

Arizona Linking Study

Technical Report for the Linking of *TerraNova* to SAT/9

Submitted to the Arizona Department of Education

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Overview

This document contains technical information regarding the Arizona Linking Study conducted in the fall of 2004. The technical information included in this report 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).

The Arizona Linking Study created linkages between *TerraNova* (TN) and the Stanford Achievement Test, Ninth Version (SAT/9) for Reading, Language, and Mathematics in Grades 2-9. The primary purpose of the linking study was to provide evidence regarding the continuity of norm-referenced testing in Arizona for the transition from SAT/9 to TN. This study will help Arizona make the transition from SAT/9 to TN as well as Arizona educators use and interpret NRT scores based on TN. The goals of this study were to a) estimate the relationship between the TN scales and the SAT/9 scales, b) show how scales scores and national percentiles on TN correspond to scale scores and national percentile from SAT/9, and c) produce concordance tables.

Linking Design

The Arizona linking study was conducted using a single group design with counterbalancing. Students were administered both TN Form C Survey Edition and SAT/9 Form S Abbreviated Battery. Counterbalancing of the order of TN and SAT/9 administration was used to reduce order effects (i.e., fatigue). To minimize the effects of time passage, both tests were administered between October 25th 2005 and November 5th 2005.

SAT/9 Form TA had been administered in Arizona for several years in Grades 2-9, as the norm-referenced test given in the Spring. This exposure could have inflated results on SAT/9 if this form were used for the linking study. Therefore, the alternate form, SAT/9 Form S, was chosen to reduce this risk. Form S does not share items with Form TA.

In order to provide concordance tables for the norm-referenced tests administered in the Spring each year, the linking study tested students who were in Grades 3-10 in the Fall of 2004. They were administered TN Levels 12-19 (corresponding to Grades 2-9) and SAT/9 for grades 2-9. In order to reduce confusion, both grades and test levels will be referred to as 2-9 for the remainder of this paper.

TN was administered under standard administration conditions and scored at CTB. The SAT/9 was given under standard administration conditions and returned to Harcourt for scoring. Harcourt provided CTB with data files containing item score information, scale scores, and derived scores for all students in each grade/content area.

In order to examine the possibility of score inflation on SAT/9 Form TA, data also were obtained from the Spring 2004 administration of SAT/9 Form TA. Three sets of linkages were established using all the available data: a) Fall SAT/9 and Fall TN, b) Fall SAT/9 and Spring SAT/9, and c) Spring SAT/9 and Fall TN. The linking between Fall SAT/9 and Spring SAT/9 provided useful information regarding change in scale scores from Spring to Fall as well as stability of national percentile ranks from Spring to Fall. The link between the two forms of SAT/9 also provided a reference for comparison of the link between TN and SAT/9. The linkage

between Spring SAT/9 and Fall TN provided additional information for evaluation of the results of the link between Fall SAT/9 and Fall TN.

Method

Data were collected in the Fall of 2004 for this study. A sample of no less than 2,000 Arizona students for each grade was required to complete the analyses for this study. Sample sizes of 1,500 have been suggested as providing acceptable standard errors for the equipercntile procedure (Kolen & Brennan, 1995), but samples of 2,000-2,500 students per grade help the standard error of equating. Sample sizes of 2,000-2,500 also help increase the likelihood that a sufficient number of students would be present at all score points, thus increasing the stability of results at each score point.

Sampling Procedure

Sampling was conducted with the goal of obtaining samples representative of the student population of Arizona with regard to scale score means and standard deviations (SD), as well as overall ethnic distribution. Four stratification variables were used: region, socioeconomic status (SES), and English language learners (ELL). School size was used as an implicit stratification variable. For region, telephone area codes were used as a proxy. SES was defined as the proportion of students eligible for free or reduced lunch programs. ELL was defined as the proportion of students enrolled in an English language learner program.

The sampling unit for this study was schools, which were selected from each cell with a probability proportionate to size. This method resulted in a sample that very closely approximated a sample where the student was the sampling unit. Ethnicity was used as a reference variable to help ensure that the selected sample matched the state population in terms of the distribution of ethnicity.

Simulation for threshold of a stratum. The purpose of using strata is to capture the heterogeneity in population. The categories for each stratification variable were established through simulation in order to make the variance within each cell as small as possible. Simulation was conducted to ensure that the scale score means, SDs, and ethnic percentages of the sample closely match those of the state as a whole.

