	645
36	700	700	700	700	700	700	700	700	700	700	700	700

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A5 Grade 5 Rating Scale Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 11	Form 12
0	255	255	255	255	255	255	255	255	255	255	255	255
1	255	255	255	255	255	255	255	255	255	255	255	255
2	255	255	255	255	255	255	255	255	255	255	255	255
3	255	255	255	255	255	255	255	255	255	255	255	255
4	255	255	255	255	255	255	255	255	255	255	255	255
5	255	255	255	255	255	255	255	255	255	255	255	255
6	255	255	255	255	255	255	255	255	255	255	255	255
7	333	385	375	360	361	357	359	344	366	335	379	349
8	353	393	385	367	373	366	368	353	374	348	388	360
9	367	399	392	373	382	373	375	360	379	358	395	368
10	380	405	399	379	391	380	381	367	385	367	402	377
11	394	412	407	386	402	389	389	376	392	379	411	387
12	408	438	428	421	420	413	415	401	419	396	427	406
13	422	464	450	455	437	437	442	425	446	414	444	426
14	435	471	459	463	448	446	451	434	453	426	452	437
15	447	477	466	469	457	453	457	442	459	435	460	446
16	459	483	473	474	466	460	464	449	465	445	467	454
17	471	490	482	482	476	469	472	458	472	455	475	464
18	484	508	497	503	492	486	492	479	497	469	488	483
19	497	526	513	525	507	503	514	500	521	482	501	503
20	509	534	522	533	518	512	523	509	529	493	509	514
21	521	540	529	539	526	519	530	517	535	502	516	522
22	533	546	536	544	535	526	536	524	541	512	523	530
23	546	553	545	552	547	535	544	533	548	524	533	540
24	559	579	567	576	567	558	573	552	580	550	556	562
25	572	606	590	600	587	581	604	572	611	577	579	584
26	584	613	600	607	598	590	613	581	619	589	589	595
27	595	619	607	613	607	597	619	588	625	599	596	603
28	606	625	614	619	616	604	626	595	630	608	603	611
29	615	633	622	626	628	613	633	604	638	619	612	621
30	625	659	639	642	650	638	667	617	644	631	634	636
31	635	686	658	658	671	663	703	630	740	644	655	652
32	645	694	667	665	683	672	711	639	740	655	664	662
33	656	699	674	671	692	679	718	646	740	665	672	671
34	669	705	681	677	701	686	724	653	740	674	679	679
35	688	713	690	684	713	695	732	662	740	687	688	689
36	740	740	740	740	740	740	740	740	740	740	740	740

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A6 Grade 5 Partial Credit Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 11	Form 12
0	255	255	255	255	255	255	255	255	255	255	255	255
1	255	255	255	255	255	255	255	255	255	255	255	255
2	255	255	255	255	255	255	255	255	255	255	255	255
3	255	255	255	255	255	255	255	255	255	255	255	255
4	255	255	255	255	255	255	255	255	255	255	255	255
5	255	255	255	255	255	255	255	255	255	255	255	255
6	255	255	255	255	255	255	255	255	255	255	255	255
7	333	390	378	354	352	351	336	349	364	334	379	333
8	353	397	387	364	368	359	346	358	371	346	390	349
9	367	403	395	372	381	371	355	365	380	357	397	369
10	380	408	402	381	392	381	366	371	388	367	405	381
11	394	416	410	392	405	392	383	379	396	379	414	392
12	408	440	431	428	422	415	416	402	423	396	429	411
13	422	465	452	460	440	439	444	426	448	413	445	431
14	435	473	462	467	451	448	454	436	456	426	454	442
15	447	479	470	473	461	455	462	445	462	438	462	450
16	459	485	476	478	470	463	469	452	467	448	470	458
17	471	492	485	485	480	472	477	462	475	460	478	468
18	484	510	499	505	495	489	497	482	498	473	491	486
19	497	527	515	526	510	505	517	502	522	486	503	505
20	509	534	523	533	519	513	525	511	529	496	511	515
21	521	540	529	538	528	520	530	517	535	505	517	523
22	533	545	536	544	536	526	536	524	540	514	524	530
23	546	553	544	551	546	535	543	532	547	525	533	539
24	559	578	565	573	565	557	571	551	578	550	555	559
25	572	603	587	596	584	579	599	570	608	574	577	581
26	584	611	596	603	594	587	606	579	616	586	586	592
27	595	617	604	609	602	594	612	587	622	595	593	601
28	606	622	611	616	610	601	618	594	629	604	600	610
29	615	630	619	624	620	610	625	603	637	614	609	620
30	625	655	636	640	640	633	657	616	643	626	630	634
31	635	684	656	656	660	657	690	628	740	639	650	648
32	645	692	667	666	670	666	699	637	740	651	659	657
33	656	740	676	673	678	673	708	645	740	662	666	666
34	669	740	684	740	686	680	714	653	740	675	674	676
35	688	740	693	740	696	689	740	662	740	685	683	688
36	740	740	740	740	740	740	740	740	740	740	740	740

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A7 Grade 6 Rating Scale Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	275	275	275	275	275	275	275	275	275	275	275	275
1	275	275	275	275	275	275	275	275	275	275	275	275
2	275	275	275	275	275	275	275	275	275	275	275	275
3	275	275	275	275	275	275	275	275	275	275	275	275
4	275	275	275	275	275	275	275	275	275	275	275	275
5	275	275	275	275	275	275	275	275	275	275	275	275
6	275	275	275	275	275	275	275	275	275	275	275	275
7	351	421	413	403	382	392	392	380	360	362	334	355
8	370	428	419	410	390	400	399	388	368	370	342	362
9	384	433	424	416	396	405	405	394	374	376	348	368
10	397	437	429	421	402	411	410	401	380	382	354	374
11	412	444	435	428	410	419	418	409	388	390	362	381
12	429	472	461	449	447	455	461	448	419	414	393	418
13	445	501	486	470	484	492	504	487	450	437	423	454
14	460	508	493	477	492	499	511	495	458	445	431	462
15	472	512	498	482	498	505	517	501	464	451	437	468
16	484	517	502	488	503	511	522	507	470	457	443	473
17	497	524	509	495	511	518	529	516	478	465	451	481
18	511	546	532	515	532	544	557	544	502	491	480	512
19	525	569	556	534	553	569	586	571	526	517	509	543
20	538	575	562	541	560	577	593	578	534	524	517	550
21	551	580	567	547	566	583	599	585	540	530	523	556
22	563	585	572	552	572	588	604	591	547	536	529	562
23	577	591	578	559	580	596	611	599	554	544	537	569
24	593	612	599	586	607	626	652	627	586	579	575	606
25	608	633	620	612	635	656	693	654	617	614	612	643
26	621	640	627	620	643	664	700	662	625	622	620	651
27	633	644	631	625	649	670	706	668	631	628	626	656
28	644	649	636	631	654	676	712	675	637	634	632	662
29	654	656	643	638	662	683	719	683	645	642	640	669
30	664	685	672	674	690	704	725	698	651	669	674	710
31	675	714	701	710	718	725	760	713	760	697	708	750
32	686	721	707	717	726	733	760	720	760	704	715	758
33	697	726	712	723	731	738	760	727	760	710	721	760
34	710	730	717	728	737	744	760	733	760	716	728	760
35	728	737	723	735	745	752	760	741	760	724	736	760
36	760	760	760	760	760	760	760	760	760	760	760	760

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A8 Grade 6 Partial Credit Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	275	275	275	275	275	275	275	275	275	275	275	275
1	275	275	275	275	275	275	275	275	275	275	275	275
2	275	275	275	275	275	275	275	275	275	275	275	275
3	275	275	275	275	275	275	275	275	275	275	275	275
4	275	275	275	275	275	275	275	275	275	275	275	275
5	275	275	275	275	275	275	275	275	275	275	275	275
6	275	275	275	275	275	275	275	275	275	275	275	275
7	351	424	418	398	384	395	394	384	365	361	322	351
8	370	430	425	407	392	403	401	392	372	370	331	361
9	384	436	429	414	399	408	407	398	378	377	338	368
10	397	441	434	422	405	414	413	404	383	383	347	375
11	412	447	440	432	413	422	421	412	391	392	359	383
12	429	476	465	454	450	458	464	451	421	416	395	420
13	445	504	490	474	487	494	506	490	452	440	425	456
14	460	510	496	481	494	502	513	497	460	448	433	464
15	472	515	501	486	500	508	519	503	467	454	439	470
16	484	520	505	492	506	514	525	510	473	460	446	476
17	497	526	511	499	514	521	532	518	481	469	455	484
18	511	548	534	518	535	546	559	546	506	494	484	515
19	525	570	557	537	555	571	587	573	529	519	512	545
20	538	577	563	544	563	579	595	580	537	527	520	552
21	551	581	568	549	568	584	600	587	543	533	525	557
22	563	586	572	554	574	590	606	593	549	539	531	563
23	577	592	578	561	582	597	613	601	556	546	539	570
24	593	613	599	587	609	627	653	628	587	581	576	610
25	608	634	619	613	636	657	694	656	618	615	613	650
26	621	641	626	621	644	664	701	665	627	623	621	657
27	633	646	631	627	650	670	707	671	633	630	627	663
28	644	651	636	632	657	676	713	677	639	636	633	669
29	654	657	642	639	665	683	721	685	647	644	640	677
30	664	686	670	675	693	703	728	699	653	670	674	684
31	675	716	702	712	719	722	760	714	760	699	710	760
32	686	724	718	720	760	760	760	722	760	709	719	760
33	697	730	733	729	760	760	760	728	760	717	760	760
34	710	736	751	736	760	760	760	735	760	727	760	760
35	728	743	760	760	760	760	760	740	760	734	760	760
36	760	760	760	760	760	760	760	760	760	760	760	760

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A9 Grade 7 Rating Scale Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 8	Form 9	Form 10	Form 11	Form 12
0	290	290	290	290	290	290	290	290	290	290	290	290
1	290	290	290	290	290	290	290	290	290	290	290	290
2	290	290	290	290	290	290	290	290	290	290	290	290
3	290	290	290	290	290	290	290	290	290	290	290	290
4	290	290	290	290	290	290	290	290	290	290	290	290
5	290	290	290	290	290	290	290	290	290	290	290	290
6	290	290	290	290	290	290	290	290	290	290	290	290
7	360	447	441	436	420	422	398	424	417	420	418	414
8	378	454	448	443	428	430	406	431	424	427	425	421
9	392	459	452	448	435	436	411	436	429	432	429	426
10	405	464	457	453	442	442	417	441	434	437	434	431
11	420	470	464	459	451	450	424	447	441	444	441	438
12	439	500	483	481	478	469	457	470	465	475	474	464
13	458	530	503	503	505	490	490	492	489	505	507	489
14	472	537	509	510	514	498	497	499	496	512	514	496
15	485	542	514	515	521	504	503	504	501	517	519	501
16	498	547	519	520	528	510	509	509	506	523	524	506
17	512	553	525	526	537	518	516	515	513	530	530	513
18	528	581	552	553	556	546	546	542	542	558	557	541
19	545	608	578	581	575	574	576	568	571	586	584	568
20	558	615	584	587	584	582	584	575	578	593	590	575
21	570	620	589	592	591	589	589	580	583	598	595	580
22	582	625	594	597	597	595	595	585	589	604	600	585
23	594	631	601	604	606	602	602	591	596	611	607	592
24	606	659	627	632	644	632	637	619	626	644	642	623
25	618	687	653	660	681	663	671	646	657	678	676	653
26	628	693	659	666	690	671	678	653	664	685	683	659
27	637	698	664	671	697	677	684	658	669	690	688	665
28	645	703	669	676	704	683	690	663	674	696	693	670
29	652	710	675	683	713	691	697	670	681	703	699	676
30	659	749	704	727	768	717	721	702	714	732	737	699
31	667	770	733	770	770	743	746	735	746	762	770	721
32	674	770	740	770	770	752	753	741	753	769	770	728
33	683	770	745	770	770	758	759	746	758	770	770	733
34	694	770	749	770	770	764	764	751	764	770	770	738
35	710	770	756	770	770	770	770	758	770	770	770	745
36	770	770	770	770	770	770	770	770	770	770	770	770

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A10 Grade 7 Partial Credit Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 8	Form 9	Form 10	Form 11	Form 12
0	290	290	290	290	290	290	290	290	290	290	290	290
1	290	290	290	290	290	290	290	290	290	290	290	290
2	290	290	290	290	290	290	290	290	290	290	290	290
3	290	290	290	290	290	290	290	290	290	290	290	290
4	290	290	290	290	290	290	290	290	290	290	290	290
5	290	290	290	290	290	290	290	290	290	290	290	290
6	290	290	290	290	290	290	290	290	290	290	290	290
7	360	444	430	424	407	417	395	428	416	415	408	411
8	378	451	438	432	416	428	403	434	424	423	416	418
9	392	456	445	438	424	435	408	439	429	429	423	423
10	405	461	453	444	431	442	414	444	435	435	430	429
11	420	468	462	451	440	450	421	450	442	443	438	436
12	439	498	483	475	467	470	454	472	465	474	473	462
13	458	529	503	499	495	490	487	494	488	505	506	488
14	472	536	510	506	504	498	495	500	496	512	513	495
15	485	541	515	511	512	504	502	505	501	517	518	501
16	498	546	520	517	520	510	508	510	507	522	523	506
17	512	553	526	524	534	517	516	516	514	530	530	513
18	528	581	552	553	559	545	546	542	543	558	557	541
19	545	610	578	583	579	574	577	567	571	586	583	568
20	558	616	585	589	587	582	584	573	578	593	590	575
21	570	621	589	594	594	589	589	578	583	599	595	580
22	582	626	594	599	601	595	595	583	588	604	600	585
23	594	633	600	606	609	602	602	590	595	611	606	592
24	606	664	626	639	648	632	637	616	624	645	644	622
25	618	696	653	674	688	664	673	644	656	680	684	653
26	628	703	660	683	698	673	681	654	666	688	691	661
27	637	709	666	689	706	681	688	663	674	693	697	667
28	645	714	672	696	714	688	695	670	681	699	702	673
29	652	720	678	703	723	696	704	678	690	706	709	680
30	659	726	707	709	731	723	729	710	724	741	715	703
31	667	770	736	770	770	751	757	742	757	770	770	726
32	674	770	742	770	770	760	765	755	766	770	770	734
33	683	770	747	770	770	769	770	769	770	770	770	743
34	694	770	751	770	770	770	770	770	770	770	770	753
35	710	770	758	770	770	770	770	770	770	770	770	763
36	770	770	770	770	770	770	770	770	770	770	770	770

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A11 Grade 8 Rating Scale Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	300	300	300	300	300	300	300	300	300	300	300	300
1	300	300	300	300	300	300	300	300	300	300	300	300
2	300	300	300	300	300	300	300	300	300	300	300	300
3	300	300	300	300	300	300	300	300	300	300	300	300
4	300	300	300	300	300	300	300	300	300	300	300	300
5	300	300	300	300	300	300	300	300	300	300	300	300
6	300	300	300	300	300	300	300	300	300	300	300	300
7	339	339	348	358	300	342	337	300	322	334	300	300
8	358	350	364	372	300	353	349	307	335	347	300	300
9	372	358	376	382	310	361	359	318	345	357	301	300
10	385	365	388	391	319	369	368	330	353	366	310	300
11	398	375	402	400	332	380	379	344	364	377	321	300
12	413	410	421	409	380	408	404	377	378	404	365	350
13	427	445	440	419	429	436	429	411	395	432	411	427
14	441	456	454	428	441	446	441	426	407	445	424	441
15	453	464	465	437	451	455	451	438	417	455	434	451
16	466	471	477	446	460	463	460	448	426	464	443	461
17	481	481	491	457	471	473	471	461	436	475	454	473
18	499	509	511	473	490	498	492	481	457	495	473	494
19	517	537	531	489	509	523	513	501	480	517	495	514
20	532	548	545	501	521	534	525	515	493	529	507	526
21	545	555	557	511	530	542	535	526	502	539	517	536
22	558	563	569	522	539	550	544	537	511	548	526	546
23	572	573	584	534	551	561	556	551	523	560	537	559
24	588	597	611	566	577	600	593	577	554	596	568	583
25	603	623	638	599	603	639	632	605	587	635	600	607
26	615	633	653	613	615	650	644	620	600	648	613	620
27	626	641	665	623	625	658	654	631	610	657	623	630
28	635	649	677	634	634	666	663	642	619	666	632	641
29	643	658	691	647	646	677	675	656	630	678	643	653
30	652	683	711	676	675	722	708	684	659	704	676	680
31	660	708	731	707	705	767	742	713	690	731	710	707
32	669	719	746	721	717	778	755	728	703	744	723	720
33	678	726	757	732	727	786	764	740	713	754	733	730
34	690	734	770	742	736	795	774	751	722	763	742	740
35	708	744	785	755	748	800	785	765	733	775	753	754
36	800	800	800	800	800	800	800	800	800	800	800	800

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A12 Grade 8 Partial Credit Model, Method 1

Raw Score	Scale Score											
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	300	300	300	300	300	300	300	300	300	300	300	300
1	300	300	300	300	300	300	300	300	300	300	300	300
2	300	300	300	300	300	300	300	300	300	300	300	300
3	300	300	300	300	300	300	300	300	300	300	300	300
4	300	300	300	300	300	300	300	300	300	300	300	300
5	300	300	300	300	300	300	300	300	300	300	300	300
6	300	300	300	300	300	300	300	300	300	300	300	300
7	339	340	347	331	300	339	324	300	315	323	300	300
8	358	350	363	343	300	350	340	300	325	333	300	300
9	372	357	375	358	300	358	352	305	337	347	300	300
10	385	364	387	372	306	366	362	321	347	358	300	300
11	398	373	400	386	322	377	375	339	359	372	310	300
12	413	407	419	398	374	404	400	375	375	401	354	343
13	427	443	437	409	424	432	426	409	390	429	402	421
14	441	452	451	420	437	444	438	423	402	442	417	436
15	453	460	462	431	447	453	449	434	412	451	428	447
16	466	468	474	442	457	461	459	446	423	461	439	458
17	481	477	488	455	469	473	470	459	435	472	452	472
18	499	505	507	471	488	498	491	479	457	493	473	492
19	517	535	528	487	508	522	512	499	478	515	493	513
20	532	546	543	499	519	533	524	513	490	528	505	525
21	545	554	556	510	529	541	533	525	500	538	515	536
22	558	562	569	521	539	549	543	536	510	547	524	546
23	572	573	585	535	551	559	554	550	521	560	536	559
24	588	599	613	566	577	598	592	577	552	597	566	583
25	603	625	641	598	603	638	632	605	585	636	601	607
26	615	637	656	612	616	650	646	620	599	649	616	620
27	626	645	668	624	626	658	658	632	610	660	626	631
28	635	653	680	635	636	667	669	644	620	670	636	641
29	643	662	694	649	648	678	682	659	632	682	647	655
30	652	686	713	678	678	738	716	688	660	708	679	682
31	660	712	734	708	707	800	750	717	695	736	712	711
32	669	723	750	721	720	800	763	733	713	749	725	726
33	678	734	765	732	729	800	775	745	727	759	734	738
34	690	742	782	743	738	800	788	758	737	770	744	749
35	708	800	796	756	751	800	800	773	749	783	757	764
36	800	800	800	800	800	800	800	800	800	800	800	800

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A13 High School Rating Scale Model, Method 1

Raw Score	Scale Score																			
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12	Form 13	Form 14	Form 15	Form 16	Form 17	Form 18	Form 19	Form 20
0	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
1	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
2	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
3	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
4	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
5	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
6	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
7	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
8	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
9	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
10	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
11	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
12	511	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	546	544	559	552	528	555	526	529	531	539	550	545	532	539	555	524	539	542	543
14	535	552	549	566	558	534	563	532	535	539	545	556	551	539	545	562	529	546	548	549
15	543	555	552	570	562	538	569	537	539	544	550	560	555	543	549	566	533	550	551	553
16	549	558	555	574	565	542	574	540	542	549	553	563	558	547	551	570	536	553	554	556
17	555	561	557	577	568	545	578	543	545	552	556	566	561	550	554	573	538	556	557	558
18	560	563	559	580	570	548	581	546	548	556	559	569	563	553	556	576	541	559	559	561
19	565	565	561	583	573	551	585	548	550	560	561	572	566	556	559	579	543	562	562	564
20	569	568	564	586	576	554	588	551	553	564	564	574	569	559	561	582	546	566	564	566
21	574	570	566	589	580	557	591	554	555	568	567	578	571	563	564	585	549	569	567	569
22	579	574	569	593	584	561	595	558	559	573	571	581	575	567	567	589	552	574	571	573
23	585	579	574	598	589	568	598	563	564	579	576	587	580	574	572	594	558	581	576	578
24	590	593	590	603	597	582	602	574	581	587	585	594	593	589	578	600	581	595	593	590
25	595	607	607	609	605	596	605	585	598	594	594	602	606	604	585	606	604	609	610	603
26	600	612	612	613	610	603	609	591	604	600	600	607	611	611	590	610	609	615	615	609
27	605	616	615	617	613	607	612	595	608	605	604	610	615	615	593	614	613	619	619	613
28	610	618	618	620	616	610	615	599	611	609	607	614	619	619	596	618	615	623	622	616
29	615	621	620	623	619	613	619	602	613	613	610	616	621	622	598	621	618	626	624	618
30	619	623	622	626	622	616	622	604	616	617	613	619	624	625	601	624	620	629	626	621
31	624	626	624	629	625	619	625	607	618	620	615	622	626	628	603	627	623	632	629	624
32	629	628	626	632	628	622	629	610	621	624	618	625	629	631	606	630	625	635	631	626
33	634	631	629	636	631	626	632	613	624	628	621	628	632	634	609	633	628	638	634	629

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

34	639	634	632	639	635	630	636	617	627	632	625	632	635	638	612	637	632	643	638	633
35	645	639	636	644	639	635	640	622	632	637	630	637	640	642	617	643	637	649	643	638
36	651	650	647	649	644	643	644	632	644	643	640	645	648	647	631	651	649	660	653	646
37	657	661	659	655	648	651	648	643	656	649	650	652	656	653	645	659	660	670	664	655
38	663	666	663	659	652	657	653	649	662	654	656	657	662	657	651	665	665	675	669	660
39	668	670	667	663	656	661	657	653	666	658	660	661	665	661	654	669	668	679	672	664
40	673	673	669	667	659	664	660	657	669	662	663	664	669	664	657	672	671	683	675	667
41	678	675	671	670	662	668	664	659	672	666	666	667	671	667	660	675	673	686	678	670
42	683	677	673	673	664	670	668	662	674	669	669	670	674	670	662	678	676	689	680	672
43	688	680	676	676	667	673	671	665	677	673	672	672	676	673	665	681	678	692	682	675
44	693	682	678	679	670	676	675	668	679	677	674	675	679	676	667	684	681	695	685	678
45	698	685	680	682	673	680	680	671	682	681	678	679	682	680	670	688	684	699	688	681
46	704	688	683	687	678	684	685	675	685	686	681	683	685	684	673	692	687	703	691	684
47	710	693	688	694	684	690	693	680	691	693	687	689	691	690	679	699	693	710	697	690
48	717	712	703	714	695	707	714	698	706	703	699	713	707	700	704	717	710	729	715	707
49	723	731	718	734	707	724	736	717	722	713	712	737	723	711	729	735	727	748	733	724
50	730	736	723	741	713	731	744	723	728	720	718	743	729	717	735	741	732	754	738	730
51	735	739	726	745	717	735	750	727	732	725	722	747	733	721	738	746	735	758	742	734
52	740	742	729	749	720	739	755	730	735	729	725	750	736	724	741	749	738	762	744	737
53	745	745	731	752	723	742	759	733	738	733	728	753	739	728	744	752	741	765	747	740
54	749	747	733	755	725	745	763	736	740	737	731	755	742	731	746	755	743	768	749	742
55	754	750	735	758	728	747	766	739	743	740	733	758	744	733	748	758	745	771	752	745
56	758	752	737	761	731	750	770	742	745	744	736	761	747	737	751	762	748	774	754	748
57	762	755	740	765	735	754	774	745	748	749	739	764	750	740	754	765	751	778	757	751
58	766	758	743	769	739	758	779	749	752	754	743	769	753	744	757	769	755	782	761	754
59	770	763	747	776	745	764	784	754	757	761	749	775	758	750	763	776	760	789	766	760
60	775	780	770	789	760	776	790	770	777	774	760	789	777	760	794	790	789	801	788	770
61	779	797	794	802	776	789	795	786	797	786	772	804	797	770	836	804	828	814	810	781
62	783	802	799	808	781	795	801	792	803	793	778	810	803	777	841	811	833	820	816	787
63	787	805	802	813	785	799	806	796	807	798	782	814	807	781	845	815	837	824	819	791
64	791	808	805	816	789	803	810	800	810	802	786	817	810	784	848	819	840	827	822	794
65	796	811	807	820	791	806	814	803	812	806	789	820	812	787	851	822	842	830	825	796
66	800	813	809	823	794	808	817	806	815	810	791	822	815	790	853	825	844	833	827	799
67	805	815	811	826	797	811	821	808	817	814	794	825	818	793	855	828	847	836	829	802
68	810	818	813	829	800	814	825	811	820	818	797	828	820	796	858	831	850	840	832	804
69	816	821	816	832	804	818	830	814	823	822	800	831	823	800	861	835	852	843	835	807
70	824	824	819	837	808	822	835	818	826	828	804	835	826	804	864	839	856	848	838	811
71	837	829	823	844	814	828	844	824	831	836	810	842	832	811	870	846	862	855	844	816
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

Table A14 High School Partial Credit Model, Method 1

Raw Score	Scale Score																			
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12	Form 13	Form 14	Form 15	Form 16	Form 17	Form 18	Form 19	Form 20
0	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
1	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
2	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
3	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
4	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
5	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
6	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
7	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
8	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
9	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
10	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
11	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
12	511	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	548	534	556	500	517	500	531	529	529	538	500	542	532	539	556	520	540	541	540
14	535	553	539	563	542	526	538	536	534	538	544	546	550	539	544	563	525	547	547	546
15	543	556	544	567	549	533	546	540	538	543	549	552	556	543	548	567	529	551	550	551
16	549	559	547	571	556	538	556	544	542	547	552	558	560	546	551	571	532	555	554	554
17	555	562	550	574	562	542	563	547	545	551	555	562	563	550	554	574	534	558	556	558
18	560	564	553	577	566	546	569	550	547	555	558	566	565	552	557	577	536	561	559	561
19	565	566	555	581	570	550	573	553	550	558	561	569	568	555	559	580	539	564	561	564
20	569	569	558	584	573	553	578	556	553	562	564	572	571	558	562	583	541	567	564	567
21	574	572	562	587	577	557	582	559	556	566	568	576	574	562	565	586	544	571	567	570
22	579	575	567	591	581	562	587	563	559	571	572	580	577	566	568	590	547	575	571	574
23	585	580	573	596	586	568	591	569	564	577	577	585	582	573	573	595	552	581	576	580
24	590	594	591	601	594	583	595	580	581	584	586	592	595	588	579	600	576	595	593	592
25	595	608	608	607	602	597	600	590	598	591	595	600	607	603	586	606	600	609	610	604
26	600	613	612	612	607	604	604	595	604	598	600	605	613	610	591	611	606	615	615	610
27	605	616	616	616	611	608	608	599	608	603	604	609	617	614	594	615	610	619	619	613
28	610	619	619	620	614	611	612	602	611	607	607	612	620	618	597	618	613	623	622	616
29	615	621	621	623	618	614	616	604	614	611	610	615	623	622	599	621	616	626	624	619
30	619	623	623	626	621	617	620	607	616	615	613	618	625	625	602	624	619	629	627	621
31	624	626	625	629	624	620	624	609	619	619	615	621	628	628	604	627	621	632	629	624
32	629	628	628	633	627	623	628	612	621	623	618	624	631	631	606	630	624	635	632	626
33	634	630	630	636	631	626	632	615	624	627	621	628	633	634	609	633	627	639	635	629
34	639	634	633	640	635	630	637	619	628	632	625	632	637	638	613	637	630	643	638	633

Appendix A. Method 1 (Rasch Models—Mean/Sigma Equating)

35	645	638	638	645	639	636	641	624	633	637	630	637	642	643	618	643	635	649	643	638
36	651	649	649	650	644	644	646	634	644	643	640	645	649	648	632	651	647	659	653	646
37	657	660	660	656	649	652	650	644	657	648	650	653	657	653	646	659	658	669	664	655
38	663	666	664	660	653	657	654	649	662	653	656	658	662	658	651	664	664	675	669	660
39	668	669	667	664	656	661	658	653	666	658	660	662	666	661	654	669	667	679	672	664
40	673	672	669	667	659	665	662	656	669	662	664	665	669	665	657	672	670	682	675	667
41	678	675	672	670	662	668	665	659	672	666	666	668	672	668	660	675	673	686	678	670
42	683	677	674	673	665	671	669	662	674	669	669	670	674	671	662	679	676	689	680	673
43	688	680	676	676	668	674	673	664	677	673	672	673	676	674	665	682	679	692	683	675
44	693	683	678	679	671	677	676	667	679	677	675	676	679	677	667	685	682	695	685	678
45	698	686	680	683	674	680	681	670	682	682	678	679	682	680	670	688	685	699	688	681
46	704	689	683	687	679	684	686	674	686	687	682	683	685	685	674	693	689	704	692	685
47	710	694	688	694	685	691	694	679	691	695	688	689	690	691	679	699	695	712	697	690
48	717	713	702	714	697	708	715	697	707	705	700	713	705	701	704	717	714	731	715	707
49	723	732	718	733	708	725	735	716	723	714	712	737	722	711	729	735	732	749	733	724
50	730	737	723	740	714	731	743	724	729	721	718	743	728	717	735	742	737	755	738	730
51	735	740	726	745	717	735	749	730	733	726	722	747	733	721	738	746	740	759	741	734
52	740	743	729	748	720	739	753	734	736	730	725	750	736	724	741	750	743	763	744	737
53	745	745	731	751	723	741	757	738	738	733	728	753	739	727	744	753	746	766	747	740
54	749	747	733	755	726	744	761	741	741	737	731	756	742	730	747	756	748	768	749	743
55	754	750	736	758	728	747	764	743	743	740	733	758	745	733	749	759	751	771	751	746
56	758	752	738	761	731	750	768	746	746	744	736	761	748	736	752	762	753	774	754	748
57	762	755	740	765	734	753	772	749	749	748	739	764	751	740	755	765	756	777	756	752
58	766	758	743	769	738	757	777	753	752	752	743	768	755	744	758	769	759	781	760	755
59	770	763	748	776	744	763	782	758	757	759	749	774	760	750	764	776	765	787	765	761
60	775	779	771	789	759	775	787	773	777	771	760	788	778	759	795	790	770	800	787	771
61	779	796	794	802	774	788	793	788	797	783	772	803	799	769	841	805	900	816	812	781
62	783	801	799	808	780	796	798	794	802	791	778	810	809	776	849	812	900	824	821	787
63	787	804	803	813	784	801	803	797	806	796	782	815	818	780	857	817	900	900	828	790
64	791	807	806	817	787	805	808	800	809	800	786	819	823	784	863	821	900	900	833	793
65	796	810	809	821	790	809	812	803	812	804	789	823	828	787	900	825	900	900	837	796
66	800	813	812	824	792	812	816	805	815	808	792	826	832	791	900	829	900	900	841	798
67	805	815	814	828	795	815	821	807	818	811	795	830	835	794	900	832	900	900	845	801
68	810	819	817	832	798	819	826	810	821	815	798	834	838	798	900	836	900	900	850	803
69	816	824	820	837	802	823	831	813	824	819	801	839	841	803	900	841	900	900	856	806
70	824	829	823	843	806	827	838	816	828	824	805	844	845	809	900	846	900	900	862	810
71	837	900	828	852	812	834	848	822	834	832	811	851	850	817	900	854	900	900	900	816
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B1 Grade 3 Rating Scale Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 9	Form 10	Form 11	Form 12
0	200	200	200	200	200	200	200	200	200	200	200	200
1	200	200	200	200	200	200	200	200	200	200	200	200
2	200	200	200	200	200	200	200	200	200	200	200	200
3	200	200	200	200	200	200	200	200	200	200	200	200
4	200	200	200	200	200	200	200	200	200	200	200	200
5	200	200	200	200	200	200	200	200	200	200	200	200
6	200	200	200	200	200	200	200	200	200	200	200	200
7	296	322	322	320	327	326	316	299	293	328	325	330
8	314	333	334	332	338	337	327	310	305	336	334	338
9	326	342	343	341	346	345	335	318	314	343	340	345
10	337	350	352	350	353	353	343	327	323	350	347	352
11	347	361	363	360	363	363	353	337	335	358	356	360
12	358	379	382	377	380	378	371	360	355	375	376	379
13	369	398	400	394	397	394	389	382	376	392	397	398
14	379	409	411	405	407	404	400	392	387	401	405	406
15	389	417	420	414	415	413	408	401	396	407	412	413
16	400	425	429	423	422	420	416	409	405	414	419	420
17	411	435	439	433	431	429	426	419	415	422	427	428
18	424	450	453	447	444	443	441	436	429	436	444	443
19	437	464	466	460	458	458	456	452	442	451	462	459
20	449	474	477	471	468	469	466	462	453	459	470	467
21	460	483	485	480	475	477	475	471	461	466	477	474
22	471	491	494	489	483	484	483	479	470	472	484	480
23	483	500	505	500	492	494	492	489	481	481	492	488
24	496	514	521	521	509	510	507	506	496	500	508	502
25	509	528	538	542	526	527	523	522	511	519	524	516
26	520	537	548	554	536	537	533	532	521	527	532	525
27	529	546	557	563	544	545	541	541	530	534	539	531
28	538	554	566	572	552	552	549	548	539	541	545	537
29	546	563	578	583	561	561	557	557	549	549	554	545
30	554	576	631	608	579	571	568	568	563	566	567	554
31	562	588	650	634	597	582	579	579	576	582	581	564
32	571	598	650	645	607	592	588	588	586	590	590	572
33	580	606	650	650	615	599	596	596	595	597	596	578
34	591	614	650	650	623	607	604	604	604	604	603	585
35	608	625	650	650	633	617	615	615	616	612	611	593
36	650	650	650	650	650	650	650	650	650	650	650	650

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B2 Grade 3 Partial Credit Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 9	Form 10	Form 11	Form 12
0	200	200	200	200	200	200	200	200	200	200	200	200
1	200	200	200	200	200	200	200	200	200	200	200	200
2	200	200	200	200	200	200	200	200	200	200	200	200
3	200	200	200	200	200	200	200	200	200	200	200	200
4	200	200	200	200	200	200	200	200	200	200	200	200
5	200	200	200	200	200	200	200	200	200	200	200	200
6	200	200	200	200	200	200	200	200	200	200	200	200
7	296	323	320	321	323	322	312	295	291	327	324	330
8	314	334	332	333	334	333	323	307	303	336	333	339
9	326	342	341	342	343	343	332	316	313	343	340	346
10	337	351	351	351	352	352	342	325	322	350	347	353
11	347	362	362	361	363	363	353	336	333	358	356	361
12	358	380	380	378	381	378	371	358	353	376	377	380
13	369	399	398	394	398	394	390	380	374	392	397	398
14	379	409	409	405	408	405	400	392	387	401	406	407
15	389	417	419	413	416	413	408	402	396	407	412	413
16	400	425	428	422	423	421	417	410	405	414	419	419
17	411	435	439	432	433	431	427	421	416	422	427	427
18	424	449	454	446	446	445	442	437	430	436	444	442
19	437	464	469	460	459	460	457	453	443	451	461	458
20	449	474	480	471	468	470	467	463	453	459	470	466
21	460	482	490	481	475	477	475	471	462	466	477	473
22	471	491	499	490	482	484	483	479	471	472	483	479
23	483	501	510	501	491	493	492	489	481	481	492	487
24	496	514	527	522	507	509	507	506	496	500	508	501
25	509	528	544	543	524	525	522	521	510	519	524	515
26	520	538	555	554	534	536	531	531	521	527	533	523
27	529	547	565	562	542	543	539	538	529	534	539	530
28	538	555	574	571	549	550	546	545	537	540	546	536
29	546	565	587	582	559	558	554	553	547	548	554	544
30	554	577	597	606	576	568	565	564	560	565	568	554
31	562	589	650	633	596	579	576	575	573	581	582	565
32	571	599	650	646	608	588	586	585	584	590	590	576
33	580	608	650	650	617	596	594	594	593	597	597	585
34	591	617	650	650	625	603	602	606	602	604	604	593
35	608	630	650	650	634	613	613	615	614	613	613	603
36	650	650	650	650	650	650	650	650	650	650	650	650

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B3 Grade 4 Rating Scale Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 12
0	230	230	230	230	230	230	230	230	230	230	230	230
1	230	230	230	230	230	230	230	230	230	230	230	230
2	230	230	230	230	230	230	230	230	230	230	230	230
3	230	230	230	230	230	230	230	230	230	230	230	230
4	230	230	230	230	230	230	230	230	230	230	230	230
5	230	230	230	230	230	230	230	230	230	230	230	230
6	230	230	230	230	230	230	230	230	230	230	230	230
7	331	411	419	409	407	373	364	358	367	379	361	334
8	348	419	425	417	414	379	369	364	373	385	367	341
9	361	426	429	423	420	383	374	369	378	389	372	346
10	373	432	434	428	425	388	378	373	383	393	377	352
11	385	440	440	436	432	394	384	379	389	399	383	358
12	399	459	458	454	455	417	411	403	407	423	406	386
13	412	478	476	472	478	440	438	426	424	448	429	413
14	425	486	482	480	485	446	444	432	430	453	435	420
15	435	493	486	486	490	450	448	437	435	457	440	425
16	446	499	491	492	496	455	453	441	440	461	445	431
17	457	508	496	499	503	460	458	447	446	467	451	437
18	469	526	514	519	519	480	481	471	465	486	472	457
19	481	546	531	539	536	499	503	495	483	506	492	477
20	492	554	537	547	543	505	509	501	489	512	499	484
21	503	561	541	553	549	509	513	505	494	516	503	489
22	514	567	546	559	554	514	517	510	499	520	508	495
23	526	575	551	566	561	519	523	516	505	525	514	501
24	539	590	571	586	580	538	542	537	526	544	533	520
25	553	605	591	607	599	556	562	559	547	563	552	540
26	564	613	597	614	607	562	567	565	553	569	559	546
27	575	620	602	620	612	566	572	569	558	573	563	552
28	584	626	606	626	617	571	576	574	563	577	568	557
29	594	635	612	633	624	576	582	580	569	583	574	564
30	603	653	632	668	649	602	602	607	589	603	607	596
31	612	671	652	700	674	627	623	633	608	624	640	629
32	622	680	658	700	681	633	629	639	614	630	646	636
33	632	686	662	700	687	638	633	644	619	634	651	641
34	644	693	666	700	692	642	638	648	624	638	656	646
35	660	700	672	700	699	648	643	654	630	643	662	653
36	700	700	700	700	700	700	700	700	700	700	700	700

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B4 Grade 4 Partial Credit Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 12
0	230	230	230	230	230	230	230	230	230	230	230	230
1	230	230	230	230	230	230	230	230	230	230	230	230
2	230	230	230	230	230	230	230	230	230	230	230	230
3	230	230	230	230	230	230	230	230	230	230	230	230
4	230	230	230	230	230	230	230	230	230	230	230	230
5	230	230	230	230	230	230	230	230	230	230	230	230
6	230	230	230	230	230	230	230	230	230	230	230	230
7	331	409	418	407	405	368	360	354	357	370	355	319
8	348	418	425	415	413	376	367	361	363	377	363	329
9	361	425	430	422	419	382	372	366	369	383	369	336
10	373	432	434	428	425	387	377	372	376	389	375	345
11	385	441	440	435	433	394	384	379	385	397	382	355
12	399	459	458	453	455	417	411	403	404	424	405	385
13	412	478	476	472	478	440	439	426	422	448	428	412
14	425	486	482	480	485	446	444	432	428	454	435	420
15	435	493	486	486	491	450	448	437	433	458	440	426
16	446	500	491	492	496	455	453	442	439	462	445	432
17	457	508	497	499	504	461	458	448	447	468	452	439
18	469	526	514	520	520	480	481	471	466	487	472	459
19	481	546	531	541	536	499	503	495	484	507	493	478
20	492	554	537	549	542	505	509	501	490	512	499	485
21	503	561	541	555	548	509	513	505	495	516	503	490
22	514	567	545	560	553	514	518	510	499	520	508	495
23	526	575	551	567	559	519	523	516	505	525	514	501
24	539	590	570	589	577	538	542	538	526	544	533	520
25	553	604	590	612	596	556	562	559	547	562	552	539
26	564	612	596	620	604	561	567	565	553	568	558	545
27	575	619	600	626	611	566	571	569	557	572	563	551
28	584	625	604	632	617	570	575	574	562	576	568	556
29	594	634	610	640	625	576	581	579	567	581	574	562
30	603	652	631	646	649	601	602	606	587	602	607	594
31	612	671	652	700	683	627	623	632	606	622	639	628
32	622	680	658	700	700	634	629	639	612	628	646	637
33	632	689	664	700	700	639	633	643	616	633	651	644
34	644	697	673	700	700	644	638	648	620	637	656	651
35	660	700	680	700	700	651	644	655	626	643	663	660
36	700	700	700	700	700	700	700	700	700	700	700	700

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B5 Grade 5 Rating Scale Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 11	Form 12
0	255	255	255	255	255	255	255	255	255	255	255	255
1	255	255	255	255	255	255	255	255	255	255	255	255
2	255	255	255	255	255	255	255	255	255	255	255	255
3	255	255	255	255	255	255	255	255	255	255	255	255
4	255	255	255	255	255	255	255	255	255	255	255	255
5	255	255	255	255	255	255	255	255	255	255	255	255
6	255	255	255	255	255	255	255	255	255	255	255	255
7	333	377	367	350	352	347	349	333	357	323	370	338
8	353	386	377	358	364	357	359	343	365	337	380	350
9	367	392	385	364	374	364	366	350	371	348	388	359
10	380	398	392	370	384	372	373	358	377	358	396	368
11	394	406	401	379	395	382	381	368	385	371	406	379
12	408	434	423	415	414	407	409	394	414	389	423	400
13	422	462	447	453	433	433	438	420	442	408	440	422
14	435	470	457	461	445	442	448	430	451	421	450	434
15	447	476	465	467	455	450	455	438	457	431	457	443
16	459	483	472	473	464	458	462	446	463	441	465	451
17	471	491	481	481	475	467	470	455	471	453	474	462
18	484	510	498	505	492	486	493	478	497	467	488	482
19	497	529	515	528	508	504	516	501	524	482	502	504
20	509	537	525	536	520	514	526	511	532	493	511	516
21	521	544	533	542	529	521	533	519	538	504	518	525
22	533	550	540	549	539	529	540	526	545	514	526	533
23	546	558	549	557	551	538	548	536	553	527	536	544
24	559	586	573	582	573	563	580	557	587	555	561	567
25	572	615	598	608	595	588	613	578	621	583	586	591
26	584	623	608	616	607	598	622	588	629	597	596	603
27	595	629	616	623	617	605	629	596	635	607	604	612
28	606	636	623	629	626	613	636	604	641	617	612	621
29	615	644	633	637	638	623	645	613	649	629	622	631
30	625	672	651	654	662	649	681	627	656	642	645	647
31	635	701	671	671	685	676	719	641	740	656	668	664
32	645	709	681	679	698	686	729	650	740	668	678	676
33	656	716	688	685	707	694	736	658	740	678	686	685
34	669	722	696	691	717	701	740	666	740	689	693	693
35	688	730	705	699	730	711	740	676	740	702	703	705
36	740	740	740	740	740	740	740	740	740	740	740	740

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B6 Grade 5 Partial Credit Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 11	Form 12
0	255	255	255	255	255	255	255	255	255	255	255	255
1	255	255	255	255	255	255	255	255	255	255	255	255
2	255	255	255	255	255	255	255	255	255	255	255	255
3	255	255	255	255	255	255	255	255	255	255	255	255
4	255	255	255	255	255	255	255	255	255	255	255	255
5	255	255	255	255	255	255	255	255	255	255	255	255
6	255	255	255	255	255	255	255	255	255	255	255	255
7	333	377	364	337	336	334	318	332	348	315	365	314
8	353	385	375	348	353	343	329	342	356	329	377	332
9	367	392	383	357	367	356	339	349	366	341	386	354
10	380	398	390	368	380	367	351	357	375	352	394	367
11	394	406	400	380	394	379	370	366	384	365	404	380
12	408	433	422	419	413	406	407	391	414	384	421	401
13	422	461	447	455	433	431	437	417	442	403	439	423
14	435	470	458	463	445	442	449	429	451	418	449	435
15	447	476	466	469	456	450	457	438	457	430	457	444
16	459	483	473	475	466	458	465	447	463	442	466	453
17	471	491	482	483	478	468	474	457	471	455	476	464
18	484	510	499	506	494	487	496	480	498	470	490	484
19	497	529	516	528	510	505	518	502	524	484	503	505
20	509	538	525	536	521	514	527	511	532	495	512	516
21	521	544	532	542	530	522	533	519	538	505	519	525
22	533	550	539	548	539	529	540	526	544	515	526	533
23	546	558	548	556	551	539	548	535	552	528	536	543
24	559	586	571	580	572	563	578	556	586	555	560	565
25	572	614	596	606	593	587	609	577	620	582	585	589
26	584	623	607	614	604	597	618	587	629	595	596	602
27	595	629	615	621	613	604	624	596	635	605	603	612
28	606	636	623	628	622	611	631	604	642	615	611	622
29	615	643	632	637	633	621	639	614	651	626	621	632
30	625	671	651	655	656	648	674	628	659	640	644	648
31	635	703	673	672	677	674	711	642	740	654	667	664
32	645	712	686	684	689	684	721	651	740	667	677	674
33	656	740	695	691	697	692	730	660	740	679	684	684
34	669	740	704	740	706	699	737	669	740	694	692	695
35	688	740	714	740	718	709	740	680	740	705	703	709
36	740	740	740	740	740	740	740	740	740	740	740	740

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B7 Grade 6 Rating Scale Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	275	275	275	275	275	275	275	275	275	275	275	275
1	275	275	275	275	275	275	275	275	275	275	275	275
2	275	275	275	275	275	275	275	275	275	275	275	275
3	275	275	275	275	275	275	275	275	275	275	275	275
4	275	275	275	275	275	275	275	275	275	275	275	275
5	275	275	275	275	275	275	275	275	275	275	275	275
6	275	275	275	275	275	275	275	275	275	275	275	275
7	351	420	411	400	377	388	388	375	352	354	323	346
8	370	427	418	408	385	396	396	383	361	363	332	354
9	384	433	423	414	392	402	402	390	368	370	339	361
10	397	438	429	420	399	409	408	397	375	376	345	367
11	412	445	436	428	407	417	416	406	383	385	354	375
12	429	477	464	451	449	458	464	450	418	412	388	416
13	445	509	493	474	490	498	512	493	452	438	422	457
14	460	516	500	482	498	507	520	502	461	447	431	465
15	472	522	505	488	505	513	526	509	468	453	437	472
16	484	527	511	494	512	520	532	516	475	460	444	478
17	497	534	518	502	520	528	540	525	483	469	453	486
18	511	559	544	524	543	556	572	556	510	498	486	521
19	525	584	570	546	567	585	603	587	537	526	518	556
20	538	591	577	554	575	593	611	595	546	535	526	564
21	551	597	583	560	582	600	617	602	553	542	533	570
22	563	602	588	566	588	606	624	609	560	548	540	576
23	577	609	595	574	597	615	632	618	568	557	549	585
24	593	633	618	603	627	648	677	649	603	596	591	626
25	608	656	642	633	658	682	723	679	638	635	632	667
26	621	663	649	641	667	690	731	688	647	644	641	676
27	633	669	654	647	673	697	737	695	654	650	648	682
28	644	674	660	653	680	703	743	702	661	657	655	688
29	654	681	667	661	688	712	751	711	669	666	663	696
30	664	714	699	701	719	735	758	728	676	696	702	741
31	675	746	731	742	750	758	760	745	760	727	739	760
32	686	753	738	749	759	760	760	753	760	735	748	760
33	697	759	744	756	760	760	760	760	760	742	754	760
34	710	760	749	760	760	760	760	760	760	749	760	760
35	728	760	756	760	760	760	760	760	760	758	760	760
36	760	760	760	760	760	760	760	760	760	760	760	760

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B8 Grade 6 Partial Credit Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	275	275	275	275	275	275	275	275	275	275	275	275
1	275	275	275	275	275	275	275	275	275	275	275	275
2	275	275	275	275	275	275	275	275	275	275	275	275
3	275	275	275	275	275	275	275	275	275	275	275	275
4	275	275	275	275	275	275	275	275	275	275	275	275
5	275	275	275	275	275	275	275	275	275	275	275	275
6	275	275	275	275	275	275	275	275	275	275	275	275
7	351	419	413	390	375	387	386	375	353	349	305	337
8	370	427	420	401	384	395	394	383	361	359	315	349
9	384	432	426	409	391	402	401	390	367	366	323	357
10	397	438	431	418	398	409	407	397	374	374	333	365
11	412	446	438	429	407	417	416	406	382	384	347	374
12	429	478	466	453	449	458	464	450	416	411	387	415
13	445	509	493	476	490	498	512	493	451	437	420	456
14	460	516	500	483	499	507	520	501	460	446	429	464
15	472	522	505	489	505	513	526	508	468	453	437	471
16	484	527	511	495	512	520	533	516	475	460	445	478
17	497	534	518	503	520	529	541	525	484	469	454	486
18	511	559	543	525	544	557	572	556	511	498	487	521
19	525	584	569	546	567	585	603	587	538	527	518	556
20	538	591	575	554	575	593	611	595	546	535	527	563
21	551	596	581	560	582	600	617	602	553	542	533	569
22	563	601	586	566	588	606	624	610	559	548	540	575
23	577	608	593	574	597	614	632	619	568	557	549	583
24	593	632	616	602	627	648	677	649	602	595	591	628
25	608	655	639	632	658	681	722	680	638	634	632	673
26	621	663	646	640	667	689	731	690	647	643	641	682
27	633	668	652	647	674	696	737	697	654	650	647	688
28	644	674	657	653	681	702	744	704	661	657	654	695
29	654	682	665	661	690	710	754	712	670	666	663	704
30	664	714	696	701	722	733	760	729	677	696	700	711
31	675	748	731	742	751	754	760	745	760	728	741	760
32	686	756	749	752	760	760	760	754	760	739	750	760
33	697	760	760	760	760	760	760	760	760	749	760	760
34	710	760	760	760	760	760	760	760	760	760	760	760
35	728	760	760	760	760	760	760	760	760	760	760	760
36	760	760	760	760	760	760	760	760	760	760	760	760

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B9 Grade 7 Rating Scale Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 8	Form 9	Form 10	Form 11	Form 12
0	290	290	290	290	290	290	290	290	290	290	290	290
1	290	290	290	290	290	290	290	290	290	290	290	290
2	290	290	290	290	290	290	290	290	290	290	290	290
3	290	290	290	290	290	290	290	290	290	290	290	290
4	290	290	290	290	290	290	290	290	290	290	290	290
5	290	290	290	290	290	290	290	290	290	290	290	290
6	290	290	290	290	290	290	290	290	290	290	290	290
7	360	443	437	433	419	421	400	422	416	419	417	414
8	378	448	443	439	426	428	407	428	422	425	423	419
9	392	452	447	443	432	433	411	432	427	429	427	424
10	405	457	451	447	438	438	416	437	431	434	431	428
11	420	462	457	453	446	445	422	442	437	440	437	434
12	439	488	473	472	469	462	451	462	458	466	466	457
13	458	514	491	491	493	479	480	481	478	493	494	479
14	472	520	496	496	500	486	486	487	484	499	500	485
15	485	524	500	501	506	492	491	491	489	503	504	489
16	498	528	505	505	512	497	496	496	493	508	508	493
17	512	534	510	510	520	503	502	501	499	514	514	499
18	528	558	533	534	536	527	528	524	525	538	537	523
19	545	582	555	558	553	552	554	547	550	563	560	547
20	558	587	561	564	560	559	560	552	556	569	566	553
21	570	592	565	568	566	565	565	557	560	573	570	557
22	582	596	569	572	572	570	570	561	565	578	575	562
23	594	602	575	578	580	576	576	567	571	584	580	568
24	606	626	597	602	612	602	606	591	597	613	610	594
25	618	649	620	626	644	629	636	615	623	642	640	620
26	628	655	626	632	652	636	642	620	629	648	646	626
27	637	659	630	636	658	641	647	624	634	653	650	630
28	645	664	634	640	664	646	652	629	639	657	655	635
29	652	669	640	646	672	653	658	634	645	663	660	640
30	659	703	664	684	719	675	679	663	673	689	693	660
31	667	737	690	723	766	698	700	691	701	714	725	679
32	674	743	695	729	770	705	707	696	707	720	731	685
33	683	747	699	733	770	711	712	701	711	725	735	689
34	694	751	704	737	770	716	716	705	716	730	740	694
35	710	757	709	743	770	722	723	711	722	736	745	700
36	770	770	770	770	770	770	770	770	770	770	770	770

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B10 Grade 7 Partial Credit Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Form 8	Form 9	Form 10	Form 11	Form 12
0	290	290	290	290	290	290	290	290	290	290	290	290
1	290	290	290	290	290	290	290	290	290	290	290	290
2	290	290	290	290	290	290	290	290	290	290	290	290
3	290	290	290	290	290	290	290	290	290	290	290	290
4	290	290	290	290	290	290	290	290	290	290	290	290
5	290	290	290	290	290	290	290	290	290	290	290	290
6	290	290	290	290	290	290	290	290	290	290	290	290
7	360	442	429	424	410	418	400	428	418	417	411	413
8	378	447	436	431	418	428	406	433	424	423	418	419
9	392	452	443	436	424	434	411	437	429	428	423	424
10	405	456	449	441	430	440	416	441	434	434	429	429
11	420	462	456	447	438	446	422	447	440	440	436	435
12	439	488	475	468	461	464	450	465	459	467	466	457
13	458	514	492	488	485	481	478	484	479	493	495	479
14	472	519	497	494	493	487	485	489	485	499	500	485
15	485	524	501	499	499	492	490	493	490	504	504	490
16	498	528	506	503	506	497	496	498	495	508	509	494
17	512	534	511	509	518	504	502	503	501	514	514	500
18	528	558	533	535	539	527	529	525	525	538	537	524
19	545	582	556	559	556	552	554	546	549	562	560	547
20	558	588	561	565	563	559	560	552	555	568	565	553
21	570	592	565	569	569	564	565	556	559	573	570	557
22	582	596	569	573	575	570	570	560	564	577	574	562
23	594	602	574	579	582	576	576	565	570	583	579	567
24	606	628	596	607	615	601	605	588	595	612	612	593
25	618	655	619	637	649	628	636	611	622	642	645	619
26	628	662	625	644	658	637	643	620	630	649	652	626
27	637	666	630	650	664	643	649	627	637	653	656	631
28	645	671	635	655	671	649	655	634	643	658	661	636
29	652	676	641	662	679	656	662	640	651	664	667	642
30	659	681	665	667	685	679	684	667	679	694	672	662
31	667	770	689	770	770	702	707	695	708	729	770	681
32	674	770	695	770	770	711	715	706	716	742	770	688
33	683	770	699	770	770	718	770	718	726	748	770	696
34	694	770	703	770	770	726	770	732	738	770	770	704
35	710	770	708	770	770	732	770	746	744	770	770	712
36	770	770	770	770	770	770	770	770	770	770	770	770

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B11 Grade 8 Rating Scale Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	300	300	300	300	300	300	300	300	300	300	300	300
1	300	300	300	300	300	300	300	300	300	300	300	300
2	300	300	300	300	300	300	300	300	300	300	300	300
3	300	300	300	300	300	300	300	300	300	300	300	300
4	300	300	300	300	300	300	300	300	300	300	300	300
5	300	300	300	300	300	300	300	300	300	300	300	300
6	300	300	300	300	300	300	300	300	300	300	300	300
7	339	342	351	361	300	345	339	300	324	337	300	300
8	358	353	368	375	303	356	352	309	338	350	300	300
9	372	361	380	386	312	364	362	321	348	360	303	300
10	385	369	392	394	322	373	371	332	357	369	313	300
11	398	378	406	403	335	384	383	347	367	381	324	300
12	413	414	425	413	384	412	408	381	382	408	369	353
13	427	450	444	423	433	440	433	415	399	437	415	432
14	441	460	458	432	446	451	446	430	411	450	429	445
15	453	468	470	441	455	459	456	442	421	459	438	456
16	466	476	482	451	465	467	465	453	430	469	447	466
17	481	486	496	462	476	478	476	466	441	480	459	478
18	499	514	516	477	495	504	497	486	462	501	478	499
19	517	543	537	494	515	529	519	506	485	523	500	519
20	532	554	551	506	526	540	531	520	498	535	513	532
21	545	562	563	517	536	548	540	532	508	545	522	542
22	558	569	575	527	545	556	550	543	517	554	532	552
23	572	579	591	540	557	567	562	557	528	566	543	565
24	588	604	618	572	584	607	600	584	560	603	574	590
25	603	630	645	605	610	646	639	612	594	642	607	614
26	615	640	661	620	622	657	652	627	607	655	620	627
27	626	648	673	630	632	665	662	638	617	665	630	638
28	635	656	685	641	641	674	671	649	626	674	639	648
29	643	666	699	654	654	685	683	664	638	686	651	661
30	652	691	720	684	683	731	716	692	666	712	683	688
31	660	717	740	715	713	777	751	722	698	740	719	715
32	669	727	754	730	726	787	764	737	711	753	732	728
33	678	735	766	740	735	796	773	748	721	763	742	739
34	690	743	779	751	745	800	783	760	730	772	751	749
35	708	753	795	764	757	800	795	774	742	784	762	763
36	800	800	800	800	800	800	800	800	800	800	800	800

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B12 Grade 8 Partial Credit Model, Method 2

Raw Score	Scale Score											
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12
0	300	300	300	300	300	300	300	300	300	300	300	300
1	300	300	300	300	300	300	300	300	300	300	300	300
2	300	300	300	300	300	300	300	300	300	300	300	300
3	300	300	300	300	300	300	300	300	300	300	300	300
4	300	300	300	300	300	300	300	300	300	300	300	300
5	300	300	300	300	300	300	300	300	300	300	300	300
6	300	300	300	300	300	300	300	300	300	300	300	300
7	339	349	357	341	300	348	333	300	324	332	300	300
8	358	359	372	352	300	359	349	300	334	343	300	300
9	372	366	384	367	304	367	361	314	346	356	300	300
10	385	373	395	381	316	375	371	331	356	367	306	300
11	398	382	409	394	331	386	384	348	368	381	319	300
12	413	416	427	407	383	413	408	384	384	409	363	352
13	427	451	445	418	432	440	434	417	399	437	410	430
14	441	460	459	428	445	452	447	431	410	450	425	444
15	453	468	470	439	455	460	457	443	420	459	436	455
16	466	476	482	450	465	469	466	454	431	469	447	466
17	481	485	495	462	477	480	478	467	443	480	460	479
18	499	513	515	478	496	505	498	487	465	500	481	500
19	517	542	535	494	515	529	519	507	486	522	501	520
20	532	553	550	507	527	540	531	521	498	535	513	533
21	545	561	563	517	536	548	540	532	507	545	522	543
22	558	569	576	528	546	556	549	543	517	554	531	553
23	572	579	592	542	558	566	561	557	528	566	543	565
24	588	605	619	572	584	605	598	583	559	603	573	589
25	603	631	646	604	610	644	638	611	592	642	607	613
26	615	643	662	618	622	655	652	626	606	655	622	626
27	626	651	674	630	632	664	663	638	616	665	632	637
28	635	658	685	641	641	673	674	650	626	675	642	647
29	643	668	699	654	654	684	688	664	638	687	653	661
30	652	692	718	683	683	743	721	693	666	713	685	687
31	660	717	739	713	712	800	755	722	700	740	717	716
32	669	728	755	726	724	800	767	737	718	753	729	731
33	678	739	769	737	734	800	779	750	731	764	739	743
34	690	747	786	748	743	800	792	762	742	774	749	754
35	708	800	800	761	755	800	800	778	754	787	761	768
36	800	800	800	800	800	800	800	800	800	800	800	800

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B13 High School Rating Scale Model, Method 2

Raw Score	Scale Score																			
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12	Form 13	Form 14	Form 15	Form 16	Form 17	Form 18	Form 19	Form 20
0	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
1	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
2	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
3	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
4	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
5	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
6	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
7	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
8	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
9	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
10	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
11	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
12	511	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	548	553	547	556	538	530	527	540	545	551	535	549	558	511	547	537	541	550	550
14	535	556	561	555	562	546	539	536	549	552	558	543	557	564	520	555	545	550	557	557
15	543	561	565	560	567	551	545	542	554	557	563	549	562	568	526	560	551	556	562	562
16	549	565	569	564	570	556	550	546	559	561	567	553	567	572	531	564	555	560	566	566
17	555	569	572	567	573	559	554	550	563	565	570	557	570	575	535	568	559	564	570	570
18	560	573	576	570	576	563	558	554	567	568	573	560	574	578	539	571	563	568	573	573
19	565	576	579	574	579	566	562	558	570	572	576	564	577	580	542	575	567	572	576	576
20	569	580	582	577	583	570	566	561	574	575	580	568	581	583	546	578	571	577	580	580
21	574	584	585	581	586	573	570	565	578	579	583	572	584	587	551	582	575	582	584	583
22	579	588	590	586	591	578	575	570	582	584	587	577	589	591	556	587	581	587	588	588
23	585	595	595	592	596	585	582	576	588	590	593	584	594	596	564	593	587	595	595	593
24	590	603	603	601	603	594	591	584	596	598	600	594	602	604	574	603	596	604	604	602
25	595	611	611	611	610	603	600	592	604	606	608	603	610	613	585	612	604	614	614	610
26	600	618	617	617	615	610	607	599	611	612	614	610	617	618	592	619	611	621	620	616
27	605	622	622	622	619	614	613	605	616	617	618	614	622	622	598	623	616	626	625	621
28	610	627	625	626	622	618	617	609	621	620	622	619	626	626	602	628	620	630	629	625
29	615	630	629	629	626	622	621	613	624	624	625	622	629	629	606	631	624	634	632	628
30	619	634	632	633	629	625	625	617	628	627	628	626	633	631	610	635	627	638	635	631
31	624	637	635	636	632	629	629	620	631	630	631	629	636	634	614	638	631	642	638	634
32	629	641	638	639	635	632	633	624	635	634	634	633	639	637	618	641	635	646	642	638
33	634	644	641	643	638	636	637	627	638	637	637	637	643	640	622	645	639	651	645	641