Figure 1 shows the histogram used to discover whether bimodal or multiple modals exist in data. This graph suggests that the distribution may be bimodal but does not suggest where the threshold or cut point sits. However, an implicit solution is shown in Figure 2. Sets of thresholds are generated so that data are separated into two groups by each threshold. The standard deviations of two groups are plotted against its threshold. Our objective was to make the standard deviation of each group as small as possible. Hence, the plot suggests that the threshold be set at 0.5 for SES. Similar simulations were carried out to determine the optimal thresholds for region, and ELL, and school size.

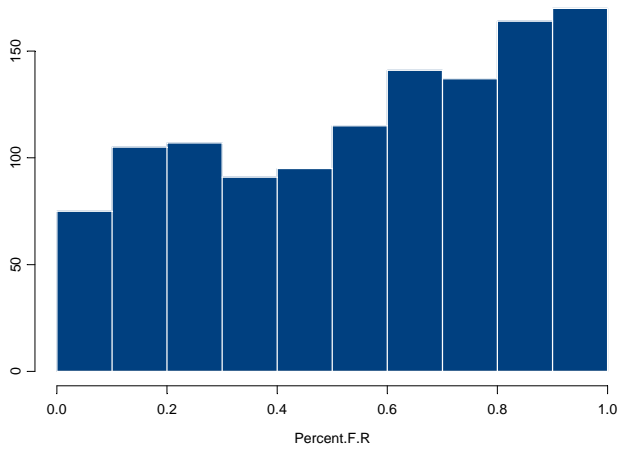


Figure 1. Histogram of SES.

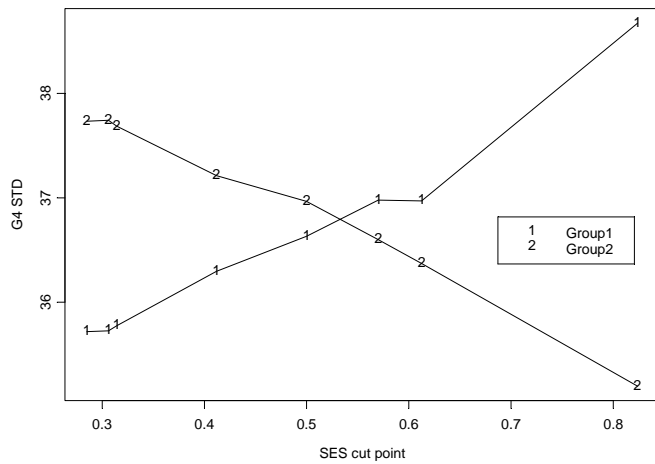


Figure 2. Standard deviations of two groups versus their cut-points.

Cell definition. The categories for each stratification variable (SES, ELL, and region) were set using the results of the simulations. SES was divided into two categories; the threshold between the two categories was .5, which represented the proportion of students in the school that were eligible to participate in free or reduced lunch programs. ELL also was divided into two categories with a threshold of .094. Simulation revealed that three regions were required to give the desired properties of these strata. The three regions were area code 480, area code 602, and all other area codes. Dividing each of the strata into the above categories resulted in 12 cells shown in the table below.

Region (Area Code)	SES (<0.5)		SES (>=0.5)	
	ELL(<0.094)	ELL(others)	ELL(<0.094)	ELL(others)
Others	1	4	7	10
480	2	5	8	11
602	3	6	9	12

The division into 12 cells resulted in some cells very small cells containing very few schools. Cells 6, 8, 9, and 12 had proportions very close to 0. As such, ensuring participation in the sample of schools from these cells would be extremely difficult. The small cells, therefore, were pooled with a larger cell that was close in term of mean SS. Cell 6 was pooled with cell 5; Cell 8 was pooled with Cell 7; Cells 9 and 12 were pooled with Cell 10. This resulted in the following stratification structure:

Region (Area Code)	SES (<0.5)		SES (>=0.5)	
	ELL(<0.094)	ELL(Others)	ELL(<0.094)	ELL(Others)
Others	1	4	7	10
480	2	5	7	11
602	3	5	10	10

School size was then included as implicit stratification variable. Schools were defined as either large or small. The threshold for defining schools as large was 68 or 93 for Grades 4 and 8, respectively. This resulted in the following cells.

Region (Area Code)	school size (G4<68, G8<93)				school size (G4>=68 or G8>=93)			
	SES(L)		SES(H)		SES(L)		SES(H)	
	ELL(L)	ELL(H)	ELL(L)	ELL(H)	ELL(L)	ELL(H)	ELL(L)	ELL(H)
Others	1	4	7	10	13	16	19	22
480	2	5	7	23	14	17	19	23
602	3	5	10	10	15	17	22	22

The percentage and N of students in each cell for a sample of 2,500 students is provided in the table below.