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

34	639	648	645	647	642	640	641	632	642	642	641	642	646	644	627	649	644	656	650	645
35	645	653	649	652	646	645	647	636	647	646	645	647	651	648	633	655	649	662	655	650
36	651	659	655	658	651	651	653	642	652	652	650	653	656	654	640	661	655	668	661	655
37	657	664	660	665	655	657	659	647	658	657	656	660	661	659	647	667	660	674	667	660
38	663	669	665	670	660	663	664	653	663	662	660	665	666	664	653	672	665	680	672	665
39	668	674	669	674	663	667	669	657	668	666	664	669	671	667	658	677	670	685	677	670
40	673	678	672	678	666	671	673	661	672	670	668	673	675	670	662	681	674	689	680	673
41	678	681	675	681	669	674	677	665	676	673	671	677	678	673	666	684	677	693	684	677
42	683	685	678	685	672	678	681	669	679	676	674	680	682	676	670	687	681	696	687	680
43	688	688	682	688	675	681	685	673	683	680	677	684	685	679	674	691	685	700	690	683
44	693	692	685	691	678	685	689	676	686	683	680	688	688	682	678	695	689	705	694	686
45	698	696	688	695	682	689	694	681	690	687	684	692	692	685	682	699	693	710	698	690
46	704	701	693	700	687	694	699	686	695	692	688	697	697	689	688	704	699	716	703	695
47	710	708	699	707	693	701	707	693	703	699	694	705	704	696	696	711	707	725	710	702
48	717	723	714	724	706	718	724	708	717	714	708	723	718	711	716	728	723	742	727	716
49	723	739	729	741	719	734	741	723	732	729	722	740	733	725	735	745	738	760	744	732
50	730	746	736	749	725	742	749	731	740	736	729	748	740	732	744	752	746	768	751	739
51	735	751	740	754	729	747	755	737	746	741	734	753	746	736	749	758	752	773	756	744
52	740	756	744	758	733	751	760	742	750	745	738	757	750	739	754	762	756	778	760	748
53	745	760	747	761	736	755	764	746	754	749	741	761	754	742	758	765	760	782	764	751
54	749	763	751	764	739	758	768	749	758	752	744	764	757	745	762	769	764	786	767	755
55	754	767	754	768	742	762	771	753	762	755	747	768	761	748	766	772	768	790	770	758
56	758	770	757	771	746	765	776	757	765	759	750	772	764	751	770	776	772	795	774	761
57	762	774	760	775	749	769	780	761	769	763	754	776	768	754	774	780	776	800	778	765
58	766	779	765	780	754	774	786	766	774	768	758	782	773	759	780	785	782	806	782	770
59	770	787	772	788	761	782	794	774	782	775	765	790	780	765	789	793	790	815	790	777
60	775	805	788	807	776	801	813	791	799	793	781	810	796	782	811	812	809	836	809	794
61	779	823	806	827	791	821	833	809	817	810	798	830	813	799	833	832	827	856	829	812
62	783	830	813	834	797	828	842	817	825	818	805	838	821	806	842	840	835	864	837	819
63	787	836	818	839	801	834	848	823	830	822	809	843	827	810	848	845	840	870	842	824
64	791	840	821	843	805	838	852	828	835	826	813	847	831	813	853	849	845	874	846	828
65	796	844	825	847	808	841	856	832	839	830	817	851	835	816	857	853	849	878	849	832
66	800	847	828	850	811	845	860	836	843	833	820	854	838	819	861	856	852	882	852	835
67	805	851	831	854	814	848	864	839	846	837	823	858	841	822	864	860	856	886	856	838
68	810	855	834	857	817	852	868	843	850	840	826	862	845	825	868	864	860	891	859	842
69	816	859	838	861	821	856	873	848	854	844	830	866	849	828	873	868	865	896	863	845
70	824	864	842	866	826	861	879	853	859	849	834	872	854	833	879	873	871	900	868	850
71	837	871	849	873	833	869	887	861	867	857	841	880	861	839	887	881	879	900	876	857
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

Table B14 High School Partial Credit Model, Method 2

Raw Score	Scale Score																			
	2005 Operational	Form 2	Form 3	Form 4	Form 5	Form 6	Form 7	Form 8	Form 9	Form 10	Form 11	Form 12	Form 13	Form 14	Form 15	Form 16	Form 17	Form 18	Form 19	Form 20
0	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
1	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
2	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
3	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
4	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
5	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
6	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
7	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
8	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
9	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
10	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
11	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
12	511	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	532	553	545	548	538	526	528	541	544	552	528	546	556	500	546	537	539	532	551
14	535	549	560	553	556	545	535	536	549	551	558	536	555	563	501	554	545	548	548	558
15	543	561	565	558	561	551	541	541	554	556	563	542	560	567	507	559	551	555	559	562
16	549	567	569	562	565	555	547	545	558	560	566	547	565	571	513	563	555	560	566	566
17	555	572	572	566	570	558	551	549	562	564	569	552	569	574	519	567	559	565	571	569
18	560	576	575	569	574	562	556	552	566	567	572	557	573	577	525	571	562	569	575	572
19	565	580	578	573	579	565	560	556	569	571	575	562	577	580	534	574	566	574	579	575
20	569	583	582	577	583	569	565	560	573	574	578	567	581	583	547	578	570	579	583	578
21	574	587	585	581	588	573	570	564	577	578	582	573	585	586	561	582	574	585	586	582
22	579	591	590	586	593	578	575	569	581	583	586	580	590	590	568	587	580	591	590	586
23	585	595	595	592	599	584	583	575	588	589	591	587	595	596	574	594	587	598	594	592
24	590	600	602	602	604	593	592	584	596	598	599	595	602	604	579	603	596	606	599	601
25	595	606	610	611	609	603	601	593	605	607	607	602	609	613	583	613	605	613	606	610
26	600	614	616	617	614	609	607	600	611	612	613	607	615	618	587	619	612	618	614	616
27	605	622	621	622	618	614	613	605	616	617	617	612	621	622	590	624	616	623	623	621
28	610	628	624	626	621	619	617	609	620	621	621	616	625	626	594	628	621	628	629	624
29	615	633	628	629	625	622	621	612	624	624	624	620	629	629	599	631	624	632	633	628
30	619	637	631	633	628	626	625	616	628	627	627	624	633	631	604	635	628	636	637	631
31	624	640	634	636	631	629	629	619	631	630	631	628	636	634	610	638	631	640	641	634
32	629	643	638	639	635	632	633	623	635	634	634	633	640	637	617	641	635	645	644	637
33	634	647	641	643	639	636	637	627	638	637	637	638	643	640	625	645	639	651	647	641

Appendix B. Method 2 (Rasch Models—Fixed Parameter Equating)

34	639	650	645	647	643	640	642	631	642	641	641	643	646	644	631	649	643	657	651	645
35	645	653	649	652	648	644	647	636	646	646	645	649	650	648	636	654	648	664	654	649
36	651	657	653	658	652	649	654	641	651	651	649	655	654	653	641	659	653	669	659	654
37	657	662	658	664	657	655	661	647	657	657	654	660	659	658	645	665	659	674	664	660
38	663	667	663	669	660	661	666	652	662	662	659	665	665	663	648	671	664	679	671	664
39	668	673	667	674	663	666	671	657	667	666	663	669	671	667	652	676	669	683	678	669
40	673	678	671	678	666	671	674	661	672	670	667	673	676	670	656	680	674	686	684	672
41	678	683	675	681	669	675	678	665	676	673	670	676	680	673	660	684	678	690	689	676
42	683	688	679	685	672	679	681	669	680	677	674	680	684	676	665	688	682	695	694	680
43	688	693	683	688	675	683	685	673	684	680	677	684	687	679	672	692	686	699	698	683
44	693	697	687	692	679	686	688	676	687	684	681	688	691	682	681	696	690	704	702	687
45	698	702	691	696	682	691	692	681	691	688	685	692	695	686	691	700	694	711	706	691
46	704	707	696	701	687	696	697	686	696	692	690	698	700	690	701	705	700	721	710	696
47	710	713	703	708	694	703	705	693	704	699	696	706	706	697	710	712	707	732	715	703
48	717	720	714	724	706	718	724	708	717	715	709	722	717	711	717	728	723	744	721	717
49	723	729	726	741	718	733	742	724	732	730	721	738	729	725	723	744	739	755	730	731
50	730	740	733	748	724	741	750	731	740	737	728	746	738	732	729	752	747	762	743	738
51	735	750	738	753	728	746	756	737	745	741	733	751	745	736	734	757	752	767	755	743
52	740	757	743	757	732	751	760	741	750	745	737	755	750	739	738	761	756	772	763	747
53	745	762	746	761	736	755	764	745	754	749	740	759	754	742	743	765	760	776	768	750
54	749	766	750	764	739	758	768	749	757	752	743	763	758	745	749	768	764	780	772	754
55	754	770	753	767	742	762	772	752	761	755	746	767	762	748	757	772	767	785	776	757
56	758	774	757	771	746	765	776	756	764	758	750	772	765	750	770	775	771	790	780	760
57	762	778	760	775	751	769	780	760	768	762	753	777	769	754	783	779	775	797	784	764
58	766	783	765	780	756	774	786	765	773	767	758	784	774	758	794	784	780	805	789	769
59	770	790	772	787	763	782	794	772	781	774	764	793	781	764	802	792	788	817	796	776
60	775	801	787	806	776	800	813	791	798	792	781	810	795	781	810	811	807	833	805	793
61	779	814	803	825	787	818	833	809	816	810	797	826	810	798	817	831	827	848	817	811
62	783	825	811	832	794	826	841	817	824	817	804	835	819	805	823	838	835	856	830	818
63	787	834	816	838	799	832	847	822	829	822	808	841	825	809	829	844	840	862	839	823
64	791	840	820	842	804	836	852	827	834	826	812	846	830	813	835	848	845	867	846	827
65	796	845	824	846	808	840	857	831	838	830	816	850	835	816	841	852	849	871	851	830
66	800	849	827	850	812	844	862	835	842	833	819	855	839	819	847	855	852	876	856	834
67	805	853	830	854	817	848	866	839	845	837	822	860	843	822	856	859	856	880	860	837
68	810	857	834	858	821	852	871	843	849	840	825	864	847	825	869	863	860	885	865	841
69	816	862	837	862	826	856	876	848	854	844	829	870	851	829	883	867	864	891	869	844
70	824	867	842	868	831	862	883	853	859	850	833	877	856	834	894	873	870	898	875	849
71	837	875	849	876	839	870	892	862	867	857	840	887	864	840	900	881	878	900	883	857
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C1 Grade 3 Method 3

Raw Score	2005 OP	Scale Score															
		Form 1				Form 2				Form 3				Form 4			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
7	296	328	330	355	350	332	325	355	349	327	319	336	335	324	330	353	347
8	314	339	340	359	356	343	337	357	355	338	331	348	345	335	340	355	352
9	326	349	351	361	360	353	348	359	358	349	342	355	352	346	350	358	356
10	337	360	361	363	363	364	359	360	360	359	354	357	356	357	360	361	360
11	347	371	372	366	368	374	370	362	365	370	365	359	361	367	370	365	367
12	358	381	382	378	377	384	381	378	376	380	376	372	372	378	380	382	381
13	369	391	392	391	390	395	392	394	393	390	387	387	386	388	390	395	394
14	379	402	402	401	401	406	404	404	405	401	398	396	397	398	400	401	402
15	389	413	414	412	411	418	416	417	415	413	411	407	408	410	411	410	410
16	400	426	427	421	419	431	430	424	423	426	424	421	419	422	423	420	419
17	411	439	439	426	428	443	443	431	432	438	438	429	430	435	435	426	427
18	424	451	451	442	442	455	456	450	450	450	451	451	450	447	447	441	442
19	437	462	462	465	464	466	467	469	469	461	463	472	471	458	458	460	459
20	449	473	473	480	480	477	480	482	482	472	475	485	484	470	468	471	471
21	460	485	485	493	491	490	493	495	494	485	488	494	494	481	479	481	480
22	471	498	497	500	501	503	507	503	504	498	502	501	502	494	492	490	489
23	483	511	510	509	512	515	519	517	518	510	515	507	512	507	504	496	498
24	496	522	521	523	525	525	529	535	534	521	526	524	526	518	515	511	513
25	509	531	530	540	540	534	539	550	548	531	535	544	541	528	525	535	532
26	520	540	539	551	550	543	547	556	556	539	544	551	549	537	534	546	544
27	529	548	547	556	556	551	556	565	563	547	553	555	555	545	542	553	552
28	538	556	555	560	561	559	564	571	570	555	561	558	560	553	550	557	558
29	546	564	563	564	566	567	574	574	576	563	570	562	566	561	557	563	563
30	554	573	571	571	570	576	584	587	586	572	580	573	574	570	565	568	568
31	562	582	580	577	575	586	597	608	591	581	593	591	587	579	573	573	574
32	571	594	591	579	578	599	621	614	598	593	611	595	601	590	583	579	579
33	580	612	606	582	582	623	650	623	606	610	650	596	609	605	594	585	586
34	591	650	650	584	585	650	650	645	618	650	650	596	621	644	611	596	597
35	608	650	650	588	589	650	650	650	642	650	650	599	649	650	650	632	614
36	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C1 (cont) Grade 3 Method 3

Raw Score	2005 OP	Scale Score															
		Form 5				Form 6				Form 7				Form 9			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
7	296	323	329	348	343	319	321	333	331	312	304	333	330	302	297	315	300
8	314	335	339	354	350	330	332	340	342	325	319	337	337	317	315	323	316
9	326	345	349	356	355	341	343	354	350	336	331	342	344	329	327	328	327
10	337	356	360	358	359	352	353	356	355	347	342	353	350	340	338	334	338
11	347	366	370	362	365	362	363	359	362	357	354	355	355	350	349	341	348
12	358	377	379	378	377	373	374	374	373	368	365	361	363	361	360	359	359
13	369	387	389	393	391	383	384	389	386	378	375	376	373	372	370	373	370
14	379	397	399	402	402	393	394	397	397	388	386	385	384	382	381	381	381
15	389	409	410	412	411	404	405	405	405	399	397	394	394	392	391	391	391
16	400	421	422	421	420	416	417	416	414	410	409	404	405	403	402	402	402
17	411	434	434	428	430	429	429	424	425	423	422	418	417	415	414	415	415
18	424	446	446	443	443	442	442	438	440	436	435	430	432	428	427	427	428
19	437	458	457	460	459	453	453	457	455	448	448	451	449	440	440	443	441
20	449	469	467	472	471	464	464	467	466	459	460	464	463	452	452	453	452
21	460	480	478	481	480	476	475	474	474	470	471	475	475	463	463	463	463
22	471	493	491	490	489	488	487	484	483	482	484	487	486	474	475	473	474
23	483	506	503	497	499	501	500	494	495	495	498	496	496	487	487	485	485
24	496	518	514	509	512	513	512	507	510	508	511	505	508	500	501	497	499
25	509	527	524	529	527	524	523	533	528	519	522	520	520	512	513	512	512
26	520	536	533	540	538	533	532	541	540	529	532	531	532	523	524	523	523
27	529	545	541	549	546	541	540	550	548	537	541	543	543	532	533	535	534
28	538	553	549	554	553	550	548	555	555	546	549	554	552	540	542	544	543
29	546	561	557	557	558	558	556	560	561	554	558	560	561	549	550	553	552
30	554	569	564	563	565	566	564	568	567	562	566	568	570	557	558	561	560
31	562	578	572	572	572	574	573	573	573	570	575	580	580	565	566	572	569
32	571	589	582	581	579	584	582	577	578	579	586	592	592	573	575	581	579
33	580	603	592	589	587	597	593	583	583	590	600	606	600	583	586	588	597
34	591	637	608	592	598	618	610	588	589	606	627	650	611	595	599	592	605
35	608	650	650	597	615	650	650	595	600	650	650	650	631	614	623	599	623
36	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C1 (cont) Grade 3 Method 3

Raw Score	2005 OP	Scale Score											
		Form 10				Form 11				Form 12			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	200	200	200	200	200	200	200	200	200	200	200	200	200
7	296	315	328	336	334	322	329	331	325	320	336	335	338
8	314	328	337	343	344	333	339	340	340	332	345	354	349
9	326	338	347	354	351	344	349	354	350	342	354	358	355
10	337	349	357	356	356	354	359	358	357	353	364	361	359
11	347	360	366	359	362	365	369	361	364	364	373	363	365
12	358	370	376	372	372	375	379	378	376	374	382	381	379
13	369	380	385	387	385	386	388	392	390	384	390	395	394
14	379	391	395	396	397	396	398	400	400	394	400	403	404
15	389	401	405	407	407	407	409	410	410	405	410	414	413
16	400	413	416	420	418	419	421	421	420	418	421	423	422
17	411	426	427	426	428	432	433	428	430	431	432	429	431
18	424	439	439	437	438	445	445	445	445	443	443	444	444
19	437	450	450	452	450	456	455	462	459	455	453	459	457
20	449	461	460	462	461	467	466	470	470	466	463	466	466
21	460	473	470	471	471	479	477	480	480	477	472	474	475
22	471	485	481	481	480	491	488	492	491	490	483	483	483
23	483	498	492	491	490	504	501	499	501	503	494	492	491
24	496	510	504	500	502	516	512	512	513	515	506	501	502
25	509	521	515	514	514	526	522	528	526	525	516	518	515
26	520	531	524	524	526	535	531	535	535	534	525	525	526
27	529	539	533	536	536	544	539	542	543	542	533	534	535
28	538	548	541	547	545	552	547	551	549	550	540	542	542
29	546	556	548	554	552	560	555	554	554	558	547	550	548
30	554	564	555	557	557	568	562	558	558	567	554	554	553
31	562	572	563	561	562	577	570	563	563	576	561	557	557
32	571	582	570	564	566	587	579	566	567	586	569	561	562
33	580	593	579	569	571	601	589	570	572	599	576	565	566
34	591	611	588	574	577	629	603	575	578	622	585	572	572
35	608	650	601	579	584	650	631	585	585	650	596	579	580
36	650	650	650	650	650	650	650	650	650	650	650	650	650

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C2 Grade 4 Method 3

Raw Score	2005 OP	Scale Score															
		Form 1				Form 2				Form 3				Form 4			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
7	331	400	407	409	409	391	416	433	430	393	401	404	405	393	405	403	403
8	348	414	419	417	419	405	426	437	437	407	413	411	413	407	417	405	408
9	361	426	430	430	429	418	434	441	441	419	425	424	424	420	427	413	415
10	373	436	440	439	439	430	443	446	446	431	435	436	435	431	437	429	427
11	385	447	450	450	452	440	451	452	453	441	445	446	447	442	446	439	442
12	399	458	461	467	467	451	460	467	468	452	455	466	464	452	456	466	466
13	412	470	472	473	474	463	470	473	473	464	466	470	470	464	467	472	472
14	425	482	483	475	477	475	479	474	475	476	477	472	473	476	478	474	475
15	435	493	493	483	484	486	488	475	477	487	488	474	476	488	488	478	480
16	446	504	503	494	495	497	497	479	480	498	498	481	483	499	498	491	491
17	457	515	514	510	512	508	505	486	488	509	508	499	501	509	508	508	510
18	469	527	525	536	535	519	514	520	521	520	518	533	534	521	518	535	535
19	481	541	537	543	543	532	523	540	538	533	530	542	542	533	529	541	542
20	492	554	550	545	547	546	534	541	541	547	543	544	545	547	541	543	545
21	503	566	561	549	552	558	545	543	543	560	555	545	548	560	553	545	547
22	514	576	571	558	562	569	555	544	545	570	566	548	551	571	564	546	549
23	526	585	580	579	580	579	564	545	547	580	575	559	561	580	573	551	556
24	539	595	589	600	597	589	572	557	559	590	584	586	588	590	582	569	570
25	553	604	598	603	602	598	580	599	595	599	593	603	600	599	591	597	591
26	564	613	607	605	604	608	587	601	600	608	602	605	604	609	599	601	599
27	575	623	616	606	606	617	595	603	602	618	611	606	606	618	608	603	603
28	584	633	625	607	608	627	602	603	604	628	620	607	608	628	616	605	606
29	594	645	634	608	610	637	610	604	606	638	629	608	610	639	625	607	608
30	603	662	646	614	614	650	617	607	609	652	639	638	618	652	634	608	611
31	612	700	662	651	622	673	625	619	614	676	652	700	625	677	645	657	619
32	622	700	700	685	630	700	633	629	621	700	673	700	633	700	660	680	628
33	632	700	700	700	639	700	642	641	632	700	700	700	642	700	698	685	637
34	644	700	700	700	650	700	654	654	643	700	700	700	653	700	700	700	648
35	660	700	700	700	667	700	672	676	660	700	700	700	670	700	700	700	665
36	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C2 (cont) Grade 4 Method 3

Raw Score	2005 OP	Scale Score															
		Form 5				Form 6				Form 7				Form 8			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
7	331	343	365	371	367	345	360	372	369	333	342	358	346	306	349	354	347
8	348	357	375	374	375	359	371	381	377	350	356	368	355	338	360	366	358
9	361	369	386	381	382	370	382	389	384	362	367	370	363	353	371	369	369
10	373	381	398	393	388	382	394	393	388	374	379	374	372	365	381	380	379
11	385	394	410	395	395	396	407	393	393	386	391	379	383	377	393	392	390
12	399	408	421	427	424	410	418	417	417	400	404	401	401	389	405	403	404
13	412	421	431	449	447	422	429	445	442	414	417	420	417	403	417	424	420
14	425	432	440	454	455	433	438	448	448	426	428	431	428	417	427	431	430
15	435	442	449	462	460	444	448	453	453	437	439	437	437	428	436	436	437
16	446	453	459	465	463	455	458	461	459	447	449	446	446	439	446	446	447
17	457	465	469	467	466	467	469	465	464	458	460	456	457	450	455	458	459
18	469	477	480	473	473	479	480	473	473	470	471	471	471	461	465	469	469
19	481	489	490	492	490	490	491	506	502	482	483	492	488	473	476	475	476
20	492	499	499	502	502	501	500	515	516	493	494	500	499	485	486	479	481
21	503	510	508	512	512	512	510	526	525	504	504	507	509	496	496	485	486
22	514	522	518	521	521	523	520	533	531	515	514	516	518	506	505	494	494
23	526	535	529	531	531	536	532	535	535	527	526	525	529	518	515	503	506
24	539	548	540	540	540	550	545	542	541	541	539	540	539	530	525	535	535
25	553	561	552	546	547	562	556	552	549	554	552	550	549	544	537	544	544
26	564	571	562	553	554	573	567	557	556	566	563	556	557	557	549	545	547
27	575	581	572	559	561	582	576	562	562	576	573	563	565	568	560	546	549
28	584	591	580	566	570	592	585	569	570	585	583	570	574	578	569	550	553
29	594	600	588	580	582	601	593	580	582	595	592	580	584	587	578	556	562
30	603	609	596	602	601	611	602	601	600	604	601	601	599	597	586	587	587
31	612	619	604	617	620	620	610	608	611	614	610	614	617	606	594	606	606
32	622	629	613	646	628	630	619	622	621	623	619	635	634	616	602	607	609
33	632	640	621	657	638	641	628	649	631	633	628	648	643	625	611	608	611
34	644	654	630	666	649	656	638	667	643	645	639	659	654	636	619	609	614
35	660	681	639	682	666	689	649	684	659	662	652	681	671	648	628	614	617
36	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C2 (cont) Grade 4 Method 3

Raw Score	2005 OP	Scale Score											
		Form 9				Form 10				Form 12			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	230	230	230	230	230	230	230	230	230	230	230	230	230
7	331	352	373	393	390	332	348	304	308	230	296	311	295
8	348	365	384	393	392	349	360	316	329	324	335	316	322
9	361	376	395	394	394	362	371	369	355	345	350	324	339
10	373	389	407	395	396	373	382	384	373	358	362	360	360
11	385	403	418	398	401	386	394	393	389	370	374	373	377
12	399	416	428	439	435	399	407	406	410	382	386	396	395
13	412	428	437	462	458	413	419	436	431	395	399	402	403
14	425	439	446	464	463	425	430	442	441	409	412	405	408
15	435	449	456	465	464	436	440	446	448	422	424	412	415
16	446	461	466	467	466	447	450	454	455	433	435	428	427
17	457	473	476	468	468	458	460	464	463	443	445	443	443
18	469	485	486	475	473	470	472	470	470	454	456	465	464
19	481	496	496	504	501	482	483	476	477	466	467	470	470
20	492	506	505	514	514	493	493	486	487	478	479	473	474
21	503	517	514	523	523	503	503	501	500	490	490	475	477
22	514	530	524	531	529	514	513	512	513	500	500	487	487
23	526	543	535	535	534	526	524	527	527	511	511	505	507
24	539	557	547	542	542	540	536	539	539	523	522	535	536
25	553	568	558	560	559	553	549	546	547	536	534	544	544
26	564	578	567	569	570	565	561	552	555	550	548	545	547
27	575	587	576	581	579	575	571	561	563	562	560	547	549
28	584	597	584	587	586	585	580	572	573	572	570	554	554
29	594	606	592	591	592	594	588	583	585	582	580	559	564
30	603	615	600	603	603	604	597	602	601	591	589	590	591
31	612	625	608	608	608	613	606	623	622	601	598	607	606
32	622	636	616	608	610	623	615	642	631	610	607	607	608
33	632	648	625	608	612	633	624	657	640	620	616	607	608
34	644	668	633	614	616	644	633	681	651	630	626	608	609
35	660	700	643	633	622	661	644	700	668	641	636	608	611
36	700	700	700	700	700	700	700	700	700	700	700	700	700

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C3 Grade 5 Method 3

Raw Score	2005 OP	Scale Score															
		Form 1				Form 2				Form 3				Form 4			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
7	333	370	368	392	379	357	357	363	353	362	346	394	381	350	332	347	343
8	353	383	381	399	394	371	371	380	373	375	363	401	397	365	353	365	368
9	367	396	395	402	401	384	384	392	386	388	377	402	401	378	368	382	383
10	380	411	410	406	406	397	397	402	395	402	391	404	405	392	383	401	396
11	394	425	424	410	413	412	412	404	403	417	407	407	411	406	397	405	405
12	408	438	437	444	443	426	426	422	423	430	422	432	429	420	413	414	417
13	422	450	449	464	463	439	439	447	444	443	437	451	450	433	427	436	431
14	435	461	461	471	472	450	450	455	455	455	450	458	459	446	441	445	444
15	447	474	473	479	478	462	462	462	463	467	463	465	465	457	454	454	454
16	459	487	486	482	482	475	475	473	470	479	476	472	472	470	467	466	466
17	471	500	499	486	488	488	488	481	480	492	490	479	479	482	480	480	478
18	484	512	512	507	505	500	500	496	498	505	504	490	490	495	494	488	489
19	497	523	524	533	531	513	513	525	522	517	517	518	516	508	507	505	504
20	509	535	536	541	542	524	524	534	534	529	530	530	531	519	520	519	518
21	521	548	549	553	551	536	536	543	543	541	544	544	544	531	533	531	531
22	533	562	562	558	557	549	549	554	551	554	558	557	555	544	546	544	544
23	546	575	576	562	563	563	563	558	557	568	573	563	564	557	561	557	555
24	559	587	587	582	582	576	576	565	567	580	586	588	589	571	575	566	569
25	572	598	598	620	612	588	588	594	591	592	598	622	620	583	587	597	594
26	584	608	609	624	621	598	598	604	604	602	609	627	628	594	599	611	611
27	595	618	618	626	624	609	609	612	612	612	619	630	632	604	610	623	622
28	606	627	628	627	627	618	618	621	619	622	630	636	637	614	620	628	628
29	615	637	638	628	630	628	628	624	624	632	641	639	643	624	631	631	634
30	625	648	649	638	638	638	638	629	630	642	653	672	665	634	641	639	641
31	635	659	660	697	646	649	648	638	639	652	666	740	706	644	653	672	649
32	645	672	675	704	655	660	660	650	649	670	681	740	713	655	666	679	658
33	656	693	697	704	665	674	674	667	661	688	696	740	720	667	683	690	668
34	669	740	740	704	677	695	695	670	674	706	711	740	727	684	731	699	680
35	688	740	740	704	696	740	740	684	720	724	726	740	734	727	740	707	699
36	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C3 (cont) Grade 5 Method 3

Raw Score	2005 OP	Scale Score															
		Form 5				Form 6				Form 7				Form 8			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
7	333	339	320	285	281	353	304	275	283	324	264	341	341	358	333	389	377
8	353	357	347	290	320	367	343	283	307	347	336	361	359	372	354	392	390
9	367	371	363	308	342	381	361	305	329	363	355	372	374	385	370	394	396
10	380	384	377	353	361	394	376	327	348	376	370	390	386	399	384	402	400
11	394	397	391	384	383	408	392	366	372	389	383	401	397	413	400	404	404
12	408	412	406	409	407	423	408	410	410	403	398	407	407	427	416	426	425
13	422	426	421	427	425	436	424	436	434	418	413	414	416	440	431	449	445
14	435	438	435	437	438	448	439	446	446	431	427	427	426	452	445	453	453
15	447	450	447	447	449	460	452	455	455	443	440	436	436	464	458	457	458
16	459	462	460	460	460	472	466	463	463	455	453	446	448	476	472	464	464
17	471	475	473	474	472	485	480	476	474	467	465	456	461	489	486	473	473
18	484	488	486	485	486	498	495	490	491	480	479	480	477	502	500	488	489
19	497	500	500	499	500	510	509	521	518	493	492	490	492	514	514	518	517
20	509	513	513	515	513	522	523	529	529	505	505	501	503	526	527	529	530
21	521	524	525	526	526	533	536	537	538	517	518	515	515	538	541	541	542
22	533	536	538	537	537	546	551	550	547	529	530	527	527	551	555	554	552
23	546	549	551	552	550	560	567	558	558	542	543	541	542	564	571	560	561
24	559	563	566	562	564	573	581	575	577	555	557	560	560	577	584	582	584
25	572	576	579	584	581	585	594	614	608	568	571	581	579	589	596	624	622
26	584	588	591	596	594	596	606	621	619	581	584	593	593	599	608	628	629
27	595	598	602	606	605	606	617	626	624	592	595	603	603	610	619	631	634
28	606	608	613	616	613	616	628	628	628	603	606	614	612	619	630	636	640
29	615	618	623	622	621	626	640	629	631	613	616	621	619	629	641	646	648
30	625	628	633	628	630	636	652	636	638	622	626	626	626	639	653	676	654
31	635	638	644	639	639	646	665	672	646	632	637	630	632	650	666	706	661
32	645	648	655	642	650	657	684	677	655	642	648	634	638	661	685	706	669
33	656	660	669	665	662	670	740	685	665	653	659	639	644	675	740	706	678
34	669	674	688	676	675	688	740	694	677	665	674	651	650	698	740	706	690
35	688	695	740	698	693	740	740	694	696	681	697	672	670	740	740	706	712
36	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C3 (cont) Grade 5 Method 3

Raw Score	2005 OP	Scale Score											
		Form 9				Form 11				Form 12			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	255	255	255	255	255	255	255	255	255	255	255	255	255
7	333	291	255	255	255	344	352	327	337	339	255	349	341
8	353	337	255	292	275	360	366	361	357	357	334	361	357
9	367	355	310	315	335	373	378	378	372	370	355	373	370
10	380	369	345	364	364	386	391	397	386	384	370	382	382
11	394	382	363	382	384	400	405	403	401	397	384	392	394
12	408	396	378	403	399	415	419	414	417	412	400	410	411
13	422	410	393	408	407	428	432	440	433	426	416	433	429
14	435	424	410	411	415	441	444	448	446	438	431	441	439
15	447	437	426	422	426	453	455	456	456	450	444	446	447
16	459	449	440	443	441	465	467	467	467	462	457	454	454
17	471	461	454	456	456	477	479	479	478	475	471	460	464
18	484	474	468	471	470	490	491	488	490	488	485	481	479
19	497	486	482	481	479	503	503	507	504	500	499	490	492
20	509	499	497	485	487	515	515	518	517	512	512	505	506
21	521	511	511	493	498	527	526	528	528	524	525	521	521
22	533	523	525	518	516	539	538	538	538	536	539	536	536
23	546	535	539	537	537	552	550	550	549	549	553	553	551
24	559	548	554	559	559	566	563	561	561	563	568	565	567
25	572	562	569	579	579	578	576	576	574	576	582	602	598
26	584	575	583	593	593	590	587	587	586	588	594	616	612
27	595	587	596	604	605	600	598	597	596	598	606	623	621
28	606	597	608	618	614	610	607	606	606	608	616	626	626
29	615	608	619	624	623	620	617	615	616	618	627	628	630
30	625	617	630	629	631	630	626	626	627	628	638	633	635
31	635	627	642	638	643	640	636	638	639	638	650	644	644
32	645	637	654	667	660	651	646	642	650	648	662	663	653
33	656	647	668	679	670	662	656	665	662	660	679	668	663
34	669	659	689	694	682	677	669	671	675	673	713	674	675
35	688	672	740	707	701	702	685	685	693	694	740	685	694
36	740	740	740	740	740	740	740	740	740	740	740	740	740

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C4 Grade 6 Method 3

Raw Score	2005 OP	Scale Score															
		Form 1				Form 2				Form 3				Form 5			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275
7	351	406	414	426	423	391	400	421	417	372	379	411	402	388	376	379	377
8	370	422	430	427	426	404	413	422	420	386	392	412	412	402	391	394	394
9	384	439	446	428	429	420	429	423	422	400	405	418	415	417	405	408	405
10	397	454	459	429	432	437	445	425	424	415	420	422	420	434	423	418	413
11	412	468	471	431	436	453	458	427	427	432	437	424	424	450	441	422	421
12	429	480	483	500	495	466	470	481	477	448	452	437	436	463	457	446	451
13	445	492	495	513	511	478	482	508	505	462	465	484	480	476	471	503	497
14	460	506	508	515	515	491	494	510	508	474	476	491	491	488	484	506	504
15	472	520	521	517	519	504	506	511	511	487	488	502	499	501	498	509	508
16	484	534	534	520	522	518	520	513	514	500	501	507	504	516	513	512	512
17	497	546	546	529	532	532	533	515	518	514	515	509	508	529	528	515	517
18	511	558	557	569	571	545	544	546	548	528	528	519	519	542	542	538	538
19	525	571	570	591	588	557	556	586	583	541	541	554	552	554	555	573	571
20	538	586	583	593	592	570	568	588	587	553	552	563	565	567	569	586	583
21	551	602	599	595	595	584	581	590	590	565	564	575	574	581	585	589	588
22	563	617	613	597	598	600	596	592	594	579	578	586	583	597	602	593	593
23	577	629	625	598	601	615	610	594	597	595	593	589	588	612	618	596	598
24	593	640	635	614	617	627	623	600	603	610	608	596	596	625	631	609	616
25	608	650	646	662	659	638	633	644	635	624	621	626	626	636	642	663	660
26	621	661	655	663	662	649	643	657	650	635	632	637	640	647	654	666	664
27	633	671	665	664	664	659	653	661	658	646	642	653	650	657	665	668	667
28	644	682	675	666	666	670	663	663	661	656	653	661	657	668	676	669	669
29	654	693	685	666	668	680	673	664	663	666	663	662	661	678	688	669	672
30	664	705	696	669	672	691	683	668	668	677	673	667	667	689	700	750	751
31	675	720	708	752	746	703	693	697	699	688	683	748	731	700	715	760	760
32	686	749	723	758	760	718	704	746	740	699	693	755	747	714	741	760	760
33	697	760	757	760	760	743	718	749	753	712	705	760	746	736	760	760	760
34	710	760	760	760	760	760	742	750	751	732	720	760	748	760	760	760	760
35	728	760	760	760	760	760	760	756	752	760	748	760	748	760	760	760	760
36	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C4 (cont) Grade 6 Method 3

Raw Score	2005 OP	Scale Score															
		Form 6				Form 7				Form 8				Form 9			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275
7	351	400	379	382	377	412	376	386	378	398	367	343	329	354	275	305	299
8	370	415	394	398	395	429	394	397	394	413	385	367	361	372	347	320	319
9	384	432	411	411	408	445	412	409	404	429	401	382	375	386	370	327	349
10	397	448	430	421	416	460	433	419	409	446	420	394	389	400	385	338	370
11	412	462	449	422	422	472	454	422	421	460	441	408	413	415	400	381	391
12	429	474	465	474	471	485	470	486	487	473	459	461	466	432	417	426	425
13	445	487	479	508	505	497	486	511	509	485	474	506	504	448	436	435	439
14	460	500	493	510	509	512	503	513	513	498	489	508	508	462	453	444	452
15	472	514	510	512	512	526	521	516	518	512	505	511	511	474	468	467	468
16	484	528	526	515	516	539	538	522	524	526	523	514	515	487	481	487	486
17	497	541	541	519	521	551	554	538	540	539	539	517	520	500	495	504	501
18	511	553	555	561	558	563	570	583	582	551	553	557	555	514	511	512	512
19	525	565	570	590	587	577	589	596	597	564	569	589	586	528	526	524	524
20	538	580	587	593	592	593	609	598	601	577	587	592	591	541	541	536	536
21	551	595	605	595	595	608	626	600	605	593	606	596	595	553	554	549	550
22	563	611	621	598	599	622	640	615	615	609	623	598	599	565	568	565	566
23	577	624	635	600	602	633	653	636	633	622	637	600	603	579	584	585	582
24	593	635	647	636	637	644	667	665	665	634	649	648	641	595	602	595	596
25	608	646	659	668	669	654	680	760	760	644	662	669	672	610	618	622	621
26	621	656	671	670	675	665	694	760	760	655	675	683	696	624	631	643	643
27	633	666	683	677	684	675	711	760	760	665	688	749	740	635	643	660	656
28	644	677	696	714	705	686	737	760	760	675	702	760	751	645	654	663	661
29	654	688	711	760	740	697	760	760	760	686	720	760	753	656	666	665	666
30	664	699	735	760	760	710	760	760	760	697	760	760	760	666	678	670	672
31	675	709	739	760	760	718	760	760	760	710	760	760	760	677	689	760	682
32	686	719	743	760	760	726	760	760	760	729	760	760	760	688	702	760	692
33	697	729	747	760	760	734	760	760	760	760	760	760	760	699	719	760	702
34	710	739	751	760	760	742	760	760	760	760	760	760	760	712	752	760	715
35	728	749	755	760	760	750	760	760	760	760	760	760	760	732	760	760	733
36	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C4 (cont) Grade 6 Method 3

Raw Score	2005 OP	Scale Score											
		Form 10				Form 11				Form 12			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	275	275	275	275	275	275	275	275	275	275	275	275	275
7	351	337	275	309	313	275	275	275	275	371	275	275	275
8	370	363	275	324	333	351	275	275	275	385	275	275	275
9	384	379	341	330	348	370	275	275	275	399	356	289	275
10	397	392	367	340	368	384	275	275	275	413	378	306	275
11	412	406	384	373	387	398	355	275	275	430	395	319	325
12	429	422	400	423	419	412	377	419	408	447	413	425	424
13	445	439	417	429	428	429	394	426	422	461	435	434	437
14	460	454	437	430	432	446	412	426	425	473	455	439	446
15	472	467	455	434	438	460	434	428	428	486	471	466	464
16	484	479	470	440	453	473	454	430	432	499	487	484	484
17	497	492	484	472	475	485	471	434	438	513	504	501	499
18	511	506	500	509	508	498	486	505	506	527	523	517	518
19	525	520	516	518	519	512	503	515	516	540	539	566	563
20	538	533	532	524	527	526	521	517	519	552	555	577	576
21	551	546	547	538	538	539	538	519	523	564	572	586	583
22	563	558	561	553	552	551	554	529	531	578	591	589	587
23	577	571	577	570	570	563	570	548	547	594	611	592	592
24	593	586	595	593	593	577	590	591	591	609	627	600	602
25	608	602	613	618	619	593	610	646	642	623	641	665	663
26	621	616	627	633	637	608	626	660	657	634	655	667	667
27	633	628	640	657	651	622	640	662	660	645	668	669	670
28	644	639	652	662	660	633	654	663	663	655	682	670	673
29	654	650	664	665	665	644	667	665	666	666	696	674	687
30	664	660	677	669	671	654	680	669	672	676	712	760	760
31	675	671	689	760	689	665	695	760	681	687	742	760	760
32	686	681	703	760	710	675	711	760	691	698	760	760	760
33	697	692	720	760	754	686	738	760	701	711	760	760	760
34	710	715	733	760	756	697	760	760	714	727	760	760	760
35	728	738	746	760	758	710	760	760	733	743	760	760	760
36	760	760	760	760	760	760	760	760	760	760	760	760	760

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C5 Grade 7 Method 3

Raw Score	2005 OP	Scale Score															
		Form 1				Form 2				Form 3				Form 4			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290
7	360	397	425	442	444	362	406	408	405	366	397	352	356	372	388	382	376
8	378	411	441	444	449	379	418	417	417	383	408	383	382	387	400	392	390
9	392	427	457	449	459	393	432	431	428	396	421	405	400	400	413	402	402
10	405	447	470	468	467	406	447	435	436	410	437	429	414	414	428	409	419
11	420	464	480	473	479	422	461	441	453	426	453	433	436	432	446	425	436
12	439	478	491	502	501	441	472	479	478	445	467	467	463	451	462	467	464
13	458	490	501	522	519	459	482	494	492	463	478	484	482	468	475	488	486
14	472	503	513	524	523	474	492	498	499	477	489	489	490	481	487	493	494
15	485	518	527	526	526	487	502	505	506	489	499	498	498	493	498	500	502
16	498	535	540	529	530	499	513	515	513	502	511	509	509	507	511	509	510
17	512	550	552	532	535	513	525	521	521	517	525	521	520	522	526	523	521
18	528	563	563	561	562	530	538	533	532	534	539	534	535	539	541	535	536
19	545	575	573	592	589	546	550	561	560	549	551	569	566	554	554	566	564
20	558	587	582	597	597	560	560	567	568	562	562	574	575	566	566	574	575
21	570	599	592	601	600	571	569	574	574	574	572	581	581	578	576	583	584
22	582	611	602	604	603	583	578	581	580	586	582	588	588	589	587	593	592
23	594	622	612	606	606	595	587	589	588	598	592	594	598	602	598	600	600
24	606	632	621	610	611	607	596	603	604	610	602	605	605	614	609	607	607
25	618	640	629	633	630	619	606	610	609	621	612	611	610	624	620	617	614
26	628	648	637	636	636	629	615	610	610	631	622	611	611	634	629	622	620
27	637	655	643	638	639	638	623	611	612	640	630	611	612	642	637	628	626
28	645	662	649	640	641	646	631	611	613	647	637	612	613	650	644	634	631
29	652	670	655	642	644	653	638	612	614	655	644	612	614	657	651	636	636
30	659	678	661	650	649	660	644	624	625	662	650	632	625	664	658	642	642
31	667	687	668	663	658	668	650	646	645	669	656	656	640	672	664	660	652
32	674	699	674	663	667	675	655	648	655	677	662	656	653	680	671	660	662
33	683	721	681	663	677	684	661	649	662	686	669	657	665	690	679	661	672
34	694	770	689	663	688	695	666	651	676	698	675	657	678	703	687	662	684
35	710	770	699	663	704	712	672	656	693	718	683	657	694	731	698	662	701
36	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C5 (cont) Grade 7 Method 3

Raw Score	2005 OP	Scale Score															
		Form 5				Form 6				Form 8				Form 9			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290
7	360	358	384	345	327	359	372	343	340	336	392	362	364	348	384	339	345
8	378	377	396	357	363	378	386	358	361	367	403	383	381	372	395	372	370
9	392	391	408	371	384	392	399	372	376	383	414	396	394	387	407	384	378
10	405	404	422	396	403	405	412	389	394	397	428	408	406	400	420	390	390
11	420	419	439	418	427	420	428	404	412	410	444	420	422	414	436	395	405
12	439	438	456	451	455	438	446	445	445	426	459	447	449	431	453	438	434
13	458	457	469	483	479	457	463	476	469	446	471	481	478	451	467	472	469
14	472	472	481	489	490	472	476	481	481	463	481	488	487	467	479	483	482
15	485	485	492	497	499	485	488	491	492	477	491	493	493	481	490	490	490
16	498	497	504	509	509	498	500	503	503	490	502	499	499	493	501	498	497
17	512	511	517	521	520	512	514	518	516	503	514	507	508	506	513	506	507
18	528	527	532	530	530	528	530	530	530	518	527	529	528	522	528	529	530
19	545	544	546	546	544	544	545	545	544	534	540	546	545	539	542	553	551
20	558	558	558	557	557	558	558	557	557	550	552	554	554	553	554	559	559
21	570	570	569	569	569	570	570	570	570	563	563	561	561	566	565	566	566
22	582	581	579	581	581	582	581	582	582	575	572	569	569	577	575	574	574
23	594	593	590	591	593	594	592	593	594	586	581	577	579	589	586	583	584
24	606	605	600	604	604	606	604	605	605	598	591	601	592	601	596	603	604
25	618	617	611	610	611	618	615	612	613	610	601	609	609	613	607	610	609
26	628	628	621	611	614	628	625	613	620	622	611	609	610	624	617	611	611
27	637	636	630	612	617	637	634	626	627	631	620	610	611	634	626	611	612
28	645	644	638	620	623	645	642	635	634	640	628	611	612	642	634	612	613
29	652	652	645	631	631	652	649	639	640	648	635	611	614	649	641	612	615
30	659	659	651	641	640	659	656	648	647	655	642	618	623	657	648	634	628
31	667	666	658	661	656	667	663	739	656	662	648	646	645	664	654	649	645
32	674	674	664	663	670	674	670	770	666	670	654	647	654	671	661	650	658
33	683	683	671	663	688	683	678	770	675	678	660	648	660	680	667	651	669
34	694	693	678	770	725	694	686	770	687	687	666	649	666	690	674	655	681
35	710	732	724	770	748	710	698	770	703	699	672	653	685	703	681	658	698
36	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770	770

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C5 (cont) Grade 7 Method 3

Raw Score	2005 OP	Scale Score											
		Form 10				Form 11				Form 12			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	290	290	290	290	290	290	290	290	290	290	290	290	290
7	360	375	394	394	384	373	395	392	383	337	388	382	376
8	378	389	405	405	401	388	406	398	396	368	398	384	383
9	392	402	419	418	411	401	420	404	402	384	410	389	392
10	405	417	435	431	422	415	436	420	413	397	423	398	402
11	420	435	452	435	440	432	453	431	432	411	439	407	415
12	439	454	467	475	474	452	467	475	475	427	455	442	443
13	458	470	479	494	492	468	479	497	495	446	468	477	474
14	472	483	490	500	500	481	490	504	504	464	479	487	486
15	485	495	502	509	508	494	501	513	511	478	490	493	493
16	498	509	515	521	517	507	514	521	518	490	500	500	500
17	512	525	529	523	522	523	528	523	523	503	512	510	511
18	528	541	544	534	534	540	543	533	533	518	526	529	529
19	545	556	556	567	565	554	555	564	560	535	540	544	542
20	558	568	567	575	576	567	566	571	572	550	552	550	551
21	570	580	578	584	584	578	576	579	580	563	563	558	558
22	582	591	588	593	592	590	586	589	588	575	573	567	566
23	594	603	599	600	600	602	597	596	597	586	582	575	577
24	606	615	610	607	607	614	608	606	606	598	592	601	594
25	618	626	620	614	615	625	618	617	617	611	602	610	609
26	628	635	629	623	624	634	627	625	626	622	612	610	611
27	637	643	637	634	631	642	635	635	632	632	622	611	612
28	645	651	644	638	637	650	642	638	637	640	630	612	613
29	652	658	651	640	641	657	649	639	641	648	637	612	615
30	659	665	657	648	648	664	655	647	647	655	644	632	627
31	667	673	664	662	661	672	662	770	664	662	650	645	644
32	674	681	670	663	675	680	668	770	683	670	656	646	653
33	683	692	677	770	692	690	675	770	719	678	662	648	660
34	694	706	686	770	730	717	707	770	736	687	668	651	674
35	710	738	728	770	750	744	739	770	753	699	675	653	691
36	770	770	770	770	770	770	770	770	770	770	770	770	770

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C6 Grade 8 Method 3

Raw Score	2005 OP	Scale Score															
		Form 2				Form 3				Form 4				Form 5			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
7	339	362	329	396	392	367	300	366	358	300	300	382	378	335	300	382	376
8	358	375	355	404	398	380	347	381	380	341	300	382	381	356	300	382	379
9	372	388	371	408	403	393	366	391	392	359	300	384	385	370	335	383	383
10	385	401	385	410	406	407	381	407	404	373	321	388	389	383	358	383	389
11	398	416	400	411	412	422	397	412	415	386	353	389	395	396	374	386	396
12	413	431	416	425	427	436	415	426	430	399	370	405	401	411	389	410	408
13	427	444	432	448	445	449	432	448	445	414	386	410	408	425	405	423	423
14	441	456	447	451	451	461	447	454	454	429	402	413	414	439	422	439	436
15	453	469	461	456	457	475	462	462	463	442	420	418	422	451	438	449	446
16	466	485	476	466	466	492	479	475	475	454	437	433	433	464	452	454	454
17	481	504	496	480	480	511	500	494	492	467	452	448	447	478	467	461	464
18	499	521	517	507	508	527	522	509	514	482	468	463	465	496	485	482	479
19	517	536	533	540	539	541	538	538	536	501	487	490	484	515	507	499	498
20	532	548	548	550	551	553	553	551	551	519	510	499	501	530	526	510	517
21	545	561	562	561	561	567	569	565	565	534	529	517	520	544	542	534	534
22	558	576	578	572	571	582	588	581	580	547	545	542	541	556	557	551	551
23	572	591	596	584	583	598	606	593	596	559	561	560	560	570	573	568	568
24	588	606	611	603	606	611	620	625	624	573	578	582	580	585	591	588	589
25	603	618	624	639	637	622	631	650	648	589	597	594	597	601	608	616	614
26	615	628	634	650	648	632	642	654	656	604	613	610	612	614	621	631	631
27	626	637	644	653	653	641	652	662	664	617	626	630	628	625	632	645	643
28	635	646	653	656	657	649	661	673	672	627	637	645	641	634	642	654	654
29	643	654	662	663	665	657	672	679	681	636	647	652	652	642	652	661	662
30	652	662	672	680	679	666	684	694	695	644	657	660	663	651	661	670	669
31	660	671	684	800	691	675	701	753	700	653	668	677	676	659	671	677	676
32	669	681	699	800	708	686	752	800	707	661	679	688	693	668	683	681	682
33	678	694	733	800	800	700	800	800	716	670	694	739	701	677	699	684	689
34	690	729	755	800	800	729	800	800	731	680	722	800	713	688	736	712	697
35	708	764	777	800	800	800	800	800	798	692	800	800	736	704	800	741	715
36	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C6 (cont) Grade 8 Method 3

Raw Score	2005 OP	Scale Score															
		Form 6				Form 7				Form 8				Form 9			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
7	339	357	300	382	378	349	300	360	344	330	300	351	331	300	300	300	320
8	358	371	300	384	383	365	300	370	363	353	300	357	350	312	300	300	341
9	372	384	341	387	388	378	322	380	371	368	300	362	362	346	300	309	353
10	385	397	363	391	394	391	354	384	380	381	332	364	373	363	300	333	363
11	398	411	379	398	402	405	372	387	392	394	358	381	383	376	300	346	371
12	413	426	395	411	413	420	388	411	408	408	375	407	402	389	346	366	379
13	427	440	413	424	425	434	405	423	424	423	391	415	414	403	366	386	389
14	441	452	431	442	438	447	423	437	436	437	409	419	422	418	383	406	399
15	453	465	447	450	449	459	440	448	446	449	427	430	431	432	400	410	408
16	466	479	463	459	459	473	456	455	456	462	443	444	442	445	418	415	418
17	481	497	481	471	473	489	472	465	469	476	459	452	453	457	436	425	432
18	499	516	504	496	494	508	493	495	492	493	476	466	468	470	452	454	453
19	517	531	525	515	518	525	517	513	515	512	498	493	489	486	468	473	471
20	532	544	542	539	539	539	535	531	532	528	521	507	510	505	488	490	487
21	545	557	558	557	557	551	551	545	546	542	538	536	535	523	512	499	501
22	558	571	575	576	573	565	567	561	560	554	554	555	554	537	532	523	522
23	572	586	595	587	588	579	586	577	575	568	571	573	572	550	548	544	544
24	588	602	612	606	609	595	605	595	597	583	591	590	591	563	565	571	570
25	603	615	625	642	637	609	620	637	634	598	609	615	614	577	584	592	594
26	615	625	637	652	649	621	632	650	648	612	623	629	629	593	603	605	609
27	626	634	647	656	657	631	643	654	656	623	635	641	641	607	619	621	621
28	635	643	657	663	665	639	653	661	662	632	645	651	650	619	631	632	631
29	643	651	668	673	673	648	664	672	671	641	655	655	658	629	642	638	640
30	652	659	680	683	685	656	675	681	685	649	666	669	669	638	653	651	651
31	660	668	696	731	691	664	689	728	725	658	678	681	680	646	663	664	663
32	669	678	728	746	698	673	710	747	738	666	692	684	689	655	675	676	674
33	678	689	800	770	706	684	800	800	777	675	719	700	700	663	689	682	685
34	690	705	800	800	719	697	800	800	800	686	800	742	712	672	711	696	699
35	708	754	800	800	747	722	800	800	800	701	800	750	734	682	800	738	717
36	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C6 (cont) Grade 8 Method 3

Raw Score	2005 OP	Scale Score											
		Form 10				Form 11				Form 12			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
6	300	300	300	300	300	300	300	300	300	300	300	300	300
7	339	353	300	382	378	300	300	360	334	342	300	377	368
8	358	368	300	385	381	343	300	360	353	360	300	379	375
9	372	381	338	387	384	360	300	360	366	373	300	381	379
10	385	394	361	390	389	374	300	379	377	386	347	382	383
11	398	408	377	393	398	387	340	385	386	400	367	383	389
12	413	423	393	414	413	400	363	395	395	415	383	408	404
13	427	437	411	436	432	415	379	408	404	429	399	418	419
14	441	450	429	446	443	429	396	412	411	442	418	431	430
15	453	462	445	450	450	443	415	416	418	455	435	440	439
16	466	476	460	455	457	455	433	425	428	467	451	449	448
17	481	493	477	465	469	468	449	440	442	483	466	456	458
18	499	512	500	495	493	483	465	461	463	501	485	479	477
19	517	529	522	515	518	502	484	491	488	519	509	501	502
20	532	542	539	537	537	520	508	499	502	534	529	523	524
21	545	554	555	551	552	535	529	514	519	547	545	543	543
22	558	568	571	567	566	547	546	540	539	560	561	561	560
23	572	583	591	581	580	560	562	559	559	574	579	578	576
24	588	599	609	597	603	574	580	584	583	590	599	593	595
25	603	612	623	637	635	590	600	608	609	605	615	621	619
26	615	623	634	651	650	605	617	627	625	617	628	633	634
27	626	633	645	657	659	617	629	637	634	627	639	648	647
28	635	641	655	666	666	627	641	644	641	636	649	656	657
29	643	650	665	675	675	636	651	649	648	645	659	668	668
30	652	658	677	684	686	645	662	656	658	653	670	679	679
31	660	666	691	769	693	653	673	681	680	661	683	691	692
32	669	676	714	800	702	661	686	700	709	670	700	704	712
33	678	687	800	800	714	670	707	747	718	680	746	735	721
34	690	701	800	800	737	680	800	800	734	692	800	755	738
35	708	734	800	800	800	692	800	800	800	710	800	770	800
36	800	800	800	800	800	800	800	800	800	800	800	800	800

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 2				Form 3				Form 4				Form 5			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
12	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	524	522	529	529	519	522	525	522	523	517	524	525	510	522	500	513
14	535	547	543	558	558	537	543	550	543	546	534	547	550	520	543	500	526
15	543	553	549	567	562	544	549	554	546	552	542	552	557	531	549	505	534
16	549	558	555	576	565	551	554	557	549	557	550	557	563	542	554	510	541
17	555	563	560	578	568	556	559	558	554	562	556	567	568	548	559	525	546
18	560	567	565	579	571	561	564	558	558	567	561	576	573	554	563	539	551
19	565	572	570	581	575	566	569	560	562	572	566	582	578	559	568	551	559
20	569	577	575	583	578	571	574	562	566	577	571	587	582	564	572	562	566
21	574	583	580	585	582	576	579	569	571	582	576	589	586	569	577	571	572
22	579	588	585	586	586	581	584	576	576	587	581	590	589	574	582	580	578
23	585	593	591	592	593	586	589	584	585	593	587	593	593	579	587	585	584
24	590	598	596	597	600	591	594	592	593	598	593	595	597	584	592	590	589
25	595	603	602	607	607	597	599	600	599	603	599	602	602	590	597	596	595
26	600	608	607	616	614	602	604	608	605	608	604	609	606	595	602	601	600
27	605	613	612	618	618	607	609	611	609	613	609	613	610	600	607	606	605
28	610	617	616	620	621	612	613	613	613	617	614	616	614	605	611	611	609
29	615	622	621	624	625	617	618	616	615	622	619	618	618	610	615	615	614
30	619	627	626	627	628	621	622	618	617	626	623	620	622	615	619	618	618
31	624	632	631	632	632	626	627	620	620	631	628	625	627	620	624	622	623
32	629	637	636	636	635	630	632	622	623	636	633	630	631	624	628	626	627
33	634	643	642	640	640	636	637	625	628	642	639	637	637	629	633	632	633
34	639	648	647	644	645	641	642	628	632	648	645	644	643	633	637	638	638
35	645	654	653	651	652	647	648	644	646	654	652	651	651	639	643	645	645
36	651	660	659	658	659	652	654	660	660	660	658	658	658	644	648	652	651
37	657	666	665	666	666	658	660	669	669	666	664	665	665	650	654	658	657
38	663	671	671	674	673	664	665	677	677	671	669	672	671	656	659	663	662
39	668	676	676	678	678	670	670	680	680	676	675	677	676	662	665	668	667
40	673	681	681	682	682	675	675	682	682	680	680	681	681	668	670	672	672
41	678	686	686	686	686	680	680	684	685	685	685	685	685	673	675	676	676
42	683	690	690	690	690	684	684	686	687	690	690	689	689	678	679	680	680
43	688	696	696	694	694	689	689	689	690	695	696	694	694	683	684	684	684

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 2				Form 3				Form 4				Form 5			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
44	693	701	701	698	698	694	694	691	692	700	701	698	698	687	688	688	688
45	698	708	708	703	703	700	700	695	695	707	708	704	704	693	693	692	693
46	704	714	714	708	707	705	705	698	698	713	714	710	709	698	697	696	697
47	710	721	721	714	714	712	712	707	707	720	721	716	717	704	703	704	704
48	717	727	728	720	721	718	718	716	716	726	728	722	724	709	708	711	711
49	723	733	734	732	733	725	724	727	726	732	734	733	733	716	715	717	717
50	730	738	739	744	744	731	730	737	736	738	740	743	742	723	721	722	723
51	735	743	744	750	750	737	736	740	739	743	745	750	749	729	727	726	728
52	740	748	748	756	756	742	741	742	742	747	749	756	756	735	732	730	732
53	745	752	753	761	760	747	746	745	744	752	754	762	761	740	737	735	736
54	749	756	757	766	764	751	750	747	746	756	758	768	766	745	742	739	739
55	754	760	762	769	767	755	754	750	749	760	763	771	770	750	747	742	743
56	758	764	766	771	770	759	758	752	751	764	767	774	773	754	751	745	747
57	762	769	770	773	773	763	762	754	754	768	772	776	776	758	755	750	751
58	766	773	774	774	775	767	766	755	757	772	776	777	779	762	758	754	755
59	770	777	779	778	778	772	770	764	764	777	781	780	783	766	762	760	760
60	775	781	783	781	781	776	774	772	771	781	785	782	786	770	766	765	764
61	779	786	787	800	787	780	778	792	787	785	790	789	791	775	770	770	768
62	783	790	791	818	792	784	782	812	803	789	794	796	795	779	774	774	772
63	787	794	796	821	798	789	787	817	806	794	799	803	800	783	778	776	776
64	791	798	800	824	804	793	791	822	809	798	803	810	805	787	782	777	779
65	796	803	805	830	811	798	795	824	813	803	809	816	809	792	786	781	783
66	800	808	810	835	818	802	799	826	816	807	814	821	812	796	790	785	787
67	805	814	818	868	839	807	804	826	821	814	824	825	817	801	794	793	792
68	810	820	825	900	859	812	809	826	825	820	833	829	821	805	798	801	797
69	816	840	844	900	869	820	815	827	833	833	867	833	829	811	803	814	805
70	824	860	863	900	879	827	821	828	841	845	900	837	836	816	807	826	813
71	837	880	882	900	889	864	861	864	871	873	900	869	868	858	854	863	857
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 6				Form 7				Form 8				Form 9			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
12	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	519	500	506	519	521	500	511	516	506	500	537	531	519	505	526	525
14	535	537	500	512	537	542	500	522	532	512	500	573	561	538	509	552	549
15	543	544	515	531	545	548	508	538	541	526	500	574	566	545	525	557	555
16	549	551	530	549	552	554	516	553	549	540	500	575	570	551	540	562	560
17	555	556	539	555	557	559	530	557	555	547	514	576	574	557	547	567	564
18	560	561	548	561	561	564	543	561	560	553	528	576	577	562	554	571	567
19	565	566	554	567	565	569	550	568	565	558	538	578	580	567	559	574	571
20	569	571	560	572	569	574	557	575	569	563	547	580	582	571	564	577	575
21	574	576	565	576	573	579	563	578	574	568	553	583	584	576	570	579	579
22	579	581	570	579	577	584	568	581	578	573	559	585	586	581	575	580	582
23	585	586	576	584	581	590	574	584	582	578	565	587	588	587	580	585	586
24	590	591	581	588	585	595	579	587	586	583	570	589	590	592	585	589	589
25	595	597	587	590	589	600	585	590	591	588	576	591	592	597	591	593	593
26	600	602	593	592	593	605	591	593	595	593	581	593	594	602	597	596	596
27	605	607	599	595	597	610	597	600	600	599	587	594	596	607	602	601	600
28	610	612	604	597	601	614	603	606	604	604	593	594	597	612	607	605	603
29	615	617	610	603	605	619	609	610	608	609	599	597	600	617	612	608	606
30	619	621	615	609	609	623	614	614	612	613	605	599	602	621	617	611	609
31	624	626	620	614	614	628	620	617	617	618	610	604	605	626	622	615	613
32	629	630	625	618	618	633	625	620	621	622	615	609	608	631	627	618	617
33	634	636	630	622	624	639	631	626	627	627	620	613	612	636	633	621	622
34	639	641	635	626	630	644	636	631	632	632	625	616	616	641	638	624	627
35	645	647	642	637	638	650	643	640	640	638	631	623	623	647	644	638	639
36	651	653	648	647	646	656	649	649	648	643	637	630	630	653	650	651	651
37	657	659	655	657	655	662	656	657	656	649	643	640	639	659	657	661	661
38	663	664	661	667	664	667	663	665	664	655	649	650	647	665	663	671	670
39	668	670	667	672	670	672	669	671	670	661	656	654	653	670	669	675	675
40	673	675	673	677	676	677	675	676	675	666	663	658	659	675	674	678	679
41	678	680	678	681	681	682	681	680	680	671	669	664	664	680	679	682	682
42	683	684	683	685	685	687	686	684	685	676	674	670	669	685	684	685	685
43	688	689	689	690	690	692	692	690	691	681	680	675	675	690	690	689	689