	G4		G8		G9	
	Percent	Count	Percent	Count	Percent	Count
cell1	5%	135	4%	90	35%	877
cell2	2%	49	1%	14	6%	143
cell3	1%	30	0%	7	6%	143
cell4	2%	46	1%	37	6%	151
cell5	1%	27	0%	0	9%	220
cell6	0%	0	0%	0	0%	0
cell7	4%	106	2%	40	6%	158
cell8	0%	0	0%	0	0%	0
cell9	0%	0	0%	0	0%	0
cell10	16%	399	7%	165	18%	456
cell11	0%	0	0%	0	0%	0
cell12	0%	0	0%	0	0%	0
cell13	11%	274	15%	381	0%	9
cell14	15%	375	20%	494	10%	243
cell15	3%	73	6%	149	0%	0
cell16	1%	33	3%	73	0%	0
cell17	3%	86	7%	166	1%	26
cell18	0%	0	0%	0	0%	0
cell19	3%	76	5%	130	0%	0
cell20	0%	0	0%	0	0%	0
cell21	0%	0	0%	0	0%	0
cell22	25%	628	28%	691	0%	0
cell23	7%	163	3%	64	3%	73
cell24	0%	0	0%	0	0%	0
Total	100%	2,500	100%	2,500	100%	2,500

The simulations described above and the resulting cell definitions help ensure that the selected sample closely match the state as a whole in terms of performance and ethnicity. Performance was defined in terms of SAT/9 scale scores. Descriptive statistics for the selected samples and the state as a whole are presented below. Reading scores were used to select the Grade 4 and Grade 9 samples; math scores were used to select the Grade 8 sample. The pool includes all schools for which the necessary demographic and achievement data were available.

	State	Pool	Sample
Grade 4			
N	617.54	52136	2698
RD SS M	641.49	639.93	641.55
RD SS SD	42.29	41.98	41.38
Hispanic	0.38	0.40	0.38
Native Am	0.06	0.07	0.05
White	0.49	0.46	0.48
Black	0.05	0.05	0.06
Asian	0.02	0.02	0.02
Grade 8			
N	59041	51228	3106
Ma SS M	692.09	692.04	692.00
Ma SS SD	37.80	37.74	36.49
Hispanic	0.38	0.40	0.43
Native Am	0.06	0.07	0.03
White	0.49	0.46	0.46
Black	0.05	0.05	0.05
Asian	0.02	0.02	0.02
Grade 9			
N	56771	35074	3611
RD SS M	692.56	690.21	692.42
RD SS SD	33.79	33.59	34.22
Hispanic	0.38	0.40	0.34
Native Am	0.06	0.07	0.09
White	0.49	0.46	0.51
Black	0.05	0.05	0.04
Asian	0.02	0.02	0.02

All schools in the pool were assigned a cell based on the definitions described above. Schools in the pool were also assigned a rank based on the achievement data for Reading and Math. Replacement schools can be found by identifying a school in the pool that has the same cell and rank as the school needing to be replaced.

The simulations described above and the resulting cell definitions helped ensure that the scale score means, SDs, and ethnic percentages of the schools selected closely match those of the state as a whole. Participation of the selected schools was very high. In the few instances where selected schools did not wish to participate, replacement schools were found by identifying a school in the pool that had the same cell and rank as the school needing to be replaced.

Data

Given the design of this study, matched samples were required for each grade and content area, such that all students in the sample have complete data for the two tests being linked. Final linking results were obtained for each grade and content area through a series of processes, which can be best described as taking place in three phases.

Cleaning. Phase I involved a thorough examination and cleaning of the data. Summary statistics for each of the three tests were run, and results were examined for face validity. Tables A1 through A24 in Appendix A show summary statistics for these data sets, including the number of invalid cases (cases for which there were no scores) as well as descriptive statistics for raw scores, scale scores and national percentile ranks (NP). Note that the number of invalid cases is different across contents, Reading, Language, and Mathematics. In all tables, SS represents Spring SAT/9, FS represents Fall SAT/9, and TN is *TerraNova*.

Matching. In Phase II, students' records were matched using various combinations of student ID, first name, last name, birth date, and school code. While the original plan was to use only student ID, it was found that many students' IDs were missing or incorrect, so a new procedure was customized for the study. The matching procedure is described in detail in Appendix A, using Fall SAT/9 and Fall TN as an example.