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 6				Form 7				Form 8				Form 9			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
44	693	694	694	694	694	697	698	696	696	686	685	680	680	695	695	693	693
45	698	700	701	700	700	703	705	704	703	691	691	686	686	701	701	698	698
46	704	705	707	705	705	709	712	711	709	696	696	691	692	706	707	702	703
47	710	712	714	712	713	716	720	717	717	702	703	702	702	713	714	711	712
48	717	718	721	719	720	722	727	722	724	708	709	713	712	719	721	719	720
49	723	725	728	728	728	729	734	733	733	715	717	724	723	726	728	731	730
50	730	731	735	737	736	735	740	744	742	721	724	734	733	732	734	742	740
51	735	737	740	741	741	740	745	750	749	727	731	739	739	737	740	747	745
52	740	742	745	745	746	745	750	755	756	733	737	744	744	742	745	751	750
53	745	747	750	750	751	749	755	762	761	738	743	749	748	747	750	755	753
54	749	751	755	755	755	753	760	768	766	743	748	753	752	751	754	758	756
55	754	755	760	761	760	758	765	772	770	748	753	757	755	756	759	760	759
56	758	759	764	766	764	762	770	775	773	752	757	760	758	760	763	762	762
57	762	763	769	769	768	766	775	777	777	757	762	762	762	764	768	765	765
58	766	767	773	772	771	770	779	778	780	761	767	764	765	768	772	767	768
59	770	772	778	775	775	774	784	781	784	765	772	770	770	772	777	772	773
60	775	776	782	777	779	778	789	783	787	769	776	775	774	776	781	776	777
61	779	780	787	786	784	783	794	790	792	773	781	786	784	781	786	787	787
62	783	784	792	794	789	787	799	797	796	777	785	797	794	785	790	798	796
63	787	789	797	800	795	791	805	807	801	782	790	801	800	789	795	800	802
64	791	793	801	806	800	795	810	816	806	786	795	805	805	793	799	802	808
65	796	798	807	816	805	800	819	823	814	790	800	812	809	798	804	806	812
66	800	802	813	826	810	804	827	829	821	794	805	819	813	802	809	809	815
67	805	807	822	837	817	810	864	865	844	799	812	823	818	807	816	816	820
68	810	812	830	848	824	815	900	900	867	803	818	826	822	812	823	822	825
69	816	820	865	874	862	836	900	900	875	809	832	829	830	820	852	828	833
70	824	827	900	900	899	857	900	900	883	814	846	831	837	828	881	833	841
71	837	864	900	900	900	878	900	900	891	857	873	866	869	864	891	867	871
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 10				Form 11				Form 12				Form 13			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
12	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	516	500	500	500	512	516	512	517	521	500	508	502	521	520	530	528
14	535	532	500	500	500	524	532	524	534	542	500	516	503	542	539	559	556
15	543	540	519	508	509	534	540	539	541	548	515	518	514	548	546	562	560
16	549	548	538	515	518	544	548	553	548	554	529	520	525	554	553	565	563
17	555	554	545	519	524	550	553	556	553	559	539	535	535	559	558	570	567
18	560	559	552	522	530	555	558	558	558	564	548	549	545	564	563	575	570
19	565	564	558	535	540	560	563	559	562	569	554	556	554	569	568	577	573
20	569	568	563	548	549	565	568	560	566	574	560	562	563	574	573	578	576
21	574	573	568	554	558	570	573	564	571	579	566	569	569	579	578	580	580
22	579	578	573	560	567	575	578	568	575	584	571	575	575	584	583	581	584
23	585	584	578	573	575	580	583	577	580	589	577	582	581	590	589	588	590
24	590	589	583	586	582	585	588	586	584	594	582	588	587	595	594	594	596
25	595	594	589	590	588	591	593	590	589	600	588	593	592	600	599	604	602
26	600	599	595	593	594	596	598	593	593	605	594	597	597	605	604	613	608
27	605	604	600	597	599	601	603	598	598	610	600	602	602	610	609	616	612
28	610	609	605	600	603	606	608	603	602	614	605	607	606	614	614	618	616
29	615	614	610	606	607	611	613	608	606	619	611	611	610	619	619	620	619
30	619	618	615	611	611	616	617	612	610	623	616	614	613	624	623	622	622
31	624	623	620	615	616	621	622	615	614	628	621	617	617	629	628	624	625
32	629	628	625	619	620	625	626	618	617	633	626	620	620	633	633	626	627
33	634	633	630	623	625	630	631	621	622	639	632	624	625	639	639	629	631
34	639	638	635	627	630	634	636	624	626	644	638	627	630	644	644	632	635
35	645	644	641	637	637	640	642	636	636	650	645	639	640	650	650	643	645
36	651	649	647	646	644	646	647	647	646	656	651	651	650	656	656	654	654
37	657	655	654	654	652	652	653	656	655	662	658	661	660	662	662	663	663
38	663	661	660	662	660	658	659	665	663	667	664	670	669	668	667	672	671
39	668	667	666	667	666	664	664	669	668	672	670	675	674	673	672	676	676
40	673	672	671	672	672	669	669	672	673	677	675	679	679	678	677	680	680
41	678	677	676	677	677	674	674	677	677	682	681	683	683	683	682	684	684
42	683	682	681	682	682	679	679	681	681	687	686	687	687	687	687	688	688
43	688	687	686	687	687	684	684	685	685	692	692	692	691	692	692	692	692

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 10				Form 11				Form 12				Form 13			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
44	693	691	691	692	692	688	688	689	689	697	697	696	695	697	697	696	695
45	698	697	697	699	699	694	694	694	694	703	704	701	700	703	703	700	700
46	704	702	703	706	705	699	699	699	699	709	711	705	705	709	709	704	704
47	710	709	710	713	713	705	705	707	707	716	719	714	714	716	716	712	712
48	717	715	716	720	721	711	710	715	715	722	726	722	722	723	723	719	719
49	723	722	723	728	728	718	717	722	722	728	733	738	735	729	729	730	730
50	730	728	730	735	734	724	723	728	728	734	739	753	747	735	735	741	740
51	735	734	736	739	739	730	729	733	732	739	744	756	752	740	740	747	746
52	740	739	741	742	744	736	735	737	736	744	749	759	757	745	745	752	751
53	745	744	746	746	748	741	740	740	740	749	754	761	760	749	750	757	755
54	749	749	751	750	752	746	745	742	743	753	758	763	763	753	754	761	759
55	754	753	755	755	756	750	749	745	747	757	763	766	765	758	758	764	762
56	758	757	759	759	759	754	753	747	750	761	768	768	767	762	762	766	764
57	762	761	764	763	763	759	758	751	754	766	773	770	770	766	767	768	767
58	766	765	768	766	766	763	762	755	758	770	777	772	772	770	771	769	769
59	770	770	773	770	769	767	766	762	764	774	782	775	776	774	775	773	773
60	775	774	777	773	772	771	770	769	769	778	787	777	779	778	779	776	777
61	779	778	782	775	775	775	774	773	773	783	792	792	789	783	784	784	783
62	783	782	786	777	778	779	778	777	777	787	796	806	798	787	788	792	789
63	787	787	791	778	781	784	782	778	779	791	802	813	801	791	792	798	795
64	791	791	795	779	783	788	786	778	781	795	807	819	804	795	796	803	801
65	796	795	800	783	786	792	790	779	783	800	814	822	808	800	801	810	808
66	800	799	804	787	788	796	794	780	785	804	820	824	812	804	806	816	814
67	805	804	810	791	791	801	799	783	788	810	839	829	817	810	812	819	819
68	810	809	816	794	794	806	803	786	790	815	857	833	821	816	817	822	824
69	816	816	826	799	798	812	809	790	793	824	879	840	829	825	828	826	832
70	824	822	836	804	801	817	814	793	795	833	900	847	836	834	839	829	840
71	837	861	868	852	851	859	857	847	848	867	900	874	868	867	870	865	870
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 14				Form 15				Form 16				Form 17			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
12	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	516	523	538	532	514	500	509	501	525	520	529	531	521	505	531	531
14	535	531	546	575	564	527	500	517	502	549	539	558	561	542	509	562	561
15	543	539	552	576	569	536	500	519	514	555	546	567	566	549	525	563	564
16	549	547	557	577	573	545	500	520	525	560	553	576	570	555	540	564	567
17	555	553	562	578	576	551	500	536	535	565	559	580	574	560	547	570	570
18	560	558	566	578	579	557	500	551	545	569	564	584	577	564	554	576	573
19	565	563	571	582	582	562	513	557	554	574	569	585	580	569	560	578	576
20	569	568	575	585	584	566	526	562	563	579	574	586	583	574	565	579	579
21	574	573	580	586	587	571	537	566	568	585	579	587	587	579	570	580	582
22	579	578	585	587	589	576	548	569	573	590	584	588	590	584	575	581	585
23	585	583	590	592	594	582	555	578	578	595	590	593	595	590	581	587	590
24	590	588	595	596	598	587	561	586	582	600	596	598	599	595	587	592	594
25	595	594	600	604	604	592	567	588	586	605	601	605	604	600	593	601	599
26	600	599	605	612	609	597	573	590	589	610	606	612	609	605	598	609	604
27	605	604	609	615	613	602	580	592	592	615	611	615	613	610	604	612	608
28	610	609	613	617	616	607	586	593	595	619	616	618	617	615	609	615	612
29	615	614	618	620	619	612	593	598	599	624	621	621	621	620	614	617	615
30	619	618	622	622	622	617	599	602	602	629	626	624	624	624	619	618	618
31	624	623	627	625	625	622	605	607	606	634	631	628	628	629	624	621	621
32	629	627	631	628	628	626	611	611	610	639	636	631	632	634	629	623	624
33	634	632	636	632	632	631	617	614	615	645	642	636	638	640	635	627	629
34	639	637	641	635	636	636	623	617	620	651	648	641	643	645	640	630	633
35	645	643	647	641	642	642	629	626	627	657	655	651	652	651	647	642	643
36	651	649	652	647	647	647	635	634	634	663	661	660	660	657	653	653	653
37	657	655	658	654	654	653	642	644	643	668	667	668	668	663	660	662	662
38	663	661	663	661	661	659	649	653	651	673	672	676	675	668	666	671	670
39	668	667	668	667	667	665	657	658	658	678	677	680	680	673	672	675	675
40	673	672	673	673	673	670	664	663	664	683	682	684	684	678	677	678	679
41	678	677	678	678	678	675	671	669	669	688	688	689	689	683	682	682	683
42	683	681	682	682	682	680	677	674	674	693	693	693	693	687	687	686	686
43	688	686	687	687	687	685	683	679	678	699	699	698	698	693	693	690	690

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score															
		Form 14				Form 15				Form 16				Form 17			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
44	693	691	691	691	691	689	688	683	682	704	704	702	702	698	698	694	694
45	698	697	696	696	696	695	695	688	688	711	711	708	707	704	705	700	700
46	704	702	701	701	701	700	702	692	693	717	718	713	712	710	711	705	705
47	710	709	707	708	708	706	710	704	704	724	725	719	719	717	719	713	714
48	717	715	713	714	714	712	718	715	715	730	731	724	725	723	726	721	722
49	723	722	720	719	720	719	726	730	730	735	737	734	735	729	732	733	734
50	730	728	726	723	725	726	733	745	745	740	742	744	745	735	738	745	745
51	735	734	732	730	730	732	740	753	752	745	747	750	751	740	743	751	751
52	740	739	737	736	735	737	746	760	758	750	752	756	756	745	748	756	756
53	745	744	742	741	741	742	751	765	762	754	756	762	761	750	753	760	760
54	749	748	746	745	746	747	756	769	766	758	760	768	766	754	757	764	763
55	754	753	750	751	751	751	762	771	769	762	765	771	770	758	762	767	766
56	758	757	754	756	756	755	767	773	771	766	769	774	773	762	766	770	769
57	762	761	758	761	761	760	772	774	774	771	774	776	777	766	771	772	772
58	766	765	762	766	766	764	777	775	776	775	778	778	780	770	776	774	775
59	770	769	766	770	770	768	783	780	780	779	783	786	785	775	781	779	779
60	775	773	770	774	773	772	788	784	783	783	787	793	790	779	785	784	782
61	779	778	774	776	776	776	793	810	787	788	792	807	794	783	790	817	788
62	783	782	777	777	778	780	798	835	790	792	796	820	797	787	794	849	793
63	787	786	781	778	780	785	805	868	794	796	801	825	801	792	799	875	799
64	791	790	785	779	782	789	811	900	797	800	806	829	805	796	804	900	804
65	796	795	789	784	785	793	821	900	801	805	812	831	810	801	810	900	812
66	800	799	793	788	788	797	830	900	805	810	818	833	815	805	815	900	819
67	805	804	798	794	792	802	865	900	810	817	830	835	822	811	826	900	840
68	810	809	802	799	796	807	900	900	815	824	841	837	829	816	836	900	860
69	816	815	807	810	804	813	900	900	822	850	871	869	865	837	852	900	870
70	824	821	811	820	812	819	900	900	829	876	900	900	900	858	868	900	880
71	837	861	856	860	856	860	900	900	865	888	900	900	900	879	884	900	890
72	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score											
		Form 18				Form 19				Form 20			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
12	500	500	500	500	500	500	500	500	500	500	500	500	500
13	522	529	520	533	533	525	520	510	508	519	519	536	535
14	535	558	540	565	565	549	540	519	516	538	538	571	569
15	543	563	547	573	569	555	547	533	527	545	545	575	572
16	549	567	554	580	573	560	553	547	537	552	552	579	574
17	555	572	560	582	576	565	559	553	543	557	557	581	576
18	560	577	565	583	579	570	564	558	549	562	562	583	578
19	565	583	571	585	582	575	569	561	556	567	567	584	580
20	569	588	576	586	585	580	574	563	563	572	572	585	582
21	574	593	582	588	589	585	580	568	569	577	577	586	585
22	579	598	587	589	592	590	585	573	575	582	582	586	587
23	585	603	593	595	597	596	591	583	584	587	587	590	592
24	590	608	599	601	601	601	596	592	593	592	592	594	596
25	595	613	605	608	606	606	602	602	600	598	598	603	601
26	600	617	610	614	611	610	607	611	607	603	603	611	606
27	605	622	615	617	615	615	612	614	611	608	608	614	610
28	610	627	620	619	619	620	616	616	615	612	612	616	613
29	615	632	626	623	623	625	621	618	618	617	617	618	616
30	619	637	631	626	627	629	626	620	621	622	622	619	619
31	624	643	637	632	633	634	632	624	625	627	627	622	622
32	629	648	642	638	638	639	637	628	629	631	631	624	625
33	634	654	649	645	646	645	643	634	635	637	637	628	630
34	639	660	656	652	653	651	649	639	641	642	642	631	634
35	645	666	662	662	662	657	655	653	654	648	648	641	643
36	651	671	668	671	670	663	661	666	666	654	654	651	651
37	657	676	674	677	677	668	667	674	673	660	660	660	660
38	663	681	679	683	683	673	672	681	680	665	665	669	668
39	668	686	685	687	688	678	677	685	684	670	670	673	673
40	673	690	690	691	692	683	682	688	688	675	675	676	677
41	678	696	696	696	697	688	688	692	692	680	680	680	681
42	683	701	702	701	701	693	693	695	695	685	685	684	684
43	688	708	709	707	706	699	699	700	699	690	690	689	689

Appendix C. Method 3 (Classical Linking Methods with TCC Conversion)

Table C7 (cont) High School Method 3

Raw Score	2005 OP	Scale Score											
		Form 18				Form 19				Form 20			
		Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth	Mean	Linear	Equi-%	Smooth
44	693	714	716	712	711	704	704	704	703	695	695	693	693
45	698	721	723	716	716	711	711	708	707	701	701	698	698
46	704	727	730	720	721	717	718	712	711	706	706	703	703
47	710	733	736	731	731	724	725	718	718	713	713	711	711
48	717	738	742	741	740	730	731	723	724	720	720	719	719
49	723	743	747	754	752	735	737	737	736	726	726	730	729
50	730	748	752	766	763	740	742	750	747	732	732	740	738
51	735	752	757	770	768	745	747	754	752	738	738	743	743
52	740	756	761	773	772	750	752	758	757	743	743	746	747
53	745	760	766	775	775	754	756	761	760	747	747	751	751
54	749	764	771	776	777	758	760	764	763	751	751	755	755
55	754	769	776	778	780	762	765	767	765	756	756	759	759
56	758	773	780	779	782	766	769	769	767	760	760	762	762
57	762	777	785	784	786	771	774	771	769	764	764	766	766
58	766	781	789	788	789	775	778	772	771	768	768	769	769
59	770	786	794	798	795	779	783	775	775	773	773	773	773
60	775	790	799	808	801	783	787	778	779	777	777	776	776
61	779	794	805	821	806	788	792	798	791	781	781	780	780
62	783	798	810	833	811	792	796	817	803	785	785	784	784
63	787	803	818	834	818	796	801	820	806	789	789	789	789
64	791	808	825	835	825	800	805	822	809	793	793	793	793
65	796	814	863	867	863	805	812	824	813	798	798	798	798
66	800	820	900	898	900	810	818	826	816	802	802	803	802
67	805	833	900	898	900	817	830	829	821	808	808	808	808
68	810	846	900	898	900	824	841	831	825	813	813	812	813
69	816	859	900	898	900	853	871	833	834	821	821	818	820
70	824	872	900	898	900	881	900	835	842	829	829	823	827
71	837	885	900	898	900	891	900	868	871	865	865	862	864
72	900	900	900	900	900	900	900	900	900	900	900	900	900

Appendix D. Comparison of Means

Table D1 Grade 3 Comparison of Means Across Methods

Form	N	Method 3							Method 2			
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
1	1263	17.253	19.395	19.395	19.413	19.428	436.67	436.83	436.61	436.26	435.89	435.81
2	1289	16.898	19.395	19.395	19.424	19.403	436.38	436.57	436.17	435.62	436.21	435.48
3	1294	17.317	19.395	19.395	19.383	19.394	438.27	438.46	438.46	438.40	437.36	437.52
4	1320	17.573	19.395	19.395	19.418	19.431	436.87	436.51	436.05	435.96	435.54	435.30
5	1310	17.653	19.395	19.395	19.415	19.406	436.79	436.42	436.35	436.22	435.84	435.53
6	1334	18.044	19.395	19.395	19.377	19.396	439.14	439.16	438.67	438.65	438.06	437.95
7	1380	18.520	19.395	19.395	19.368	19.386	438.82	438.82	438.21	438.29	438.31	438.27
9	1258	19.160	19.395	19.395	19.389	19.390	440.05	439.81	439.64	439.79	439.27	439.33
10	1341	18.295	19.395	19.395	19.384	19.404	438.65	438.57	438.66	438.59	437.55	437.52
11	1321	17.780	19.395	19.395	19.387	19.365	439.00	438.95	439.31	438.91	438.17	438.10
12	1109	17.927	19.395	19.395	19.393	19.381	438.79	438.53	439.12	438.73	437.68	437.90

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix D. Comparison of Means

Table D2 Grade 4 Comparison of Means Across Methods

Form	N	Method 3							Method 2			
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
1	1802	15.170	20.221	20.221	20.281	20.320	486.62	486.39	487.17	487.52	485.49	485.45
2	2046	15.798	20.221	20.221	20.247	20.284	481.59	480.05	480.76	481.49	479.08	479.16
3	1928	15.707	20.221	20.221	20.358	20.400	488.22	487.99	489.93	490.35	487.57	487.35
4	2013	15.687	20.221	20.221	20.331	20.388	488.48	487.98	489.98	490.50	487.60	487.59
5	2138	19.602	20.221	20.221	20.220	20.186	494.48	494.67	494.75	494.18	493.78	493.82
6	1987	19.471	20.221	20.221	20.109	20.083	494.75	494.53	493.43	492.83	493.82	493.84
7	2077	20.157	20.221	20.221	20.206	20.229	494.36	494.47	494.53	494.37	494.01	493.79
8	1919	20.937	20.221	20.221	20.307	20.355	494.24	494.42	495.89	496.44	494.08	494.25
9	1944	18.960	20.221	20.221	20.195	20.104	494.31	493.80	493.33	491.91	492.96	492.56
10	1864	20.216	20.221	20.221	20.195	20.215	494.71	494.82	494.51	494.85	494.06	494.11
12	1718	21.509	20.221	20.221	20.302	20.336	494.45	494.81	495.96	496.51	494.67	494.31

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix D. Comparison of Means

Table D3 Grade 5 Comparison of Means Across Methods

Form	N	Method 3						Method 2				
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
1	1282	18.117	20.282	20.282	20.254	20.172	510.43	510.34	510.18	509.29	508.92	509.06
2	1307	19.040	20.282	20.282	20.193	20.189	511.43	511.42	510.34	510.39	510.17	510.26
3	1394	18.686	20.282	20.282	20.228	20.213	510.75	510.87	510.16	509.76	509.96	509.67
4	1407	19.458	20.282	20.282	20.228	20.221	511.56	511.72	510.77	510.57	510.71	510.52
5	1366	20.043	20.282	20.282	20.280	20.260	511.84	511.95	511.46	511.53	511.13	511.08
6	1388	19.277	20.282	20.282	20.157	20.165	512.54	512.09	510.32	510.45	511.23	510.96
7	1384	20.632	20.282	20.282	20.310	20.327	511.51	511.50	512.05	511.98	511.07	510.99
8	1378	18.939	20.282	20.282	20.168	20.170	510.96	510.94	509.20	509.45	509.61	509.67
9	1392	21.138	20.282	20.282	20.282	20.288	511.86	511.73	511.61	511.74	511.57	511.25
11	1348	19.843	20.282	20.282	20.253	20.239	511.44	511.36	510.99	510.86	510.60	510.46
12	1352	20.055	20.282	20.282	20.222	20.215	511.64	511.71	510.57	510.58	510.72	510.62

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix D. Comparison of Means

Table D4 Grade 6 Comparison of Means Across Methods

Form	N	Method 3						Method 2				
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
1	1848	16.553	20.135	20.135	20.418	20.421	532.44	532.15	535.74	535.56	531.14	531.06
2	1982	17.682	20.135	20.135	20.195	20.216	536.69	536.40	537.67	537.58	534.34	534.79
3	1887	19.002	20.135	20.135	19.911	19.873	538.16	538.09	535.03	534.31	536.16	535.80
5	1888	17.879	20.135	20.135	19.943	20.028	538.69	538.75	536.77	537.76	537.68	537.41
6	1973	16.987	20.135	20.135	20.219	20.094	538.17	538.57	539.94	538.48	537.38	537.13
7	1873	16.165	20.135	20.135	20.457	20.485	537.59	537.93	542.91	543.26	537.19	537.10
8	1934	17.130	20.135	20.135	20.160	20.141	538.86	538.99	539.36	539.25	537.63	537.64
9	1826	20.004	20.135	20.135	20.100	20.114	539.59	539.32	538.56	538.83	538.68	538.85
10	1848	20.579	20.135	20.135	20.144	20.177	539.22	539.22	539.17	539.44	538.28	538.61
11	1988	21.142	20.135	20.135	20.377	20.361	538.98	539.30	542.25	542.29	539.31	539.19
12	1916	19.078	20.135	20.135	19.789	19.798	540.68	540.02	535.09	535.42	538.66	538.83

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix D. Comparison of Means

Table D5 Grade 7 Comparison of Means Across Methods

Form	N	Method 3							Method 2			
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
1	2053	17.868	20.239	20.239	20.266	20.291	553.74	554.00	554.49	554.74	552.46	552.30
2	2037	20.173	20.239	20.239	20.187	20.233	554.21	555.73	555.76	555.78	554.33	554.40
3	2025	19.945	20.239	20.239	20.137	20.133	555.62	556.85	555.69	555.68	556.54	555.61
4	1996	19.625	20.239	20.239	20.190	20.184	556.34	556.57	556.13	556.08	555.57	554.91
5	2056	20.316	20.239	20.239	20.227	20.257	555.53	556.51	556.52	556.87	555.51	555.50
6	2039	20.286	20.239	20.239	20.233	20.241	556.39	556.71	556.85	556.88	555.78	555.73
8	2021	20.906	20.239	20.239	20.259	20.087	554.62	556.44	557.37	555.03	555.70	555.80
9	2097	20.652	20.239	20.239	20.265	20.303	555.38	556.73	557.35	557.71	555.92	556.15
10	1936	19.474	20.239	20.239	20.180	20.154	556.06	556.84	555.79	555.29	554.97	555.23
11	2076	19.592	20.239	20.239	20.198	20.172	556.21	556.83	555.84	555.45	555.21	554.96
12	2047	20.881	20.239	20.239	20.309	20.149	554.71	556.11	557.74	555.55	555.54	555.46

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix D. Comparison of Means

Table D6 Grade 8 Comparison of Means Across Methods

Form	N	Method 3							Method 2			
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
2	1436	20.432	21.638	21.638	21.518	21.565	552.04	551.66	548.65	548.93	549.81	549.74
3	1411	20.030	21.638	21.638	21.601	21.618	552.46	551.88	550.04	550.34	549.92	549.81
4	1425	22.573	21.638	21.638	21.645	21.646	551.88	551.27	550.62	550.30	549.64	549.58
5	1458	21.817	21.638	21.638	21.634	21.609	552.23	552.04	550.25	550.34	550.51	550.21
6	1426	20.759	21.638	21.638	21.596	21.589	552.62	551.91	550.25	550.04	549.79	549.79
7	1449	21.188	21.638	21.638	21.560	21.554	552.47	551.71	549.82	549.71	549.73	549.96
8	1361	21.978	21.638	21.638	21.624	21.621	552.61	551.53	550.59	550.53	550.29	550.15
9	1400	23.339	21.638	21.638	21.668	21.670	552.11	550.84	551.17	551.16	550.23	550.28
10	1420	20.954	21.638	21.638	21.552	21.601	552.68	552.13	549.39	550.18	549.74	549.88
11	1443	22.518	21.638	21.638	21.624	21.646	551.69	550.87	550.41	550.59	550.23	550.14
12	1427	21.545	21.638	21.638	21.638	21.609	552.58	551.54	550.35	550.20	550.75	550.58

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix D. Comparison of Means

Table D7 High School Comparison of Means Across Methods

Form	N	Method 3							Method 2			
		RS Mean, Unequated	RS Mean, Mean Eq	RS Mean, Linear Eq	RS Mean, EqP Eq	RS Mean, Smooth Eq	SS Mean, Mean Eq	SS Mean, Linear Eq	SS Mean, EqP Eq	SS Mean, Smooth Eq	SS Mean, PC Eq	SS Mean, RaS Eq
2	1710	42.609	44.079	44.079	43.954	43.959	695.45	695.57	694.22	694.33	694.17	694.27
3	1752	43.904	44.079	44.079	44.094	44.085	694.87	695.18	695.14	695.20	694.12	694.43
4	1747	42.705	44.079	44.079	44.025	44.020	695.27	695.48	694.66	694.74	694.25	694.20
5	1570	45.233	44.079	44.079	44.114	44.101	694.61	694.68	695.08	695.28	694.39	694.28
6	1720	43.892	44.079	44.079	44.076	44.065	694.97	695.04	694.97	694.88	694.53	694.52
7	1545	43.305	44.079	44.079	44.015	44.016	694.93	695.26	694.46	694.39	694.33	694.37
8	1512	45.534	44.079	44.079	44.119	44.062	694.68	694.57	695.01	694.55	694.21	694.40
9	1703	43.783	44.079	44.079	44.040	44.053	694.99	695.13	694.69	695.01	694.11	694.11
10	1734	44.406	44.079	44.079	44.096	44.126	694.93	694.98	695.59	695.56	694.69	694.41
11	1760	45.035	44.079	44.079	44.129	44.134	695.19	695.04	695.84	695.87	694.78	694.61
12	1704	43.340	44.079	44.079	43.906	43.878	695.13	695.47	694.25	693.85	694.28	694.39
13	1708	43.285	44.079	44.079	44.033	44.029	695.44	695.34	694.80	694.57	694.23	694.19
14	1749	44.472	44.079	44.079	44.045	44.048	695.11	694.96	694.70	694.81	694.03	694.11
15	1734	44.805	44.079	44.079	44.017	43.947	694.83	695.51	694.47	694.23	694.51	694.74
16	1749	42.177	44.079	44.079	43.987	43.990	695.54	695.33	694.42	694.32	694.12	694.30
17	1760	43.208	44.079	44.079	43.938	43.947	695.26	695.43	694.04	694.24	694.23	694.25
18	1724	40.622	44.079	44.079	44.047	44.014	695.34	695.35	694.82	694.57	694.13	694.12
19	1747	42.150	44.079	44.079	43.940	43.909	695.62	695.38	694.29	694.24	694.32	694.32
20	1738	43.722	44.079	44.079	44.030	44.056	695.08	695.08	694.62	694.66	694.02	694.00

Note. RS=Raw Score; SS= Scale Score; Eq=Equated; EqP=Equipercentile; PC=Partial Credit Model; RaS=Rating Scale Model. Scale score means were computed after application of highest obtainable scale score (HOSS) and lowest obtainable scale score (LOSS). Prior to application of HOSS and LOSS, scale score means were close to identical across forms, consistent with equated raw score mean results.

Appendix E. Recommended Scoring Tables

Table E1		
Recommended Scale Scores for Operational 2006 Prompt (Form 07)		
Grade 3		
RS	SS	SEM
6	200	216
7	312	17
8	325	15
9	336	14
10	347	14
11	357	14
12	368	14
13	378	14
14	388	14
15	399	14
16	410	15
17	423	16
18	436	15
19	448	15
20	459	15
21	470	15
22	482	15
23	495	16
24	508	15
25	519	14
26	529	13
27	537	13
28	546	12
29	554	12
30	562	13
31	570	13
32	579	14
33	590	15
34	606	20
35	650	54
36	650	54

Appendix E. Recommended Scoring Tables

Table E2		
Recommended Scale Scores for Operational 2006 Prompt (Form 07)		
Grade 4		
RS	SS	SEM
6	230	253
7	333	20
8	350	16
9	362	15
10	374	15
11	386	16
12	400	16
13	414	15
14	426	15
15	437	14
16	447	14
17	458	15
18	470	15
19	482	15
20	493	14
21	504	14
22	515	15
23	527	16
24	541	16
25	554	15
26	566	14
27	576	14
28	585	13
29	595	13
30	604	13
31	614	13
32	623	14
33	633	14
34	645	16
35	662	21
36	700	51

Appendix E. Recommended Scoring Tables

Table E3		
Recommended Scale Scores for Operational 2006 Prompt (Form 07)		
Grade 5		
RS	SS	SEM
6	255	126
7	324	27
8	347	19
9	363	17
10	376	16
11	389	17
12	403	17
13	418	17
14	431	16
15	443	16
16	455	16
17	467	16
18	480	16
19	493	16
20	505	16
21	517	15
22	529	16
23	542	16
24	555	17
25	568	16
26	581	16
27	592	15
28	603	14
29	613	14
30	622	14
31	632	14
32	642	15
33	653	15
34	665	17
35	681	20
36	740	68

Appendix E. Recommended Scoring Tables

Table E4		
Recommended Scale Scores for Operational 2006 Prompt (Form 09)		
Grade 6		
RS	SS	SEM
6	275	117
7	354	22
8	372	18
9	386	17
10	400	17
11	415	18
12	432	19
13	448	18
14	462	16
15	474	16
16	487	16
17	500	17
18	514	17
19	528	17
20	541	16
21	553	16
22	565	17
23	579	18
24	595	18
25	610	17
26	624	16
27	635	15
28	645	15
29	656	15
30	666	15
31	677	15
32	688	15
33	699	16
34	712	18
35	732	24
36	760	43

Appendix E. Recommended Scoring Tables

Table E5		
Recommended Scale Scores for Operational 2006 Prompt (Form 05)		
Grade 7		
RS	SS	SEM
6	290	105
7	358	22
8	377	17
9	391	16
10	404	16
11	419	18
12	438	20
13	457	18
14	472	16
15	485	16
16	497	16
17	511	17
18	527	18
19	544	17
20	558	16
21	570	15
22	581	15
23	593	16
24	605	16
25	617	15
26	628	14
27	636	13
28	644	12
29	652	12
30	659	12
31	666	12
32	674	13
33	683	14
34	693	16
35	732	34
36	770	85

Appendix E. Recommended Scoring Tables

Table E6		
Recommended Scale Scores for Operational 2006 Prompt (Form 10)		
Grade 08		
RS	SS	SEM
6	300	50
7	353	19
8	368	17
9	381	16
10	394	17
11	408	18
12	423	17
13	437	16
14	450	16
15	462	16
16	476	18
17	493	20
18	512	19
19	529	17
20	542	16
21	554	16
22	568	17
23	583	18
24	599	17
25	612	16
26	623	14
27	633	14
28	641	13
29	650	13
30	658	13
31	666	13
32	676	14
33	687	16
34	701	20
35	734	38
36	800	182

Appendix E. Recommended Scoring Tables

Table E7					
Recommended Scale Scores for Operational 2006 Prompt (Form 03)					
High School					
RS	SS	SEM	RS	SS	SEM
12	500	31	43	689	9
13	519	18	44	694	9
14	537	12	45	700	10
15	544	10	46	705	10
16	551	9	47	712	10
17	556	9	48	718	10
18	561	9	49	725	10
19	566	9	50	731	10
20	571	9	51	737	9
21	576	9	52	742	9
22	581	9	53	747	8
23	586	9	54	751	8
24	591	9	55	755	8
25	597	9	56	759	8
26	602	9	57	763	8
27	607	9	58	767	8
28	612	9	59	772	8
29	617	9	60	776	8
30	621	9	61	780	8
31	626	9	62	784	8
32	630	9	63	789	8
33	636	9	64	793	8
34	641	10	65	798	8
35	647	10	66	802	9
36	652	10	67	807	9
37	658	10	68	812	10
38	664	9	69	820	11
39	670	9	70	827	13
40	675	9	71	864	36
41	680	9	72	900	111
42	684	9			

Appendix E. Recommended Scoring Tables

Table E8					
Recommended Scale Scores for Operational 2006 Prompt (Form 06)					
High School Retake					
RS	SS	SEM	RS	SS	SEM
12	500	31	43	689	9
13	519	18	44	694	9
14	537	12	45	700	10
15	544	10	46	705	10
16	551	9	47	712	10
17	556	9	48	718	10
18	561	9	49	725	10
19	566	9	50	731	10
20	571	9	51	737	9
21	576	9	52	742	9
22	581	9	53	747	8
23	586	9	54	751	8
24	591	9	55	755	8
25	597	9	56	759	8
26	602	9	57	763	8
27	607	9	58	767	8
28	612	9	59	772	8
29	617	9	60	776	8
30	621	9	61	780	8
31	626	9	62	784	8
32	630	9	63	789	8
33	636	9	64	793	8
34	641	10	65	798	8
35	647	10	66	802	9
36	653	10	67	807	9
37	659	10	68	812	10
38	664	9	69	820	11
39	670	9	70	827	13
40	675	9	71	864	36
41	680	9	72	900	111
42	684	9			

Appendix F. Test Characteristic Curve (TCC) Tables

Table F1 Grade 3 Writing Scale Scores and Corresponding TCC Values									
SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
200	6.0079	245	6.0817	290	6.7558	335	9.8291	380	14.113
201	6.0083	246	6.086	291	6.791	336	9.9227	381	14.2115
202	6.0088	247	6.0905	292	6.8276	337	10.0165	382	14.31
203	6.0093	248	6.0953	293	6.8657	338	10.1105	383	14.4085
204	6.0098	249	6.1003	294	6.9052	339	10.2046	384	14.5069
205	6.0103	250	6.1056	295	6.9462	340	10.2989	385	14.6052
206	6.0108	251	6.1111	296	6.9888	341	10.3933	386	14.7033
207	6.0114	252	6.1169	297	7.0328	342	10.4878	387	14.8012
208	6.012	253	6.123	298	7.0785	343	10.5822	388	14.8989
209	6.0127	254	6.1295	299	7.1258	344	10.6767	389	14.9963
210	6.0133	255	6.1363	300	7.1747	345	10.7711	390	15.0932
211	6.014	256	6.1434	301	7.2252	346	10.8655	391	15.1898
212	6.0148	257	6.1508	302	7.2774	347	10.9598	392	15.2859
213	6.0156	258	6.1587	303	7.3313	348	11.0541	393	15.3815
214	6.0164	259	6.167	304	7.3869	349	11.1484	394	15.4766
215	6.0173	260	6.1756	305	7.4442	350	11.2425	395	15.5711
216	6.0182	261	6.1847	306	7.5031	351	11.3366	396	15.6649
217	6.0192	262	6.1943	307	7.5638	352	11.4307	397	15.758
218	6.0202	263	6.2043	308	7.6261	353	11.5247	398	15.8505
219	6.0213	264	6.2149	309	7.6901	354	11.6187	399	15.9422
220	6.0224	265	6.2259	310	7.7558	355	11.7128	400	16.0331
221	6.0236	266	6.2375	311	7.8232	356	11.8068	401	16.1232
222	6.0249	267	6.2497	312	7.8922	357	11.9008	402	16.2126
223	6.0262	268	6.2625	313	7.9628	358	11.9949	403	16.3011
224	6.0276	269	6.2759	314	8.035	359	12.0891	404	16.3888
225	6.0291	270	6.2899	315	8.1087	360	12.1834	405	16.4757
226	6.0306	271	6.3047	316	8.184	361	12.2779	406	16.5618
227	6.0322	272	6.3201	317	8.2607	362	12.3724	407	16.647
228	6.0339	273	6.3362	318	8.3388	363	12.4672	408	16.7315
229	6.0358	274	6.3532	319	8.4183	364	12.5621	409	16.8151
230	6.0377	275	6.3709	320	8.4992	365	12.6573	410	16.898
231	6.0397	276	6.3895	321	8.5813	366	12.7526	411	16.9802
232	6.0418	277	6.4089	322	8.6646	367	12.8482	412	17.0616
233	6.044	278	6.4292	323	8.7491	368	12.9441	413	17.1424
234	6.0463	279	6.4505	324	8.8347	369	13.0402	414	17.2225
235	6.0488	280	6.4727	325	8.9213	370	13.1366	415	17.3021
236	6.0514	281	6.4959	326	9.0089	371	13.2332	416	17.3811
237	6.0541	282	6.5201	327	9.0973	372	13.3301	417	17.4595
238	6.0569	283	6.5455	328	9.1866	373	13.4272	418	17.5376
239	6.06	284	6.5719	329	9.2767	374	13.5246	419	17.6152
240	6.0631	285	6.5995	330	9.3674	375	13.6223	420	17.6926
241	6.0665	286	6.6282	331	9.4588	376	13.7201	421	17.7696
242	6.07	287	6.6582	332	9.5507	377	13.8181	422	17.8464
243	6.0737	288	6.6894	333	9.6431	378	13.9163	423	17.9231
244	6.0776	289	6.722	334	9.7359	379	14.0146	424	17.9996

Appendix F. Test Characteristic Curve (TCC) Tables

Table F1 (cont) Grade 3 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
425	18.0761	470	21.9088	515	25.5527	560	30.7169	605	34.863
426	18.1526	471	21.9963	516	25.6446	561	30.8395	606	34.9121
427	18.2292	472	22.0832	517	25.7379	562	30.9616	607	34.9595
428	18.306	473	22.1695	518	25.8325	563	31.083	608	35.0052
429	18.3829	474	22.2552	519	25.9284	564	31.2037	609	35.0491
430	18.46	475	22.3402	520	26.0258	565	31.3237	610	35.0914
431	18.5375	476	22.4245	521	26.1245	566	31.4429	611	35.132
432	18.6153	477	22.5082	522	26.2246	567	31.5611	612	35.171
433	18.6936	478	22.5912	523	26.3261	568	31.6784	613	35.2085
434	18.7722	479	22.6735	524	26.4289	569	31.7946	614	35.2444
435	18.8514	480	22.7552	525	26.5331	570	31.9098	615	35.279
436	18.931	481	22.8362	526	26.6387	571	32.0238	616	35.3121
437	19.0113	482	22.9166	527	26.7456	572	32.1365	617	35.3438
438	19.092	483	22.9964	528	26.8538	573	32.248	618	35.3742
439	19.1734	484	23.0756	529	26.9632	574	32.3581	619	35.4033
440	19.2555	485	23.1543	530	27.0739	575	32.4668	620	35.4312
441	19.3381	486	23.2324	531	27.1858	576	32.574	621	35.4579
442	19.4214	487	23.3101	532	27.2989	577	32.6796	622	35.4834
443	19.5054	488	23.3874	533	27.413	578	32.7837	623	35.5078
444	19.59	489	23.4643	534	27.5282	579	32.886	624	35.5311
445	19.6752	490	23.5409	535	27.6445	580	32.9867	625	35.5534
446	19.761	491	23.6173	536	27.7617	581	33.0856	626	35.5747
447	19.8475	492	23.6935	537	27.8798	582	33.1827	627	35.5951
448	19.9346	493	23.7695	538	27.9988	583	33.2779	628	35.6145
449	20.0222	494	23.8455	539	28.1186	584	33.3713	629	35.6331
450	20.1103	495	23.9215	540	28.2392	585	33.4627	630	35.6508
451	20.199	496	23.9976	541	28.3604	586	33.5521	631	35.6677
452	20.2881	497	24.0738	542	28.4823	587	33.6396	632	35.6838
453	20.3776	498	24.1503	543	28.6047	588	33.725	633	35.6992
454	20.4674	499	24.2271	544	28.7277	589	33.8084	634	35.7138
455	20.5576	500	24.3042	545	28.8511	590	33.8897	635	35.7278
456	20.6481	501	24.3818	546	28.9749	591	33.9689	636	35.7411
457	20.7387	502	24.4599	547	29.0991	592	34.0461	637	35.7538
458	20.8295	503	24.5386	548	29.2235	593	34.1212	638	35.7659
459	20.9203	504	24.618	549	29.3482	594	34.1942	639	35.7774
460	21.0112	505	24.6981	550	29.473	595	34.2651	640	35.7883
461	21.1021	506	24.779	551	29.5979	596	34.334	641	35.7988
462	21.1928	507	24.8608	552	29.7229	597	34.4007	642	35.8087
463	21.2834	508	24.9434	553	29.8478	598	34.4655	643	35.8182
464	21.3738	509	25.0271	554	29.9727	599	34.5281	644	35.8272
465	21.464	510	25.1118	555	30.0974	600	34.5888	645	35.8357
466	21.5538	511	25.1976	556	30.2219	601	34.6475	646	35.8439
467	21.6432	512	25.2846	557	30.3462	602	34.7042	647	35.8516
468	21.7322	513	25.3727	558	30.4702	603	34.759	648	35.859
469	21.8208	514	25.4621	559	30.5938	604	34.8119	649	35.8661
								650	35.8727

Appendix F. Test Characteristic Curve (TCC) Tables

Table F2 Grade 4 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
230	6.0056	275	6.06	320	6.5927	365	9.3425	410	12.8111	455	16.8093
231	6.0059	276	6.0633	321	6.6217	366	9.4285	411	12.8872	456	16.8964
232	6.0062	277	6.0667	322	6.6519	367	9.5144	412	12.9641	457	16.9829
233	6.0066	278	6.0702	323	6.6834	368	9.6003	413	13.0418	458	17.0689
234	6.0069	279	6.074	324	6.7162	369	9.686	414	13.1203	459	17.1543
235	6.0073	280	6.078	325	6.7504	370	9.7715	415	13.1997	460	17.2392
236	6.0077	281	6.0822	326	6.7859	371	9.8566	416	13.2801	461	17.3236
237	6.0081	282	6.0866	327	6.823	372	9.9414	417	13.3613	462	17.4077
238	6.0085	283	6.0912	328	6.8614	373	10.0258	418	13.4434	463	17.4913
239	6.009	284	6.0961	329	6.9014	374	10.1097	419	13.5265	464	17.5746
240	6.0095	285	6.1012	330	6.9429	375	10.1931	420	13.6105	465	17.6576
241	6.01	286	6.1066	331	6.986	376	10.2758	421	13.6955	466	17.7403
242	6.0105	287	6.1123	332	7.0307	377	10.358	422	13.7813	467	17.8229
243	6.0111	288	6.1183	333	7.0769	378	10.4395	423	13.8681	468	17.9054
244	6.0117	289	6.1246	334	7.1248	379	10.5203	424	13.9557	469	17.9878
245	6.0124	290	6.1312	335	7.1744	380	10.6004	425	14.0442	470	18.0702
246	6.013	291	6.1382	336	7.2256	381	10.6798	426	14.1334	471	18.1526
247	6.0137	292	6.1455	337	7.2785	382	10.7585	427	14.2235	472	18.2351
248	6.0145	293	6.1532	338	7.3331	383	10.8365	428	14.3142	473	18.3178
249	6.0153	294	6.1613	339	7.3894	384	10.9137	429	14.4056	474	18.4008
250	6.0161	295	6.1699	340	7.4473	385	10.9903	430	14.4976	475	18.4839
251	6.017	296	6.1788	341	7.507	386	11.0662	431	14.5902	476	18.5675
252	6.0179	297	6.1883	342	7.5683	387	11.1415	432	14.6832	477	18.6514
253	6.0189	298	6.1982	343	7.6313	388	11.2161	433	14.7767	478	18.7357
254	6.0199	299	6.2086	344	7.6959	389	11.2902	434	14.8705	479	18.8204
255	6.021	300	6.2195	345	7.7621	390	11.3637	435	14.9646	480	18.9057
256	6.0221	301	6.231	346	7.8299	391	11.4367	436	15.0589	481	18.9915
257	6.0233	302	6.243	347	7.8993	392	11.5093	437	15.1534	482	19.0778
258	6.0245	303	6.2557	348	7.9702	393	11.5815	438	15.2479	483	19.1647
259	6.0259	304	6.269	349	8.0425	394	11.6534	439	15.3424	484	19.2522
260	6.0273	305	6.2829	350	8.1162	395	11.725	440	15.4369	485	19.3403
261	6.0288	306	6.2976	351	8.1913	396	11.7964	441	15.5312	486	19.429
262	6.0303	307	6.3129	352	8.2677	397	11.8676	442	15.6254	487	19.5184
263	6.0319	308	6.329	353	8.3453	398	11.9388	443	15.7192	488	19.6083
264	6.0337	309	6.3459	354	8.4241	399	12.01	444	15.8128	489	19.6988
265	6.0355	310	6.3636	355	8.5039	400	12.0812	445	15.9059	490	19.7899
266	6.0374	311	6.3821	356	8.5847	401	12.1525	446	15.9987	491	19.8815
267	6.0394	312	6.4015	357	8.6665	402	12.2241	447	16.091	492	19.9736
268	6.0416	313	6.4218	358	8.749	403	12.2959	448	16.1828	493	20.0662
269	6.0438	314	6.4431	359	8.8323	404	12.368	449	16.274	494	20.1592
270	6.0462	315	6.4653	360	8.9163	405	12.4405	450	16.3647	495	20.2526
271	6.0487	316	6.4886	361	9.0008	406	12.5135	451	16.4549	496	20.3464
272	6.0513	317	6.513	362	9.0858	407	12.587	452	16.5444	497	20.4404
273	6.054	318	6.5384	363	9.1711	408	12.661	453	16.6333	498	20.5346
274	6.057	319	6.565	364	9.2567	409	12.7357	454	16.7216	499	20.629

Appendix F. Test Characteristic Curve (TCC) Tables

Table F2 (cont) Grade 4 Writing Scale Scores and Corresponding TCC Values									
SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
500	20.7235	545	24.4081	590	28.6164	635	33.2592	680	35.6074
501	20.818	546	24.4818	591	28.7233	636	33.3489	681	35.6266
502	20.9124	547	24.5562	592	28.8302	637	33.4371	682	35.6448
503	21.0067	548	24.6311	593	28.9371	638	33.5239	683	35.6622
504	21.1008	549	24.7068	594	29.0439	639	33.609	684	35.6788
505	21.1947	550	24.7832	595	29.1506	640	33.6926	685	35.6946
506	21.2882	551	24.8604	596	29.2571	641	33.7744	686	35.7096
507	21.3814	552	24.9385	597	29.3636	642	33.8546	687	35.724
508	21.474	553	25.0175	598	29.47	643	33.933	688	35.7377
509	21.5661	554	25.0975	599	29.5763	644	34.0095	689	35.7507
510	21.6577	555	25.1785	600	29.6824	645	34.0843	690	35.7631
511	21.7486	556	25.2605	601	29.7885	646	34.1572	691	35.7749
512	21.8388	557	25.3437	602	29.8944	647	34.2282	692	35.7861
513	21.9282	558	25.4279	603	30.0003	648	34.2973	693	35.7968
514	22.0169	559	25.5133	604	30.1061	649	34.3645	694	35.807
515	22.1047	560	25.5999	605	30.2118	650	34.4298	695	35.8167
516	22.1917	561	25.6876	606	30.3175	651	34.4932	696	35.8259
517	22.2778	562	25.7765	607	30.423	652	34.5547	697	35.8346
518	22.363	563	25.8666	608	30.5286	653	34.6143	698	35.843
519	22.4473	564	25.9578	609	30.634	654	34.672	699	35.8509
520	22.5306	565	26.0502	610	30.7394	655	34.7279	700	35.8584
521	22.6131	566	26.1438	611	30.8446	656	34.7819		
522	22.6946	567	26.2384	612	30.9498	657	34.834		
523	22.7752	568	26.3341	613	31.0549	658	34.8844		
524	22.8549	569	26.4309	614	31.1599	659	34.9329		
525	22.9338	570	26.5287	615	31.2647	660	34.9797		
526	23.0118	571	26.6274	616	31.3694	661	35.0248		
527	23.0891	572	26.7271	617	31.4739	662	35.0682		
528	23.1656	573	26.8277	618	31.5781	663	35.11		
529	23.2413	574	26.929	619	31.682	664	35.1502		
530	23.3164	575	27.0312	620	31.7856	665	35.1887		
531	23.3909	576	27.134	621	31.8889	666	35.2258		
532	23.4649	577	27.2375	622	31.9917	667	35.2614		
533	23.5384	578	27.3416	623	32.094	668	35.2955		
534	23.6114	579	27.4462	624	32.1957	669	35.3282		
535	23.6841	580	27.5513	625	32.2969	670	35.3596		
536	23.7565	581	27.6568	626	32.3974	671	35.3896		
537	23.8287	582	27.7626	627	32.4971	672	35.4184		
538	23.9008	583	27.8688	628	32.596	673	35.4459		
539	23.9728	584	27.9752	629	32.694	674	35.4722		
540	24.0449	585	28.0818	630	32.791	675	35.4974		
541	24.117	586	28.1886	631	32.887	676	35.5215		
542	24.1893	587	28.2954	632	32.9819	677	35.5445		
543	24.2619	588	28.4024	633	33.0756	678	35.5664		
544	24.3348	589	28.5094	634	33.168	679	35.5874		

Appendix F. Test Characteristic Curve (TCC) Tables

Table F3 Grade 5 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
255	6.0264	300	6.2292	345	7.5437	390	10.7451	435	13.9969	480	17.6824
256	6.0277	301	6.2402	346	7.599	391	10.8179	436	14.0775	481	17.7597
257	6.0291	302	6.2517	347	7.6556	392	10.8903	437	14.1586	482	17.8368
258	6.0306	303	6.2636	348	7.7134	393	10.9624	438	14.2401	483	17.9138
259	6.0321	304	6.2761	349	7.7724	394	11.0341	439	14.3221	484	17.9909
260	6.0337	305	6.2892	350	7.8327	395	11.1054	440	14.4045	485	18.0679
261	6.0354	306	6.3029	351	7.8941	396	11.1764	441	14.4872	486	18.1449
262	6.0371	307	6.3171	352	7.9567	397	11.247	442	14.5703	487	18.2221
263	6.039	308	6.332	353	8.0203	398	11.3174	443	14.6537	488	18.2993
264	6.0409	309	6.3475	354	8.0851	399	11.3874	444	14.7374	489	18.3766
265	6.0429	310	6.3637	355	8.1509	400	11.4573	445	14.8214	490	18.4541
266	6.0451	311	6.3806	356	8.2177	401	11.5269	446	14.9055	491	18.5318
267	6.0473	312	6.3982	357	8.2855	402	11.5963	447	14.9898	492	18.6097
268	6.0497	313	6.4166	358	8.3542	403	11.6655	448	15.0742	493	18.6878
269	6.0521	314	6.4357	359	8.4238	404	11.7346	449	15.1587	494	18.7662
270	6.0547	315	6.4557	360	8.4942	405	11.8036	450	15.2433	495	18.8449
271	6.0574	316	6.4764	361	8.5654	406	11.8726	451	15.3279	496	18.9239
272	6.0603	317	6.4981	362	8.6374	407	11.9415	452	15.4124	497	19.0032
273	6.0633	318	6.5205	363	8.71	408	12.0104	453	15.4969	498	19.0828
274	6.0664	319	6.5439	364	8.7833	409	12.0794	454	15.5813	499	19.1628
275	6.0697	320	6.5683	365	8.8571	410	12.1485	455	15.6656	500	19.2431
276	6.0731	321	6.5935	366	8.9315	411	12.2178	456	15.7498	501	19.3238
277	6.0767	322	6.6198	367	9.0063	412	12.2872	457	15.8337	502	19.4049
278	6.0805	323	6.647	368	9.0816	413	12.3568	458	15.9175	503	19.4864
279	6.0845	324	6.6753	369	9.1572	414	12.4266	459	16.001	504	19.5682
280	6.0886	325	6.7047	370	9.2331	415	12.4968	460	16.0842	505	19.6503
281	6.093	326	6.7351	371	9.3092	416	12.5672	461	16.1672	506	19.7329
282	6.0976	327	6.7667	372	9.3856	417	12.638	462	16.2499	507	19.8157
283	6.1024	328	6.7994	373	9.4621	418	12.7092	463	16.3322	508	19.8989
284	6.1074	329	6.8332	374	9.5388	419	12.7808	464	16.4142	509	19.9824
285	6.1127	330	6.8682	375	9.6154	420	12.8529	465	16.4959	510	20.0662
286	6.1182	331	6.9044	376	9.6921	421	12.9254	466	16.5772	511	20.1503
287	6.124	332	6.9418	377	9.7687	422	12.9984	467	16.6582	512	20.2346
288	6.13	333	6.9804	378	9.8453	423	13.0719	468	16.7388	513	20.3191
289	6.1364	334	7.0203	379	9.9217	424	13.1459	469	16.8191	514	20.4039
290	6.143	335	7.0614	380	9.9979	425	13.2204	470	16.899	515	20.4888
291	6.15	336	7.1038	381	10.074	426	13.2956	471	16.9786	516	20.5738
292	6.1573	337	7.1475	382	10.1498	427	13.3712	472	17.0579	517	20.6589
293	6.1649	338	7.1925	383	10.2254	428	13.4475	473	17.1369	518	20.7441
294	6.1729	339	7.2387	384	10.3006	429	13.5243	474	17.2155	519	20.8293
295	6.1813	340	7.2863	385	10.3756	430	13.6017	475	17.2939	520	20.9146
296	6.19	341	7.3352	386	10.4502	431	13.6796	476	17.372	521	20.9997
297	6.1992	342	7.3854	387	10.5245	432	13.7581	477	17.4499	522	21.0849
298	6.2087	343	7.4368	388	10.5984	433	13.8372	478	17.5276	523	21.1699
299	6.2188	344	7.4896	389	10.672	434	13.9168	479	17.6051	524	21.2547

Appendix F. Test Characteristic Curve (TCC) Tables

Table F3 (cont.) Grade 5 Writing Scale Scores and Corresponding TCC Values									
SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
525	21.3394	570	24.8162	615	28.9492	660	33.2922	705	35.5229
526	21.4238	571	24.8933	616	29.0512	661	33.3728	706	35.5439
527	21.508	572	24.9711	617	29.1532	662	33.4521	707	35.564
528	21.5919	573	25.0495	618	29.2554	663	33.53	708	35.5833
529	21.6756	574	25.1285	619	29.3575	664	33.6067	709	35.6019
530	21.7588	575	25.2081	620	29.4596	665	33.682	710	35.6197
531	21.8417	576	25.2885	621	29.5618	666	33.7559	711	35.6367
532	21.9243	577	25.3696	622	29.6639	667	33.8284	712	35.653
533	22.0064	578	25.4515	623	29.7659	668	33.8995	713	35.6686
534	22.088	579	25.5341	624	29.8679	669	33.9691	714	35.6836
535	22.1693	580	25.6174	625	29.9698	670	34.0372	715	35.6979
536	22.25	581	25.7016	626	30.0717	671	34.1039	716	35.7116
537	22.3303	582	25.7865	627	30.1733	672	34.1691	717	35.7247
538	22.4101	583	25.8723	628	30.2749	673	34.2327	718	35.7373
539	22.4895	584	25.9588	629	30.3763	674	34.2949	719	35.7493
540	22.5683	585	26.0461	630	30.4775	675	34.3555	720	35.7607
541	22.6467	586	26.1343	631	30.5785	676	34.4146	721	35.7717
542	22.7246	587	26.2232	632	30.6793	677	34.4721	722	35.7822
543	22.802	588	26.3128	633	30.7798	678	34.5282	723	35.7922
544	22.8789	589	26.4033	634	30.8801	679	34.5827	724	35.8018
545	22.9554	590	26.4945	635	30.9801	680	34.6357	725	35.8109
546	23.0315	591	26.5864	636	31.0798	681	34.6872	726	35.8197
547	23.1072	592	26.6791	637	31.1792	682	34.7372	727	35.828
548	23.1824	593	26.7724	638	31.2781	683	34.7857	728	35.836
549	23.2574	594	26.8664	639	31.3767	684	34.8328	729	35.8436
550	23.332	595	26.9611	640	31.4749	685	34.8784	730	35.8509
551	23.4063	596	27.0564	641	31.5726	686	34.9225	731	35.8578
552	23.4803	597	27.1523	642	31.6698	687	34.9653	732	35.8645
553	23.5542	598	27.2488	643	31.7665	688	35.0067	733	35.8708
554	23.6278	599	27.3458	644	31.8626	689	35.0467	734	35.8768
555	23.7013	600	27.4433	645	31.9581	690	35.0853	735	35.8826
556	23.7747	601	27.5414	646	32.053	691	35.1227	736	35.8881
557	23.848	602	27.6399	647	32.1472	692	35.1587	737	35.8933
558	23.9213	603	27.7388	648	32.2407	693	35.1935	738	35.8983
559	23.9946	604	27.8381	649	32.3335	694	35.2271	739	35.9031
560	24.068	605	27.9378	650	32.4254	695	35.2594	740	35.9077
561	24.1416	606	28.0379	651	32.5165	696	35.2906		
562	24.2153	607	28.1382	652	32.6068	697	35.3206		
563	24.2892	608	28.2389	653	32.6961	698	35.3495		
564	24.3633	609	28.3398	654	32.7844	699	35.3773		
565	24.4378	610	28.4409	655	32.8718	700	35.404		
566	24.5126	611	28.5422	656	32.9581	701	35.4297		
567	24.5878	612	28.6438	657	33.0434	702	35.4544		
568	24.6634	613	28.7454	658	33.1275	703	35.4782		
569	24.7395	614	28.8472	659	33.2105	704	35.501		

Appendix F. Test Characteristic Curve (TCC) Tables

Table F4 Grade 6 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
275	6.0317	320	6.2631	365	7.6979	410	10.8686	455	13.6583	500	17.1915
276	6.0333	321	6.2754	366	7.757	411	10.9334	456	13.7311	501	17.2637
277	6.0349	322	6.2882	367	7.8173	412	10.9974	457	13.8048	502	17.3355
278	6.0366	323	6.3017	368	7.8789	413	11.0608	458	13.8793	503	17.407
279	6.0384	324	6.3157	369	7.9416	414	11.1236	459	13.9545	504	17.4781
280	6.0402	325	6.3303	370	8.0055	415	11.1858	460	14.0305	505	17.5488
281	6.0422	326	6.3455	371	8.0705	416	11.2474	461	14.1072	506	17.6194
282	6.0443	327	6.3614	372	8.1365	417	11.3085	462	14.1846	507	17.6896
283	6.0464	328	6.378	373	8.2036	418	11.369	463	14.2626	508	17.7597
284	6.0487	329	6.3953	374	8.2716	419	11.4291	464	14.3412	509	17.8297
285	6.051	330	6.4134	375	8.3406	420	11.4887	465	14.4204	510	17.8995
286	6.0535	331	6.4322	376	8.4104	421	11.5479	466	14.5001	511	17.9693
287	6.0561	332	6.4517	377	8.481	422	11.6068	467	14.5804	512	18.039
288	6.0588	333	6.4721	378	8.5524	423	11.6653	468	14.661	513	18.1088
289	6.0617	334	6.4933	379	8.6245	424	11.7236	469	14.742	514	18.1786
290	6.0647	335	6.5154	380	8.6972	425	11.7817	470	14.8234	515	18.2486
291	6.0678	336	6.5384	381	8.7705	426	11.8396	471	14.905	516	18.3187
292	6.0711	337	6.5623	382	8.8443	427	11.8974	472	14.9869	517	18.389
293	6.0746	338	6.5871	383	8.9185	428	11.9551	473	15.069	518	18.4596
294	6.0782	339	6.6129	384	8.9931	429	12.0128	474	15.1511	519	18.5304
295	6.082	340	6.6397	385	9.068	430	12.0705	475	15.2334	520	18.6016
296	6.0859	341	6.6676	386	9.1432	431	12.1284	476	15.3156	521	18.6731
297	6.0901	342	6.6964	387	9.2185	432	12.1863	477	15.3978	522	18.745
298	6.0944	343	6.7264	388	9.2938	433	12.2445	478	15.4799	523	18.8173
299	6.099	344	6.7575	389	9.3693	434	12.3029	479	15.5619	524	18.8901
300	6.1038	345	6.7897	390	9.4447	435	12.3616	480	15.6436	525	18.9633
301	6.1088	346	6.823	391	9.52	436	12.4206	481	15.7252	526	19.037
302	6.114	347	6.8575	392	9.5951	437	12.48	482	15.8064	527	19.1113
303	6.1195	348	6.8933	393	9.67	438	12.5399	483	15.8874	528	19.186
304	6.1252	349	6.9302	394	9.7447	439	12.6002	484	15.9679	529	19.2614
305	6.1312	350	6.9684	395	9.819	440	12.6611	485	16.0481	530	19.3372
306	6.1375	351	7.0079	396	9.8929	441	12.7225	486	16.1279	531	19.4136
307	6.1441	352	7.0486	397	9.9664	442	12.7845	487	16.2072	532	19.4906
308	6.151	353	7.0906	398	10.0395	443	12.8472	488	16.286	533	19.5681
309	6.1582	354	7.1339	399	10.112	444	12.9106	489	16.3644	534	19.6461
310	6.1658	355	7.1785	400	10.184	445	12.9746	490	16.4422	535	19.7247
311	6.1737	356	7.2245	401	10.2554	446	13.0394	491	16.5195	536	19.8037
312	6.1819	357	7.2718	402	10.3262	447	13.1049	492	16.5963	537	19.8833
313	6.1906	358	7.3204	403	10.3964	448	13.1712	493	16.6725	538	19.9634
314	6.1996	359	7.3704	404	10.4659	449	13.2383	494	16.7482	539	20.0439
315	6.209	360	7.4217	405	10.5347	450	13.3063	495	16.8233	540	20.1248
316	6.2189	361	7.4743	406	10.6029	451	13.375	496	16.898	541	20.206
317	6.2292	362	7.5282	407	10.6704	452	13.4446	497	16.9721	542	20.2877
318	6.24	363	7.5835	408	10.7372	453	13.515	498	17.0457	543	20.3696
319	6.2513	364	7.6401	409	10.8032	454	13.5862	499	17.1188	544	20.4518

Appendix F. Test Characteristic Curve (TCC) Tables

Table F4 (cont.) Grade 6 Writing Scale Scores and Corresponding TCC Values									
SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
545	20.5342	590	23.8427	635	27.1876	680	31.4788	725	34.8609
546	20.6168	591	23.9045	636	27.2803	681	31.5727	726	34.9054
547	20.6995	592	23.9663	637	27.3734	682	31.6664	727	34.9486
548	20.7823	593	24.0281	638	27.467	683	31.7598	728	34.9903
549	20.865	594	24.09	639	27.561	684	31.8529	729	35.0307
550	20.9478	595	24.152	640	27.6555	685	31.9457	730	35.0697
551	21.0305	596	24.2142	641	27.7502	686	32.038	731	35.1074
552	21.113	597	24.2766	642	27.8453	687	32.13	732	35.1438
553	21.1953	598	24.3393	643	27.9406	688	32.2214	733	35.1789
554	21.2774	599	24.4023	644	28.0362	689	32.3123	734	35.2127
555	21.3593	600	24.4658	645	28.132	690	32.4026	735	35.2453
556	21.4407	601	24.5297	646	28.2279	691	32.4923	736	35.2768
557	21.5218	602	24.5941	647	28.3239	692	32.5813	737	35.3071
558	21.6024	603	24.6591	648	28.4201	693	32.6696	738	35.3362
559	21.6826	604	24.7247	649	28.5163	694	32.7571	739	35.3643
560	21.7622	605	24.7909	650	28.6126	695	32.8438	740	35.3913
561	21.8412	606	24.8578	651	28.7089	696	32.9296	741	35.4172
562	21.9197	607	24.9255	652	28.8052	697	33.0145	742	35.4422
563	21.9975	608	24.9939	653	28.9015	698	33.0984	743	35.4661
564	22.0747	609	25.0631	654	28.9978	699	33.1812	744	35.4892
565	22.1512	610	25.1332	655	29.094	700	33.263	745	35.5113
566	22.2269	611	25.2042	656	29.1902	701	33.3436	746	35.5325
567	22.302	612	25.2761	657	29.2864	702	33.4231	747	35.5529
568	22.3763	613	25.3488	658	29.3825	703	33.5013	748	35.5724
569	22.4498	614	25.4226	659	29.4785	704	33.5783	749	35.5912
570	22.5226	615	25.4973	660	29.5745	705	33.654	750	35.6092
571	22.5946	616	25.573	661	29.6704	706	33.7284	751	35.6264
572	22.6659	617	25.6496	662	29.7662	707	33.8014	752	35.6429
573	22.7364	618	25.7273	663	29.862	708	33.8729	753	35.6588
574	22.8062	619	25.8059	664	29.9577	709	33.9431	754	35.6739
575	22.8752	620	25.8856	665	30.0533	710	34.0118	755	35.6885
576	22.9435	621	25.9662	666	30.1489	711	34.0791	756	35.7024
577	23.0111	622	26.0478	667	30.2444	712	34.1448	757	35.7157
578	23.0781	623	26.1304	668	30.3399	713	34.209	758	35.7284
579	23.1444	624	26.2139	669	30.4353	714	34.2718	759	35.7406
580	23.2101	625	26.2983	670	30.5306	715	34.3329	760	35.7523
581	23.2753	626	26.3837	671	30.6259	716	34.3926		
582	23.3399	627	26.4699	672	30.7211	717	34.4507		
583	23.404	628	26.557	673	30.8162	718	34.5073		
584	23.4676	629	26.6449	674	30.9112	719	34.5624		
585	23.5309	630	26.7336	675	31.0062	720	34.6159		
586	23.5938	631	26.8231	676	31.101	721	34.6679		
587	23.6563	632	26.9132	677	31.1957	722	34.7183		
588	23.7186	633	27.0041	678	31.2902	723	34.7673		
589	23.7807	634	27.0955	679	31.3846	724	34.8148		

Appendix F. Test Characteristic Curve (TCC) Tables

Table F5 Grade 7 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
290	6.0361	335	6.331	380	8.1419	425	11.2812	470	13.8174	515	17.1998
291	6.0379	336	6.3471	381	8.2114	426	11.336	471	13.89	516	17.2628
292	6.0399	337	6.3639	382	8.2818	427	11.3902	472	13.9635	517	17.3252
293	6.0419	338	6.3815	383	8.3531	428	11.4437	473	14.0379	518	17.387
294	6.0441	339	6.3998	384	8.4252	429	11.4966	474	14.113	519	17.4483
295	6.0464	340	6.419	385	8.4982	430	11.549	475	14.189	520	17.509
296	6.0487	341	6.439	386	8.5718	431	11.6009	476	14.2657	521	17.5694
297	6.0512	342	6.4598	387	8.6461	432	11.6523	477	14.343	522	17.6293
298	6.0539	343	6.4816	388	8.721	433	11.7034	478	14.421	523	17.6889
299	6.0566	344	6.5043	389	8.7963	434	11.7541	479	14.4995	524	17.7482
300	6.0595	345	6.528	390	8.872	435	11.8045	480	14.5786	525	17.8073
301	6.0626	346	6.5526	391	8.9481	436	11.8547	481	14.6581	526	17.8662
302	6.0658	347	6.5783	392	9.0244	437	11.9048	482	14.7379	527	17.925
303	6.0691	348	6.605	393	9.1009	438	11.9548	483	14.8181	528	17.9837
304	6.0727	349	6.6328	394	9.1775	439	12.0047	484	14.8985	529	18.0425
305	6.0764	350	6.6618	395	9.2541	440	12.0547	485	14.979	530	18.1013
306	6.0803	351	6.6919	396	9.3306	441	12.1047	486	15.0597	531	18.1603
307	6.0844	352	6.7231	397	9.407	442	12.1549	487	15.1404	532	18.2195
308	6.0886	353	6.7556	398	9.4831	443	12.2052	488	15.221	533	18.2789
309	6.0932	354	6.7892	399	9.559	444	12.2559	489	15.3016	534	18.3386
310	6.0979	355	6.8242	400	9.6345	445	12.3068	490	15.382	535	18.3987
311	6.1029	356	6.8604	401	9.7096	446	12.3582	491	15.4621	536	18.4593
312	6.1081	357	6.8979	402	9.7842	447	12.41	492	15.5419	537	18.5203
313	6.1136	358	6.9368	403	9.8583	448	12.4622	493	15.6214	538	18.5818
314	6.1193	359	6.977	404	9.9317	449	12.5151	494	15.7004	539	18.644
315	6.1254	360	7.0186	405	10.0045	450	12.5685	495	15.779	540	18.7067
316	6.1317	361	7.0615	406	10.0766	451	12.6225	496	15.857	541	18.7702
317	6.1383	362	7.1059	407	10.148	452	12.6773	497	15.9345	542	18.8344
318	6.1453	363	7.1517	408	10.2185	453	12.7328	498	16.0113	543	18.8993
319	6.1526	364	7.1989	409	10.2882	454	12.7891	499	16.0875	544	18.9651
320	6.1603	365	7.2475	410	10.3571	455	12.8462	500	16.1629	545	19.0317
321	6.1684	366	7.2975	411	10.4251	456	12.9042	501	16.2377	546	19.0991
322	6.1768	367	7.349	412	10.4922	457	12.963	502	16.3116	547	19.1675
323	6.1856	368	7.4019	413	10.5583	458	13.0228	503	16.3848	548	19.2367
324	6.1949	369	7.4563	414	10.6236	459	13.0835	504	16.4572	549	19.3069
325	6.2046	370	7.512	415	10.6879	460	13.1452	505	16.5287	550	19.378
326	6.2148	371	7.5692	416	10.7512	461	13.2079	506	16.5995	551	19.4501
327	6.2255	372	7.6277	417	10.8137	462	13.2716	507	16.6694	552	19.5231
328	6.2367	373	7.6876	418	10.8752	463	13.3363	508	16.7385	553	19.5971
329	6.2484	374	7.7488	419	10.9358	464	13.402	509	16.8067	554	19.6721
330	6.2606	375	7.8113	420	10.9954	465	13.4687	510	16.8741	555	19.748
331	6.2735	376	7.875	421	11.0542	466	13.5365	511	16.9408	556	19.8248
332	6.2869	377	7.94	422	11.1122	467	13.6052	512	17.0067	557	19.9025
333	6.301	378	8.0062	423	11.1693	468	13.675	513	17.0718	558	19.9811
334	6.3157	379	8.0735	424	11.2256	469	13.7457	514	17.1361	559	20.0606

Appendix F. Test Characteristic Curve (TCC) Tables

Table F5 (cont.) Grade 7 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
560	20.1409	605	23.9294	650	28.7275	695	34.0841	740	35.7543
561	20.222	606	24.0113	651	28.8643	696	34.1595	741	35.7661
562	20.3038	607	24.0936	652	29.0016	697	34.2326	742	35.7773
563	20.3864	608	24.1763	653	29.1395	698	34.3034	743	35.788
564	20.4697	609	24.2595	654	29.2778	699	34.3719	744	35.7982
565	20.5535	610	24.3433	655	29.4164	700	34.4382	745	35.8079
566	20.638	611	24.4277	656	29.5553	701	34.5023	746	35.8171
567	20.723	612	24.5128	657	29.6942	702	34.5642	747	35.8259
568	20.8084	613	24.5987	658	29.8331	703	34.624	748	35.8343
569	20.8942	614	24.6855	659	29.9718	704	34.6817	749	35.8423
570	20.9804	615	24.7731	660	30.1104	705	34.7374	750	35.8499
571	21.0669	616	24.8618	661	30.2486	706	34.7911	751	35.8572
572	21.1537	617	24.9515	662	30.3863	707	34.8428	752	35.8641
573	21.2406	618	25.0424	663	30.5235	708	34.8926	753	35.8707
574	21.3277	619	25.1344	664	30.66	709	34.9405	754	35.877
575	21.4148	620	25.2277	665	30.7957	710	34.9866	755	35.8829
576	21.502	621	25.3223	666	30.9305	711	35.031	756	35.8886
577	21.5891	622	25.4182	667	31.0643	712	35.0736	757	35.894
578	21.6761	623	25.5156	668	31.197	713	35.1146	758	35.8992
579	21.7631	624	25.6144	669	31.3285	714	35.1539	759	35.9041
580	21.8498	625	25.7147	670	31.4587	715	35.1916	760	35.9087
581	21.9364	626	25.8166	671	31.5875	716	35.2279	761	35.9132
582	22.0227	627	25.92	672	31.7148	717	35.2626	762	35.9174
583	22.1088	628	26.0251	673	31.8406	718	35.2959	763	35.9214
584	22.1945	629	26.1317	674	31.9646	719	35.3279	764	35.9253
585	22.28	630	26.2401	675	32.087	720	35.3585	765	35.9289
586	22.3651	631	26.35	676	32.2075	721	35.3878	766	35.9324
587	22.4498	632	26.4617	677	32.3261	722	35.4159	767	35.9357
588	22.5342	633	26.5749	678	32.4427	723	35.4427	768	35.9388
589	22.6182	634	26.6899	679	32.5574	724	35.4684	769	35.9418
590	22.7019	635	26.8065	680	32.6699	725	35.493	770	35.9447
591	22.7852	636	26.9247	681	32.7803	726	35.5166		
592	22.8682	637	27.0445	682	32.8885	727	35.5391		
593	22.9508	638	27.1659	683	32.9945	728	35.5606		
594	23.0331	639	27.2889	684	33.0982	729	35.5811		
595	23.1152	640	27.4133	685	33.1997	730	35.6008		
596	23.197	641	27.5392	686	33.2988	731	35.6195		
597	23.2786	642	27.6666	687	33.3955	732	35.6374		
598	23.36	643	27.7952	688	33.4899	733	35.6546		
599	23.4413	644	27.9251	689	33.582	734	35.6709		
600	23.5225	645	28.0563	690	33.6716	735	35.6865		
601	23.6037	646	28.1886	691	33.7588	736	35.7014		
602	23.6849	647	28.3219	692	33.8437	737	35.7156		
603	23.7662	648	28.4563	693	33.9262	738	35.7291		
604	23.8477	649	28.5915	694	34.0063	739	35.742		

Appendix F. Test Characteristic Curve (TCC) Tables

Table F6 Grade 8 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
300	6.1729	345	7.2532	390	10.4141	435	13.5681	480	16.9616	525	19.4786
301	6.1812	346	7.3022	391	10.489	436	13.6445	481	17.0219	526	19.546
302	6.1899	347	7.3526	392	10.5634	437	13.7215	482	17.0814	527	19.6143
303	6.1991	348	7.4045	393	10.6373	438	13.799	483	17.14	528	19.6836
304	6.2086	349	7.4577	394	10.7107	439	13.8771	484	17.1978	529	19.7537
305	6.2186	350	7.5124	395	10.7835	440	13.9557	485	17.2548	530	19.8247
306	6.2291	351	7.5684	396	10.8557	441	14.0347	486	17.3111	531	19.8966
307	6.24	352	7.6258	397	10.9274	442	14.1142	487	17.3667	532	19.9694
308	6.2515	353	7.6846	398	10.9986	443	14.1941	488	17.4217	533	20.0429
309	6.2634	354	7.7447	399	11.0693	444	14.2743	489	17.4761	534	20.1173
310	6.2759	355	7.8061	400	11.1395	445	14.3548	490	17.5299	535	20.1923
311	6.289	356	7.8688	401	11.2092	446	14.4356	491	17.5833	536	20.268
312	6.3026	357	7.9328	402	11.2785	447	14.5167	492	17.6362	537	20.3444
313	6.3169	358	7.998	403	11.3474	448	14.5978	493	17.6886	538	20.4214
314	6.3318	359	8.0645	404	11.4158	449	14.6791	494	17.7408	539	20.4989
315	6.3473	360	8.1321	405	11.4839	450	14.7604	495	17.7927	540	20.577
316	6.3636	361	8.2007	406	11.5517	451	14.8417	496	17.8443	541	20.6554
317	6.3805	362	8.2705	407	11.6192	452	14.9229	497	17.8957	542	20.7342
318	6.3982	363	8.3413	408	11.6865	453	15.004	498	17.9471	543	20.8134
319	6.4166	364	8.4131	409	11.7535	454	15.0849	499	17.9983	544	20.8928
320	6.4358	365	8.4857	410	11.8205	455	15.1655	500	18.0496	545	20.9724
321	6.4559	366	8.5592	411	11.8873	456	15.2458	501	18.1009	546	21.0521
322	6.4767	367	8.6335	412	11.954	457	15.3258	502	18.1523	547	21.1319
323	6.4985	368	8.7086	413	12.0208	458	15.4053	503	18.2039	548	21.2117
324	6.5211	369	8.7843	414	12.0875	459	15.4843	504	18.2557	549	21.2914
325	6.5447	370	8.8606	415	12.1544	460	15.5628	505	18.3078	550	21.3711
326	6.5692	371	8.9374	416	12.2213	461	15.6406	506	18.3603	551	21.4505
327	6.5947	372	9.0147	417	12.2885	462	15.7178	507	18.4131	552	21.5297
328	6.6212	373	9.0924	418	12.3558	463	15.7944	508	18.4663	553	21.6086
329	6.6488	374	9.1704	419	12.4235	464	15.8702	509	18.5201	554	21.6872
330	6.6775	375	9.2487	420	12.4914	465	15.9452	510	18.5743	555	21.7654
331	6.7072	376	9.3272	421	12.5597	466	16.0194	511	18.6292	556	21.8431
332	6.7381	377	9.4059	422	12.6283	467	16.0928	512	18.6847	557	21.9204
333	6.7701	378	9.4846	423	12.6974	468	16.1652	513	18.7408	558	21.9971
334	6.8033	379	9.5633	424	12.7669	469	16.2368	514	18.7977	559	22.0732
335	6.8377	380	9.6419	425	12.8369	470	16.3075	515	18.8553	560	22.1488
336	6.8734	381	9.7204	426	12.9074	471	16.3772	516	18.9137	561	22.2237
337	6.9103	382	9.7988	427	12.9785	472	16.446	517	18.9729	562	22.298
338	6.9485	383	9.8769	428	13.0501	473	16.5138	518	19.033	563	22.3716
339	6.9879	384	9.9548	429	13.1223	474	16.5806	519	19.0939	564	22.4445
340	7.0287	385	10.0324	430	13.1951	475	16.6465	520	19.1557	565	22.5168
341	7.0709	386	10.1096	431	13.2685	476	16.7114	521	19.2184	566	22.5883
342	7.1144	387	10.1864	432	13.3425	477	16.7754	522	19.2821	567	22.6591
343	7.1593	388	10.2627	433	13.4171	478	16.8384	523	19.3466	568	22.7292
344	7.2055	389	10.3387	434	13.4923	479	16.9005	524	19.4122	569	22.7986

Appendix F. Test Characteristic Curve (TCC) Tables

Table F6 (cont.) Grade 8 Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
570	22.8672	615	25.966	660	31.0018	705	34.8876	750	35.8567	795	35.9836
571	22.9353	616	26.0547	661	31.1199	706	34.9333	751	35.8634	796	35.9844
572	23.0026	617	26.1449	662	31.2372	707	34.9773	752	35.8698	797	35.9851
573	23.0694	618	26.2366	663	31.3537	708	35.0198	753	35.8758	798	35.9858
574	23.1355	619	26.3298	664	31.4694	709	35.0607	754	35.8816	799	35.9865
575	23.201	620	26.4244	665	31.5841	710	35.1002	755	35.8872	800	35.9871
576	23.2661	621	26.5206	666	31.6979	711	35.1381	756	35.8924		
577	23.3306	622	26.6182	667	31.8106	712	35.1747	757	35.8975		
578	23.3946	623	26.7173	668	31.9222	713	35.2099	758	35.9023		
579	23.4582	624	26.8178	669	32.0326	714	35.2437	759	35.9068		
580	23.5215	625	26.9197	670	32.1418	715	35.2762	760	35.9112		
581	23.5844	626	27.023	671	32.2497	716	35.3075	761	35.9154		
582	23.6471	627	27.1276	672	32.3562	717	35.3375	762	35.9193		
583	23.7096	628	27.2335	673	32.4613	718	35.3664	763	35.9231		
584	23.7719	629	27.3408	674	32.565	719	35.3941	764	35.9267		
585	23.8341	630	27.4492	675	32.6671	720	35.4206	765	35.9302		
586	23.8963	631	27.5589	676	32.7676	721	35.4461	766	35.9334		
587	23.9586	632	27.6696	677	32.8666	722	35.4706	767	35.9366		
588	24.0209	633	27.7815	678	32.9639	723	35.4941	768	35.9396		
589	24.0833	634	27.8945	679	33.0595	724	35.5165	769	35.9424		
590	24.146	635	28.0084	680	33.1533	725	35.5381	770	35.9451		
591	24.209	636	28.1232	681	33.2453	726	35.5587	771	35.9477		
592	24.2723	637	28.239	682	33.3356	727	35.5785	772	35.9502		
593	24.3361	638	28.3555	683	33.424	728	35.5974	773	35.9525		
594	24.4003	639	28.4729	684	33.5106	729	35.6156	774	35.9547		
595	24.4651	640	28.5909	685	33.5952	730	35.6329	775	35.9569		
596	24.5305	641	28.7096	686	33.678	731	35.6495	776	35.9589		
597	24.5966	642	28.8288	687	33.7588	732	35.6654	777	35.9608		
598	24.6635	643	28.9486	688	33.8377	733	35.6806	778	35.9627		
599	24.7311	644	29.0688	689	33.9147	734	35.6951	779	35.9645		
600	24.7996	645	29.1895	690	33.9897	735	35.709	780	35.9661		
601	24.8691	646	29.3104	691	34.0628	736	35.7223	781	35.9677		
602	24.9395	647	29.4316	692	34.1339	737	35.735	782	35.9693		
603	25.011	648	29.5531	693	34.2031	738	35.7472	783	35.9707		
604	25.0835	649	29.6746	694	34.2703	739	35.7588	784	35.9721		
605	25.1572	650	29.7962	695	34.3356	740	35.7699	785	35.9734		
606	25.2321	651	29.9179	696	34.3991	741	35.7805	786	35.9747		
607	25.3082	652	30.0394	697	34.4606	742	35.7906	787	35.9759		
608	25.3856	653	30.1609	698	34.5203	743	35.8003	788	35.977		
609	25.4644	654	30.2821	699	34.5781	744	35.8095	789	35.9781		
610	25.5444	655	30.4031	700	34.6341	745	35.8183	790	35.9791		
611	25.6259	656	30.5238	701	34.6883	746	35.8267	791	35.9801		
612	25.7087	657	30.644	702	34.7407	747	35.8348	792	35.9811		
613	25.793	658	30.7639	703	34.7914	748	35.8424	793	35.9819		
614	25.8788	659	30.8831	704	34.8403	749	35.8497	794	35.9828		

Appendix F. Test Characteristic Curve (TCC) Tables

Table F7 High School Writing Scale Scores and Corresponding TCC Values									
SS	TCC	SS	TCC	SS	TCC	SS	TCC	SS	TCC
500	12.2633	545	15.3128	590	24.0073	635	33.2406	680	41.4079
501	12.2800	546	15.4680	591	24.1937	636	33.4294	681	41.6180
502	12.2977	547	15.6277	592	24.3804	637	33.6157	682	41.8283
503	12.3164	548	15.7919	593	24.5676	638	33.7994	683	42.0385
504	12.3364	549	15.9605	594	24.7554	639	33.9808	684	42.2483
505	12.3575	550	16.1332	595	24.9441	640	34.1598	685	42.4576
506	12.3799	551	16.3099	596	25.1338	641	34.3367	686	42.6659
507	12.4037	552	16.4905	597	25.3247	642	34.5115	687	42.8732
508	12.4290	553	16.6747	598	25.5169	643	34.6844	688	43.0791
509	12.4557	554	16.8624	599	25.7106	644	34.8555	689	43.2834
510	12.4840	555	17.0533	600	25.9058	645	35.0251	690	43.4860
511	12.5141	556	17.2471	601	26.1027	646	35.1934	691	43.6865
512	12.5459	557	17.4436	602	26.3013	647	35.3605	692	43.8848
513	12.5795	558	17.6425	603	26.5018	648	35.5266	693	44.0808
514	12.6152	559	17.8436	604	26.7040	649	35.6921	694	44.2743
515	12.6529	560	18.0466	605	26.9082	650	35.8571	695	44.4651
516	12.6927	561	18.2511	606	27.1141	651	36.0218	696	44.6533
517	12.7349	562	18.4570	607	27.3219	652	36.1865	697	44.8387
518	12.7794	563	18.6639	608	27.5314	653	36.3513	698	45.0212
519	12.8265	564	18.8715	609	27.7426	654	36.5167	699	45.2008
520	12.8761	565	19.0795	610	27.9554	655	36.6827	700	45.3776
521	12.9285	566	19.2878	611	28.1696	656	36.8495	701	45.5515
522	12.9838	567	19.4961	612	28.3852	657	37.0175	702	45.7226
523	13.0421	568	19.7041	613	28.6019	658	37.1867	703	45.8910
524	13.1035	569	19.9116	614	28.8196	659	37.3574	704	46.0567
525	13.1681	570	20.1184	615	29.0380	660	37.5297	705	46.2199
526	13.2361	571	20.3243	616	29.2571	661	37.7038	706	46.3807
527	13.3076	572	20.5293	617	29.4764	662	37.8798	707	46.5392
528	13.3827	573	20.7331	618	29.6960	663	38.0579	708	46.6957
529	13.4615	574	20.9356	619	29.9154	664	38.2382	709	46.8502
530	13.5442	575	21.1368	620	30.1345	665	38.4207	710	47.0030
531	13.6309	576	21.3366	621	30.3530	666	38.6054	711	47.1542
532	13.7217	577	21.5349	622	30.5707	667	38.7925	712	47.3042
533	13.8167	578	21.7318	623	30.7873	668	38.9819	713	47.4532
534	13.9160	579	21.9273	624	31.0027	669	39.1737	714	47.6013
535	14.0198	580	22.1213	625	31.2167	670	39.3677	715	47.7488
536	14.1280	581	22.3141	626	31.4289	671	39.5639	716	47.8960
537	14.2408	582	22.5055	627	31.6394	672	39.7622	717	48.0432
538	14.3582	583	22.6959	628	31.8478	673	39.9626	718	48.1905
539	14.4803	584	22.8851	629	32.0540	674	40.1649	719	48.3382
540	14.6072	585	23.0735	630	32.2580	675	40.3688	720	48.4867
541	14.7388	586	23.2611	631	32.4596	676	40.5744	721	48.6361
542	14.8752	587	23.4482	632	32.6587	677	40.7813	722	48.7868
543	15.0163	588	23.6347	633	32.8552	678	40.9893	723	48.9389
544	15.1622	589	23.8211	634	33.0492	679	41.1983	724	49.0926

Appendix F. Test Characteristic Curve (TCC) Tables

Table F7 (cont.) High School Writing Scale Scores and Corresponding TCC Values

SS	TCC	SS	TCC	SS	TCC	SS	TCC
725	49.2484	770	58.9131	815	68.7818	860	71.7516
726	49.4062	771	59.1517	816	68.9327	861	71.7664
727	49.5664	772	59.3899	817	69.0785	862	71.7804
728	49.7292	773	59.6279	818	69.2191	863	71.7935
729	49.8947	774	59.8656	819	69.3546	864	71.8059
730	50.0631	775	60.1032	820	69.4850	865	71.8176
731	50.2346	776	60.3406	821	69.6103	866	71.8285
732	50.4092	777	60.5780	822	69.7307	867	71.8388
733	50.5872	778	60.8153	823	69.8462	868	71.8485
734	50.7685	779	61.0527	824	69.9568	869	71.8576
735	50.9533	780	61.2900	825	70.0627	870	71.8662
736	51.1417	781	61.5274	826	70.1641	871	71.8742
737	51.3335	782	61.7649	827	70.2609	872	71.8818
738	51.5290	783	62.0024	828	70.3533	873	71.8890
739	51.7280	784	62.2399	829	70.4415	874	71.8957
740	51.9305	785	62.4774	830	70.5256	875	71.9020
741	52.1364	786	62.7148	831	70.6057	876	71.9079
742	52.3457	787	62.9520	832	70.6819	877	71.9134
743	52.5583	788	63.1889	833	70.7544	878	71.9187
744	52.7740	789	63.4254	834	70.8232	879	71.9236
745	52.9928	790	63.6614	835	70.8887	880	71.9282
746	53.2144	791	63.8967	836	70.9508	881	71.9326
747	53.4386	792	64.1311	837	71.0097	882	71.9366
748	53.6654	793	64.3645	838	71.0656	883	71.9405
749	53.8945	794	64.5966	839	71.1186	884	71.9441
750	54.1257	795	64.8273	840	71.1687	885	71.9475
751	54.3588	796	65.0562	841	71.2162	886	71.9507
752	54.5936	797	65.2832	842	71.2612	887	71.9537
753	54.8300	798	65.5080	843	71.3037	888	71.9565
754	55.0675	799	65.7304	844	71.3439	889	71.9591
755	55.3062	800	65.9502	845	71.3819	890	71.9616
756	55.5458	801	66.1670	846	71.4178	891	71.9639
757	55.7860	802	66.3807	847	71.4517	892	71.9661
758	56.0268	803	66.5910	848	71.4837	893	71.9682
759	56.2679	804	66.7977	849	71.5139	894	71.9701
760	56.5092	805	67.0006	850	71.5424	895	71.9719
761	56.7506	806	67.1994	851	71.5693	896	71.9736
762	56.9920	807	67.3940	852	71.5947	897	71.9752
763	57.2332	808	67.5842	853	71.6186	898	71.9767
764	57.4742	809	67.7699	854	71.6412	899	71.9781
765	57.7150	810	67.9509	855	71.6624	900	71.9795
766	57.9553	811	68.1271	856	71.6825		
767	58.1954	812	68.2983	857	71.7013		
768	58.4350	813	68.4646	858	71.7191		
769	58.6742	814	68.6258	859	71.7358		

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G1 Grade 3 Recommended Method Results, All Forms

Scale Score and Standard Error of Measurement													
Raw Score	2005 OP	Form 1		Form 2		Form 3		Form 4		Form 5		Form 6	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	200	200	216	200	216	200	216	200	216	200	216	200	216
7	296	328	15	332	14	327	15	324	15	323	15	319	15
8	314	339	14	343	14	338	14	335	14	335	14	330	15
9	326	349	14	353	14	349	14	346	14	345	14	341	14
10	337	360	14	364	14	359	14	357	14	356	14	352	14
11	347	371	14	374	14	370	14	367	14	366	14	362	14
12	358	381	14	384	14	380	14	378	14	377	14	373	14
13	369	391	14	395	14	390	14	388	14	387	14	383	14
14	379	402	15	406	15	401	15	398	14	397	14	393	14
15	389	413	15	418	16	413	15	410	15	409	15	404	15
16	400	426	16	431	16	426	16	422	16	421	16	416	16
17	411	439	15	443	15	438	15	435	16	434	16	429	16
18	424	451	15	455	15	450	15	447	15	446	15	442	15
19	437	462	15	466	15	461	15	458	15	458	15	453	15
20	449	473	15	477	15	472	15	470	15	469	15	464	15
21	460	485	16	490	16	485	16	481	15	480	15	476	15
22	471	498	16	503	16	498	16	494	16	493	16	488	16
23	483	511	15	515	14	510	15	507	15	506	15	501	16
24	496	522	14	525	14	521	14	518	14	518	14	513	15
25	509	531	13	534	13	531	13	528	13	527	13	524	14
26	520	540	13	543	13	539	13	537	13	536	13	533	13
27	529	548	12	551	12	547	12	545	12	545	12	541	13
28	538	556	12	559	12	555	12	553	12	553	12	550	12
29	546	564	13	567	13	563	13	561	13	561	13	558	12
30	554	573	13	576	13	572	13	570	13	569	13	566	13
31	562	582	14	586	15	581	14	579	14	578	14	574	13
32	571	594	16	599	18	593	16	590	15	589	15	584	14
33	580	612	22	623	28	610	22	605	20	603	19	597	17
34	591	650	54	650	54	650	54	644	47	637	39	618	25
35	608	650	54	650	54	650	54	650	54	650	54	650	54
36	650	650	54	650	54	650	54	650	54	650	54	650	54

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G1 (cont.) Grade 3 Recommended Method Results, All Forms											
Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 7		Form 9		Form 10		Form 11		Form 12	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	200	200	216	200	216	200	216	200	216	200	216
7	296	312	17	302	19	315	16	322	15	320	15
8	314	325	15	317	16	328	15	333	14	332	14
9	326	336	14	329	15	338	14	344	14	342	14
10	337	347	14	340	14	349	14	354	14	353	14
11	347	357	14	350	14	360	14	365	14	364	14
12	358	368	14	361	14	370	14	375	14	374	14
13	369	378	14	372	14	380	14	386	14	384	14
14	379	388	14	382	14	391	14	396	14	394	14
15	389	399	14	392	14	401	15	407	15	405	15
16	400	410	15	403	15	413	15	419	16	418	16
17	411	423	16	415	16	426	16	432	16	431	16
18	424	436	15	428	16	439	15	445	15	443	15
19	437	448	15	440	15	450	15	456	15	455	15
20	449	459	15	452	15	461	15	467	15	466	15
21	460	470	15	463	15	473	15	479	15	477	15
22	471	482	15	474	15	485	16	491	16	490	16
23	483	495	16	487	16	498	16	504	16	503	16
24	496	508	15	500	16	510	15	516	14	515	14
25	509	519	14	512	15	521	14	526	13	525	14
26	520	529	13	523	14	531	13	535	13	534	13
27	529	537	13	532	13	539	13	544	12	542	13
28	538	546	12	540	13	548	12	552	12	550	12
29	546	554	12	549	12	556	12	560	12	558	12
30	554	562	13	557	12	564	13	568	13	567	13
31	562	570	13	565	13	572	13	577	14	576	13
32	571	579	14	573	13	582	14	587	15	586	15
33	580	590	15	583	14	593	16	601	18	599	18
34	591	606	20	595	17	611	22	629	33	622	28
35	608	650	54	614	23	650	54	650	54	650	54
36	650	650	54	650	54	650	54	650	54	650	54

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G2 Grade 4 Recommended Method Results, All Forms													
Scale Score and Standard Error of Measurement													
Raw Score	2005 OP	Form 1		Form 2		Form 3		Form 4		Form 5		Form 6	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	230	230	253	230	253	230	253	230	253	230	253	230	253
7	331	400	16	391	16	393	16	393	16	343	17	345	17
8	348	414	15	405	16	407	16	407	16	357	15	359	15
9	361	426	15	418	15	419	15	420	15	369	15	370	15
10	373	436	14	430	14	431	14	431	14	381	15	382	16
11	385	447	14	440	14	441	14	442	14	394	16	396	16
12	399	458	15	451	15	452	15	452	15	408	16	410	16
13	412	470	15	463	15	464	15	464	15	421	15	422	15
14	425	482	15	475	15	476	15	476	15	432	14	433	14
15	435	493	14	486	15	487	15	488	14	442	14	444	14
16	446	504	14	497	14	498	14	499	14	453	15	455	15
17	457	515	15	508	14	509	14	509	14	465	15	467	15
18	469	527	16	519	15	520	15	521	15	477	15	479	15
19	481	541	16	532	16	533	16	533	16	489	14	490	14
20	492	554	15	546	16	547	16	547	16	499	14	501	14
21	503	566	14	558	15	560	15	560	15	510	14	512	15
22	514	576	14	569	14	570	14	571	14	522	15	523	15
23	526	585	13	579	13	580	13	580	13	535	16	536	16
24	539	595	13	589	13	590	13	590	13	548	16	550	16
25	553	604	13	598	13	599	13	599	13	561	15	562	15
26	564	613	13	608	13	608	13	609	13	571	14	573	14
27	575	623	14	617	13	618	13	618	13	581	13	582	13
28	584	633	14	627	14	628	14	628	14	591	13	592	13
29	594	645	16	637	15	638	15	639	15	600	13	601	13
30	603	662	21	650	17	652	18	652	18	609	13	611	13
31	612	700	51	673	26	676	28	677	29	619	13	620	14
32	622	700	51	700	51	700	51	700	51	629	14	630	14
33	632	700	51	700	51	700	51	700	51	640	15	641	15
34	644	700	51	700	51	700	51	700	51	654	18	656	19
35	660	700	51	700	51	700	51	700	51	681	32	689	39
36	700	700	51	700	51	700	51	700	51	700	51	700	51

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G2 (cont.) Grade 4 Recommended Method Results, All Forms											
Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 7		Form 8		Form 9		Form 10		Form 12	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	230	230	253	230	253	230	253	230	253	230	253
7	331	333	20	306	36	352	16	332	20	230	253
8	348	350	16	338	18	365	15	349	16	324	24
9	361	362	15	353	16	376	15	362	15	345	17
10	373	374	15	365	15	389	16	373	15	358	15
11	385	386	16	377	15	403	16	386	16	370	15
12	399	400	16	389	16	416	15	399	16	382	16
13	412	414	15	403	16	428	14	413	16	395	16
14	425	426	15	417	15	439	14	425	15	409	16
15	435	437	14	428	14	449	14	436	14	422	15
16	446	447	14	439	14	461	15	447	14	433	14
17	457	458	15	450	14	473	15	458	15	443	14
18	469	470	15	461	15	485	15	470	15	454	15
19	481	482	15	473	15	496	14	482	15	466	15
20	492	493	14	485	15	506	14	493	14	478	15
21	503	504	14	496	14	517	15	503	14	490	14
22	514	515	15	506	14	530	16	514	15	500	14
23	526	527	16	518	15	543	16	526	16	511	14
24	539	541	16	530	16	557	15	540	16	523	15
25	553	554	15	544	16	568	14	553	15	536	16
26	564	566	14	557	15	578	13	565	14	550	16
27	575	576	14	568	14	587	13	575	14	562	15
28	584	585	13	578	13	597	13	585	13	572	14
29	594	595	13	587	13	606	13	594	13	582	13
30	603	604	13	597	13	615	13	604	13	591	13
31	612	614	13	606	13	625	14	613	13	601	13
32	622	623	14	616	13	636	15	623	14	610	13
33	632	633	14	625	14	648	17	633	14	620	14
34	644	645	16	636	15	668	24	644	16	630	14
35	660	662	21	648	17	700	51	661	21	641	15
36	700	700	51	700	51	700	51	700	51	700	51

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G3 Grade 5 Recommended Method Results, All Forms													
		Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 1		Form 2		Form 3		Form 4		Form 5		Form 6	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	255	255	126	255	126	255	126	255	126	255	126	255	126
7	333	370	16	357	17	362	17	350	18	339	21	353	18
8	353	383	16	371	16	375	16	365	17	357	17	367	17
9	367	396	17	384	16	388	17	378	16	371	16	381	16
10	380	411	17	397	17	402	17	392	17	384	16	394	17
11	394	425	17	412	17	417	17	406	17	397	17	408	17
12	408	438	16	426	16	430	16	420	17	412	17	423	17
13	422	450	16	439	16	443	16	433	16	426	16	436	16
14	435	461	16	450	16	455	16	446	16	438	16	448	16
15	447	474	16	462	16	467	16	457	16	450	16	460	16
16	459	487	16	475	16	479	16	470	16	462	16	472	16
17	471	500	16	488	16	492	16	482	16	475	16	485	16
18	484	512	16	500	16	505	16	495	16	488	16	498	16
19	497	523	16	513	16	517	15	508	16	500	16	510	16
20	509	535	16	524	16	529	16	519	15	513	16	522	16
21	521	548	16	536	16	541	16	531	16	524	16	533	16
22	533	562	17	549	17	554	17	544	16	536	16	546	16
23	546	575	16	563	17	568	16	557	17	549	17	560	17
24	559	587	15	576	16	580	16	571	16	563	17	573	16
25	572	598	15	588	15	592	15	583	15	576	16	585	15
26	584	608	14	598	15	602	14	594	15	588	15	596	15
27	595	618	14	609	14	612	14	604	14	598	15	606	14
28	606	627	14	618	14	622	14	614	14	608	14	616	14
29	615	637	14	628	14	632	14	624	14	618	14	626	14
30	625	648	15	638	14	642	15	634	14	628	14	636	14
31	635	659	16	649	15	652	15	644	15	638	14	646	15
32	645	672	18	660	16	670	17	655	15	648	15	657	16
33	656	693	24	674	18	688	22	667	17	660	16	670	17
34	669	740	68	695	25	706	32	684	21	674	18	688	22
35	688	740	68	740	68	724	47	727	50	695	25	740	68
36	740	740	68	740	68	740	68	740	68	740	68	740	68

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G3 (cont.) Grade 5 Recommended Method Results, All Forms											
Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 7		Form 8		Form 9		Form 11		Form 12	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	255	255	126	255	126	255	126	255	126	255	126
7	333	324	27	358	17	291	54	344	20	339	21
8	353	347	19	372	16	337	21	360	17	357	17
9	367	363	17	385	17	355	18	373	16	370	16
10	380	376	16	399	17	369	16	386	17	384	16
11	394	389	17	413	17	382	16	400	17	397	17
12	408	403	17	427	16	396	17	415	17	412	17
13	422	418	17	440	16	410	17	428	16	426	16
14	435	431	16	452	16	424	17	441	16	438	16
15	447	443	16	464	16	437	16	453	16	450	16
16	459	455	16	476	16	449	16	465	16	462	16
17	471	467	16	489	16	461	16	477	16	475	16
18	484	480	16	502	16	474	16	490	16	488	16
19	497	493	16	514	16	486	16	503	16	500	16
20	509	505	16	526	16	499	16	515	16	512	16
21	521	517	15	538	16	511	16	527	16	524	16
22	533	529	16	551	17	523	16	539	16	536	16
23	546	542	16	564	17	535	16	552	17	549	17
24	559	555	17	577	16	548	16	566	17	563	17
25	572	568	16	589	15	562	17	578	16	576	16
26	584	581	16	599	14	575	16	590	15	588	15
27	595	592	15	610	14	587	15	600	14	598	15
28	606	603	14	619	14	597	15	610	14	608	14
29	615	613	14	629	14	608	14	620	14	618	14
30	625	622	14	639	14	617	14	630	14	628	14
31	635	632	14	650	15	627	14	640	14	638	14
32	645	642	15	661	16	637	14	651	15	648	15
33	656	653	15	675	18	647	15	662	16	660	16
34	669	665	17	698	27	659	16	677	19	673	18
35	688	681	20	740	68	672	18	702	29	694	25
36	740	740	68	740	68	740	68	740	68	740	68

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G4 Grade 6 Recommended Method Results, All Forms													
Scale Score and Standard Error of Measurement													
Raw Score	2005 OP	Form 1		Form 2		Form 3		Form 5		Form 6		Form 7	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	275	275	117	275	117	275	117	275	117	275	117	275	117
7	351	406	18	391	17	372	18	388	17	400	17	412	18
8	370	422	19	404	17	386	17	402	17	415	18	429	19
9	384	439	19	420	19	400	17	417	19	432	19	445	18
10	397	454	17	437	19	415	18	434	19	448	18	460	17
11	412	468	16	453	17	432	19	450	17	462	16	472	16
12	429	480	16	466	16	448	18	463	16	474	16	485	16
13	445	492	17	478	16	462	16	476	16	487	16	497	17
14	460	506	17	491	16	474	16	488	16	500	17	512	17
15	472	520	17	504	17	487	16	501	17	514	17	526	17
16	484	534	16	518	17	500	17	516	17	528	17	539	16
17	497	546	16	532	16	514	17	529	17	541	16	551	16
18	511	558	16	545	16	528	17	542	16	553	16	563	16
19	525	571	17	557	16	541	16	554	16	565	17	577	18
20	538	586	18	570	17	553	16	567	17	580	18	593	18
21	551	602	18	584	18	565	17	581	18	595	18	608	17
22	563	617	16	600	18	579	18	597	18	611	17	622	16
23	577	629	15	615	17	595	18	612	17	624	16	633	15
24	593	640	15	627	16	610	17	625	16	635	15	644	15
25	608	650	15	638	15	624	16	636	15	646	15	654	15
26	621	661	15	649	15	635	15	647	15	656	15	665	15
27	633	671	15	659	15	646	15	657	15	666	15	675	15
28	644	682	15	670	15	656	15	668	15	677	15	686	15
29	654	693	15	680	15	666	15	678	15	688	15	697	16
30	664	705	17	691	15	677	15	689	15	699	16	710	18
31	675	720	20	703	16	688	15	700	16	709	17	718	19
32	686	749	34	718	19	699	16	714	18	719	20	726	22
33	697	760	43	743	30	712	18	736	26	729	23	734	25
34	710	760	43	760	43	732	24	760	43	739	28	742	29
35	728	760	43	760	43	760	43	760	43	749	34	750	34
36	760	760	43	760	43	760	43	760	43	760	43	760	43

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G4 (cont.) Grade 6 Recommended Method Results, All Forms											
Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 8		Form 9		Form 10		Form 11		Form 12	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	275	275	117	275	117	275	117	275	117	275	117
7	351	398	17	354	22	337	29	275	117	371	18
8	370	413	18	372	18	363	19	351	23	385	17
9	384	429	19	386	17	379	17	370	18	399	17
10	397	446	18	400	17	392	17	384	17	413	18
11	412	460	17	415	18	406	18	398	17	430	19
12	429	473	16	432	19	422	19	412	18	447	18
13	445	485	16	448	18	439	19	429	19	461	16
14	460	498	17	462	16	454	17	446	18	473	16
15	472	512	17	474	16	467	16	460	17	486	16
16	484	526	17	487	16	479	16	473	16	499	17
17	497	539	16	500	17	492	17	485	16	513	17
18	511	551	16	514	17	506	17	498	17	527	17
19	525	564	16	528	17	520	17	512	17	540	16
20	538	577	18	541	16	533	16	526	17	552	16
21	551	593	18	553	16	546	16	539	16	564	16
22	563	609	17	565	17	558	16	551	16	578	18
23	577	622	16	579	18	571	17	563	16	594	18
24	593	634	15	595	18	586	18	577	18	609	17
25	608	644	15	610	17	602	18	593	18	623	16
26	621	655	15	624	16	616	17	608	17	634	15
27	633	665	15	635	15	628	15	622	16	645	15
28	644	675	15	645	15	639	15	633	15	655	15
29	654	686	15	656	15	650	15	644	15	666	15
30	664	697	16	666	15	660	15	654	15	676	15
31	675	710	18	677	15	671	15	665	15	687	15
32	686	729	23	688	15	681	15	675	15	698	16
33	697	760	43	699	16	692	15	686	15	711	18
34	710	760	43	712	18	715	19	697	16	727	22
35	728	760	43	732	24	738	27	710	18	743	30
36	760	760	43	760	43	760	43	760	43	760	43

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G5 Grade 7 Recommended Method Results, All Forms

Raw Score	2005 OP	Scale Score and Standard Error of Measurement											
		Form 1		Form 2		Form 3		Form 4		Form 5		Form 6	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	290	290	105	290	105	290	105	290	105	290	105	290	105
7	360	397	16	362	21	366	20	372	18	358	22	359	22
8	378	411	17	379	17	383	17	387	16	377	17	378	17
9	392	427	19	393	16	396	16	400	16	391	16	392	16
10	405	447	20	406	17	410	17	414	17	404	16	405	17
11	420	464	17	422	19	426	19	432	20	419	18	420	18
12	439	478	16	441	20	445	20	451	19	438	20	438	20
13	458	450	16	459	18	463	17	468	17	457	18	457	18
14	472	503	17	474	16	477	16	481	16	472	16	472	16
15	485	518	18	487	16	489	16	493	16	485	16	485	16
16	498	535	18	499	16	502	16	507	17	497	16	498	16
17	512	550	17	513	17	517	18	522	18	511	17	512	17
18	528	563	15	530	18	534	18	539	18	527	18	528	18
19	545	575	15	546	17	549	17	554	16	544	17	544	17
20	558	587	15	560	16	562	16	566	15	558	16	558	16
21	570	599	16	571	15	574	15	578	15	570	15	570	15
22	582	611	15	583	15	586	15	589	15	581	15	582	15
23	594	622	14	595	16	598	16	602	16	593	16	594	16
24	606	632	13	607	15	610	15	614	15	605	16	606	16
25	618	640	13	619	15	621	14	624	14	617	15	618	15
26	628	648	12	629	14	631	13	634	13	628	14	628	14
27	637	655	12	638	13	640	13	642	12	636	13	637	13
28	645	662	12	646	12	647	12	650	12	644	12	645	12
29	652	670	12	653	12	655	12	657	12	652	12	652	12
30	659	678	13	660	12	662	12	664	12	659	12	659	12
31	667	687	14	668	12	669	12	672	13	666	12	667	12
32	674	699	17	675	13	677	13	680	13	674	13	674	13
33	683	721	26	684	14	686	14	690	15	683	14	683	14
34	694	770	85	695	16	698	17	703	18	693	16	694	16
35	710	770	85	712	22	718	25	731	33	732	34	710	21
36	770	770	85	770	85	770	85	770	85	770	85	770	85

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G5 (cont.) Grade 7 Recommended Method Results, All Forms											
Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 8		Form 9		Form 10		Form 11		Form 12	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	290	290	105	290	105	290	105	290	105	290	105
7	360	336	35	348	27	375	18	373	18	337	34
8	378	367	19	372	18	389	16	388	16	368	19
9	392	383	17	387	16	402	16	401	16	384	17
10	405	397	16	400	16	417	18	415	18	397	16
11	420	410	17	414	17	435	20	432	20	411	17
12	439	426	19	431	20	454	19	452	19	427	19
13	458	446	20	451	19	470	17	468	17	446	20
14	472	463	17	467	17	483	16	481	16	464	17
15	485	477	16	481	16	495	16	494	16	478	16
16	498	490	16	493	16	509	17	507	17	490	16
17	512	503	17	506	17	525	18	523	18	503	17
18	528	518	18	522	18	541	18	540	18	518	18
19	545	534	18	539	18	556	16	554	16	535	18
20	558	550	17	553	16	568	15	567	15	550	17
21	570	563	15	566	15	580	15	578	15	563	15
22	582	575	15	577	15	591	15	590	15	575	15
23	594	586	15	589	15	603	16	602	16	586	15
24	606	598	16	601	16	615	15	614	15	598	16
25	618	610	15	613	15	626	14	625	14	611	15
26	628	622	14	624	14	635	13	634	13	622	14
27	637	631	13	634	13	643	12	642	12	632	13
28	645	640	13	642	12	651	12	650	12	640	13
29	652	648	12	649	12	658	12	657	12	648	12
30	659	655	12	657	12	665	12	664	12	655	12
31	667	662	12	664	12	673	13	672	13	662	12
32	674	670	12	671	12	681	13	680	13	670	12
33	683	678	13	680	13	692	15	690	15	678	13
34	694	687	14	690	15	706	19	717	24	687	14
35	710	699	17	703	18	738	39	744	45	699	17
36	770	770	85	770	85	770	85	770	85	770	85

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G6 Grade 8 Recommended Method Results, All Forms													
Scale Score and Standard Error of Measurement													
Raw Score	2005 OP	Form 2		Form 3		Form 4		Form 5		Form 6		Form 7	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	300	300	50	300	50	300	50	300	50	300	50	300	50
7	339	362	17	367	17	300	50	335	24	357	18	349	20
8	358	375	16	380	16	341	22	356	18	371	16	365	17
9	372	388	16	393	17	359	18	370	16	384	16	378	16
10	385	401	17	407	17	373	16	383	16	397	17	391	17
11	398	416	18	422	17	386	16	396	17	411	18	405	17
12	413	431	17	436	16	399	17	411	18	426	17	420	17
13	427	450	16	449	16	414	18	425	17	440	16	434	17
14	441	456	16	461	16	429	17	439	16	452	16	447	16
15	453	469	17	475	18	442	16	451	16	465	17	459	16
16	466	485	19	492	20	454	16	464	17	479	18	473	17
17	481	504	20	511	19	467	17	478	18	497	20	489	20
18	499	521	18	527	17	482	19	496	20	516	19	508	20
19	517	536	16	541	16	501	20	515	19	531	17	525	18
20	532	548	16	553	16	519	18	530	17	544	16	539	16
21	545	561	17	567	17	534	17	544	16	557	16	551	16
22	558	576	18	582	18	547	16	556	16	571	17	565	17
23	572	591	18	598	18	559	16	570	17	586	18	579	18
24	588	606	17	611	16	573	18	585	18	602	17	595	18
25	603	618	15	622	14	589	18	601	17	615	15	609	16
26	615	628	14	632	14	604	17	614	15	625	14	621	15
27	626	637	13	641	13	617	15	625	14	634	13	631	14
28	635	646	13	649	13	627	14	634	13	643	13	639	13
29	643	654	13	657	13	636	13	642	13	651	13	648	13
30	652	662	13	666	13	644	13	651	13	659	13	656	13
31	660	671	14	675	14	653	13	659	13	668	14	664	13
32	669	681	15	686	16	661	13	668	14	678	15	673	14
33	678	694	18	700	19	670	14	677	14	689	16	684	16
34	690	729	34	729	34	680	15	688	16	705	21	697	18
35	708	764	76	800	182	692	17	704	21	754	60	722	29
36	800	800	182	800	182	800	182	800	182	800	182	800	182

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G6 (cont.) Grade 8 Recommended Method Results, All Forms											
Scale Score and Standard Error of Measurement											
Raw Score	2005 OP	Form 8		Form 9		Form 10		Form 11		Form 12	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
6	300	300	50	300	50	300	50	300	50	300	50
7	339	330	27	300	50	353	19	300	50	342	22
8	358	353	19	312	38	368	17	343	21	360	17
9	372	368	17	346	20	381	16	360	17	373	16
10	385	381	16	363	17	394	17	374	16	386	16
11	398	394	17	376	16	408	18	387	16	400	17
12	413	408	18	389	16	423	17	400	17	415	18
13	427	423	17	403	17	437	16	415	18	429	17
14	441	437	16	418	17	450	16	429	17	442	16
15	453	449	16	432	17	462	16	443	16	455	16
16	466	462	16	445	16	476	18	455	16	467	17
17	481	476	18	457	16	493	20	468	17	483	19
18	499	493	20	470	17	512	19	483	19	501	20
19	517	512	19	486	19	529	17	502	20	519	18
20	532	528	17	505	20	542	16	520	18	534	17
21	545	542	16	523	18	554	16	535	17	547	16
22	558	554	16	537	16	568	17	547	16	560	17
23	572	568	17	550	16	583	18	560	17	574	18
24	588	583	18	563	17	599	17	574	18	590	18
25	603	598	18	577	18	612	16	590	18	605	17
26	615	612	16	593	18	623	14	605	17	617	15
27	626	623	14	607	16	633	14	617	15	627	14
28	635	632	14	619	15	641	13	627	14	636	13
29	643	641	13	629	14	650	13	636	13	645	13
30	652	649	13	638	13	658	13	645	13	653	13
31	660	658	13	646	13	666	13	653	13	661	13
32	669	666	13	655	13	676	14	661	13	670	14
33	678	675	14	663	13	687	16	670	14	680	15
34	690	686	16	672	14	701	20	680	15	692	17
35	708	701	20	682	15	734	38	692	17	710	23
36	800	800	182	800	182	800	182	800	182	800	182

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G7 High School Recommended Method Results, All Forms																	
Scale Score and Standard Error of Measurement																	
Raw Score	2005 OP	Form 2		Form 3		Form 4		Form 5		Form 6		Form 7		Form 8		Form 9	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
12	500	500	31	500	31	500	31	500	31	500	31	500	31	500	31	500	31
13	522	524	16	519	18	523	16	510	23	519	18	521	17	506	26	519	18
14	535	547	10	537	12	546	10	520	18	537	12	542	11	512	22	538	12
15	543	553	9	544	10	552	9	531	13	544	10	548	10	526	15	545	10
16	549	558	9	551	9	557	9	542	11	551	9	554	9	540	11	551	9
17	555	563	9	556	9	562	9	548	10	556	9	559	9	547	10	557	9
18	560	567	9	561	9	567	9	554	9	561	9	564	9	553	9	562	9
19	565	572	9	566	9	572	9	559	9	566	9	569	9	558	9	567	9
20	569	577	9	571	9	577	9	564	9	571	9	574	9	563	9	571	9
21	574	583	9	576	9	582	9	569	9	576	9	579	9	568	9	576	9
22	579	588	9	581	9	587	9	574	9	581	9	584	9	573	9	581	9
23	585	593	9	586	9	593	9	579	9	586	9	590	9	578	9	587	9
24	590	598	9	591	9	598	9	584	9	591	9	595	9	583	9	592	9
25	595	603	9	597	9	603	9	590	9	597	9	600	9	588	9	597	9
26	600	608	9	602	9	608	9	595	9	602	9	605	9	593	9	602	9
27	605	613	9	607	9	613	9	600	9	607	9	610	9	599	9	607	9
28	610	617	9	612	9	617	9	605	9	612	9	614	9	604	9	612	9
29	615	622	9	617	9	622	9	610	9	617	9	619	9	609	9	617	9
30	619	627	9	621	9	626	9	615	9	621	9	623	9	613	9	621	9
31	624	632	9	626	9	631	9	620	9	626	9	628	9	618	9	626	9
32	629	637	9	630	9	636	9	624	9	630	9	633	9	622	9	631	9
33	634	643	10	636	9	642	10	629	9	636	9	639	9	627	9	636	9
34	639	648	10	641	10	648	10	633	9	641	10	644	10	632	9	641	10
35	645	654	10	647	10	654	10	639	9	647	10	650	10	638	9	647	10
36	651	660	10	652	10	660	10	644	10	653	10	656	10	643	10	653	10
37	657	666	9	658	10	666	9	650	10	659	10	662	9	649	10	659	10
38	663	671	9	664	9	671	9	656	10	664	9	667	9	655	10	665	9
39	668	676	9	670	9	676	9	662	9	670	9	672	9	661	10	670	9
40	673	681	9	675	9	680	9	668	9	675	9	677	9	666	9	675	9
41	678	686	9	680	9	685	9	673	9	680	9	682	9	671	9	680	9

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G7 (cont.) High School Recommended Method Results, All Forms																	
Scale Score and Standard Error of Measurement																	
Raw Score	2005 OP	Form 2		Form 3		Form 4		Form 5		Form 6		Form 7		Form 8		Form 9	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
42	683	690	9	684	9	690	9	678	9	684	9	687	9	676	9	685	9
43	688	696	9	689	9	695	9	683	9	689	9	692	9	681	9	690	9
44	693	701	10	694	9	700	10	687	9	694	9	697	9	686	9	695	9
45	698	708	10	700	10	707	10	693	9	700	10	703	10	691	9	701	10
46	704	714	10	705	10	713	10	698	9	705	10	709	10	696	9	706	10
47	710	721	10	712	10	720	10	704	10	712	10	716	10	702	10	713	10
48	717	727	10	718	10	726	10	709	10	718	10	722	10	708	10	719	10
49	723	733	9	725	10	732	10	716	10	725	10	729	10	715	10	726	10
50	730	738	9	731	10	738	9	723	10	731	10	735	9	721	10	732	10
51	735	743	9	737	9	743	9	729	10	737	9	740	9	727	10	737	9
52	740	748	8	742	9	747	8	735	9	742	9	745	9	733	9	742	9
53	745	752	8	747	8	752	8	740	9	747	8	749	8	738	9	747	8
54	749	756	8	751	8	756	8	745	9	751	8	753	8	743	9	751	8
55	754	760	8	755	8	760	8	750	8	755	8	758	8	748	8	756	8
56	758	764	8	759	8	764	8	754	8	759	8	762	8	752	8	760	8
57	762	769	8	763	8	768	8	758	8	763	8	766	8	757	8	764	8
58	766	773	8	767	8	772	8	762	8	767	8	770	8	761	8	768	8
59	770	777	8	772	8	777	8	766	8	772	8	774	8	765	8	772	8
60	775	781	8	776	8	781	8	770	8	776	8	778	8	769	8	776	8
61	779	786	8	780	8	785	8	775	8	780	8	783	8	773	8	781	8
62	783	790	8	784	8	789	8	779	8	784	8	787	8	777	8	785	8
63	787	794	8	789	8	794	8	783	8	789	8	791	8	782	8	789	8
64	791	798	8	793	8	798	8	787	8	793	8	795	8	786	8	793	8
65	796	803	9	798	8	803	9	792	8	798	8	800	9	790	8	798	8
66	800	808	9	802	9	807	9	796	8	802	9	804	9	794	8	802	9
67	805	814	10	807	9	814	10	801	9	807	9	810	9	799	8	807	9
68	810	820	11	812	10	820	11	805	9	812	10	815	10	803	9	812	10
69	816	840	18	820	11	833	15	811	10	820	11	836	16	809	9	820	11
70	824	860	32	827	13	845	21	816	10	827	13	857	29	814	10	828	13
71	837	880	60	864	36	873	48	858	30	864	36	878	56	857	29	864	36
72	900	900	111	900	111	900	111	900	111	900	111	900	111	900	111	900	111

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G7 (cont.) High School Recommended Method Results, All Forms																	
Scale Score and Standard Error of Measurement																	
Raw Score	2005 OP	Form 10		Form 11		Form 12		Form 13		Form 14		Form 15		Form 16		Form 17	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
12	500	500	31	500	31	500	31	500	31	500	31	500	31	500	31	500	31
13	522	516	20	512	22	521	17	521	17	516	20	514	21	525	16	521	17
14	535	532	13	524	16	542	11	542	11	531	13	527	15	549	10	542	11
15	543	540	11	534	13	548	10	548	10	539	11	536	12	555	9	549	10
16	549	548	10	544	10	554	9	554	9	547	10	545	10	560	9	555	9
17	555	554	9	550	10	559	9	559	9	553	9	551	9	565	9	560	9
18	560	559	9	555	9	564	9	564	9	558	9	557	9	569	9	564	9
19	565	564	9	560	9	569	9	569	9	563	9	562	9	574	9	569	9
20	569	568	9	565	9	574	9	574	9	568	9	566	9	579	9	574	9
21	574	573	9	570	9	579	9	579	9	573	9	571	9	585	9	579	9
22	579	578	9	575	9	584	9	584	9	578	9	576	9	590	9	584	9
23	585	584	9	580	9	589	9	590	9	583	9	582	9	595	9	590	9
24	590	589	9	585	9	594	9	595	9	588	9	587	9	600	9	595	9
25	595	594	9	591	9	600	9	600	9	594	9	592	9	605	9	600	9
26	600	599	9	596	9	605	9	605	9	599	9	597	9	610	9	605	9
27	605	604	9	601	9	610	9	610	9	604	9	602	9	615	9	610	9
28	610	609	9	606	9	614	9	614	9	609	9	607	9	619	9	615	9
29	615	614	9	611	9	619	9	619	9	614	9	612	9	624	9	620	9
30	619	618	9	616	9	623	9	624	9	618	9	617	9	629	9	624	9
31	624	623	9	621	9	628	9	629	9	623	9	622	9	634	9	629	9
32	629	628	9	625	9	633	9	633	9	627	9	626	9	639	9	634	9
33	634	633	9	630	9	639	9	639	9	632	9	631	9	645	10	640	9
34	639	638	9	634	9	644	10	644	10	637	9	636	9	651	10	645	10
35	645	644	10	640	9	650	10	650	10	643	10	642	10	657	10	651	10
36	651	649	10	646	10	656	10	656	10	649	10	647	10	663	9	657	10
37	657	655	10	652	10	662	9	662	9	655	10	653	10	668	9	663	9
38	663	661	10	658	10	667	9	668	9	661	10	659	10	673	9	668	9
39	668	667	9	664	9	672	9	673	9	667	9	665	9	678	9	673	9
40	673	672	9	669	9	677	9	678	9	672	9	670	9	683	9	678	9
41	678	677	9	674	9	682	9	683	9	677	9	675	9	688	9	683	9

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G7 (cont.) High School Recommended Method Results, All Forms																	
Scale Score and Standard Error of Measurement																	
Raw Score	2005 OP	Form 10		Form 11		Form 12		Form 13		Form 14		Form 15		Form 16		Form 17	
		SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM	SS	SEM
42	683	682	9	679	9	687	9	687	9	681	9	680	9	693	9	687	9
43	688	687	9	684	9	692	9	692	9	686	9	685	9	699	9	693	9
44	693	691	9	688	9	697	9	697	9	691	9	689	9	704	10	698	9
45	698	697	9	694	9	703	10	703	10	697	9	695	9	711	10	704	10
46	704	702	10	699	9	709	10	709	10	702	10	700	10	717	10	710	10
47	710	709	10	705	10	716	10	716	10	709	10	706	10	724	10	717	10
48	717	715	10	711	10	722	10	723	10	715	10	712	10	730	10	723	10
49	723	722	10	718	10	728	10	729	10	722	10	719	10	735	9	729	10
50	730	728	10	724	10	734	9	735	9	728	10	726	10	740	9	735	9
51	735	734	9	730	10	739	9	740	9	734	9	732	10	745	9	740	9
52	740	739	9	736	9	744	9	745	9	739	9	737	9	750	8	745	9
53	745	744	9	741	9	749	8	749	8	744	9	742	9	754	8	750	8
54	749	749	8	746	8	753	8	753	8	748	8	747	8	758	8	754	8
55	754	753	8	750	8	757	8	758	8	753	8	751	8	762	8	758	8
56	758	757	8	754	8	761	8	762	8	757	8	755	8	766	8	762	8
57	762	761	8	759	8	766	8	766	8	761	8	760	8	771	8	766	8
58	766	765	8	763	8	770	8	770	8	765	8	764	8	775	8	770	8
59	770	770	8	767	8	774	8	774	8	769	8	768	8	779	8	775	8
60	775	774	8	771	8	778	8	778	8	773	8	772	8	783	8	779	8
61	779	778	8	775	8	783	8	783	8	778	8	776	8	788	8	783	8
62	783	782	8	779	8	787	8	787	8	782	8	780	8	792	8	787	8
63	787	787	8	784	8	791	8	791	8	786	8	785	8	796	8	792	8
64	791	791	8	788	8	795	8	795	8	790	8	789	8	800	9	796	8
65	796	795	8	792	8	800	9	800	9	795	8	793	8	805	9	801	9
66	800	799	8	796	8	804	9	804	9	799	8	797	8	810	9	805	9
67	805	804	9	801	9	810	9	810	9	804	9	802	9	817	11	811	10
68	810	809	9	806	9	815	10	816	10	809	9	807	9	824	12	816	10
69	816	816	10	812	10	824	12	825	12	815	10	813	10	850	24	837	17
70	824	822	12	817	11	833	15	834	15	821	11	819	11	876	53	858	30
71	837	861	33	859	31	867	40	867	40	861	33	860	32	888	76	879	58
72	900	900	111	900	111	900	111	900	111	900	111	900	111	900	111	900	111

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G7 (cont.) High School 4 Recommended Method Results, All Forms

Raw Score	2005 OP	Scale Score and Standard Error of Measurement					
		Form 18		Form 19		Form 20	
		SS	SEM	SS	SEM	SS	SEM
12	500	500	31	500	31	500	31
13	522	529	14	525	16	519	18
14	535	558	9	549	10	538	12
15	543	563	9	555	9	545	10
16	549	567	9	560	9	552	9
17	555	572	9	565	9	557	9
18	560	577	9	570	9	562	9
19	565	583	9	575	9	567	9
20	569	588	9	580	9	572	9
21	574	593	9	585	9	577	9
22	579	598	9	590	9	582	9
23	585	603	9	596	9	587	9
24	590	608	9	601	9	592	9
25	595	613	9	606	9	598	9
26	600	617	9	610	9	603	9
27	605	622	9	615	9	608	9
28	610	627	9	620	9	612	9
29	615	632	9	625	9	617	9
30	619	637	9	629	9	622	9
31	624	643	10	634	9	627	9
32	629	648	10	639	9	631	9
33	634	654	10	645	10	637	9
34	639	660	10	651	10	642	10
35	645	666	9	657	10	648	10
36	651	671	9	663	9	654	10
37	657	676	9	668	9	660	10
38	663	681	9	673	9	665	9
39	668	686	9	678	9	670	9
40	673	690	9	683	9	675	9
41	678	696	9	688	9	680	9

Appendix G. Recommended Scoring Tables for All Forms, with Standard Error of Measurement

Table G7 (cont.) High School 4 Recommended Method Results, All Forms

Raw Score	2005 OP	Scale Score and Standard Error of Measurement					
		Form 18		Form 19		Form 20	
		SS	SEM	SS	SEM	SS	SEM
42	683	701	10	693	9	685	9
43	688	708	10	699	9	690	9
44	693	714	10	704	10	695	9
45	698	721	10	711	10	701	10
46	704	727	10	717	10	706	10
47	710	733	9	724	10	713	10
48	717	738	9	730	10	720	10
49	723	743	9	735	9	726	10
50	730	748	8	740	9	732	10
51	735	752	8	745	9	738	9
52	740	756	8	750	8	743	9
53	745	760	8	754	8	747	8
54	749	764	8	758	8	751	8
55	754	769	8	762	8	756	8
56	758	773	8	766	8	760	8
57	762	777	8	771	8	764	8
58	766	781	8	775	8	768	8
59	770	786	8	779	8	773	8
60	775	790	8	783	8	777	8
61	779	794	8	788	8	781	8
62	783	798	8	792	8	785	8
63	787	803	9	796	8	789	8
64	791	808	9	800	9	793	8
65	796	814	10	805	9	798	8
66	800	820	11	810	9	802	9
67	805	833	15	817	11	808	9
68	810	846	21	824	12	813	10
69	816	859	31	853	26	821	11
70	824	872	47	881	62	829	14
71	837	885	70	891	84	865	38
72	900	900	111	900	111	900	111