Tables A25 through A48 in Appendix A show summary statistics of matched students in each grade and content area. Note that six sets of matched data are summarized in each table, because each set of test scores is matched with two other sets. For example, the row labeled 'SS with FS' contains summary statistics for those Spring SAT/9 students who were also found in Fall SAT/9. The row labeled 'SS with TN' contains summary statistics for those Spring SAT/9 students who were also found in Fall TN. A different set of summary statistics is needed for each, because each contains a slightly different set of students, depending on which students could be matched.

Equipercntile Linking

Scores in this study were linked using the equipercntile method. The equipercntile procedure is preferred for several reasons. First, it is a standard industry procedure that CTB has used successfully for a number of linking studies. Compared to linear techniques such as regression, equipercntile linking generally provides greater similarity between distributions of equated scores than does linear equating, particularly at the extreme ends of a distribution. This is because the equipercntile method uses the first four moments of the distribution whereas regression using only the first two. Linking based on regression tends to focus on the middle of the distribution, near the mean. Finally, regression does not provide symmetrical results whereas equipercntile linking does.

Equipercntile linking procedure was run on all of the matched data sets. Tables A49 through A57 in Appendix A show the summary statistics for only those students whose scores contributed to the linking. There are slightly fewer case counts in Phase III than in Phase II because students who did not have both scores for a given linked set in a given content area were dropped. For example, if we were able to match Johnny Student’s FS and SS data for grade 5, but he did not have a Mathematics score for FS, he contributed to the FS/SS linking in grade 5 Reading and Language, but not Mathematics.

Tables A58 through A60 in Appendix A show Pearson’s product moment correlations between raw scores, scale scores, and NP for each linked set. In most grades, the highest correlations among the three matched datasets were produced by the FS with SS match. Also, TN with FS produced higher correlations than did TN with SS in most grades.

Methodology for Computing Percentile Ranks. For this study, a procedure using the midpoint percentile rank associated with each score in the distribution was used. A brief review of this procedure is given here, but a more in-depth discussion of the equipercntile procedure can be found in Kolen and Brennan (1995).

A percentile is a score on the measurement scale, below which a specified percentage of the cases in the distribution falls. A percentile rank is the percentage of cases falling below a given score on the measurement scale. If, for example, 50% of students taking a test have scores lower than 381, the 50th percentile is 381. The percentile rank of a score of 381 is 50.

In their 1995 equating book, Kolen and Brennan describe how to compute percentiles and percentile ranks with test scores considered a discrete variable: “A tradition exists in educational and psychological measurement to view discrete test scores as being continuous by using percentiles and percentile ranks as defined in many educational and psychological measurement test books.”

In this approach, the percentile rank of an integer is the percentile rank at the weighted *midpoint* of the interval containing that score. For example, in the table below, a scale score of 220 is considered to represent scores in the range of 215-235. Note that the scale score of 220 is not an exact midpoint of 215-235. It is the midpoint weighted with the frequency distribution as indicated in the formula below.

$$PR(x) = 100[F(x-1) + f(x)/2],$$

where PR(x) refers to the percentile rank, and for an integer score it equals the percentage of examinees below x plus ½ the percentage of examinees at integer score x, f(x) represents discrete density and F(x) denotes the cumulative distribution for x. Computation of percentile rank and percentile is shown in Table 1.

Table 1. Computation of percentile rank and percentile

SS	freq	f(x)	F(x)	PR(x)	Percentile
400	1	0.1	1	95	95-99
350	1	0.1	0.9	85	85
290	1	0.1	0.8	75	75
250	2	0.2	0.7	60	60
220	2	0.2	0.5	40	40
210	3	0.3	0.3	15	1:15

The percentile rank of a score 220 is $40 = 100 * (0.3 + 0.2/2)$. This means that the 40th percentile is a score of 220. In this example, the first percentile through the 15th percentile has the same score of 210. The same is true for the 95th percentile through 99th percentile, with a score of 400.

There are percentiles undefined in Table 1, such as the 16th percentile. For these values, the following linear interpolation was applied:

$$percentile(y = 16) = SS_{U-1} + \frac{[y - percentile(SS_{U-1})] \times [SS_U - SS_{U-1}]}{percentile(SS_U) - percentile(SS_{U-1})}$$

where SS_U is the largest score with a percentile that is smaller than y .

The above formula for percentile can be used for all defined/undefined scores after finding percentile for a floor score.

Estimation of standard error of linking. To estimate the standard error of linking (SEL), or standard errors of equating, the bootstrap method described in detail by Kolen and Brennan (1995) was used with 1,000 replications. The following procedures were used to obtain standard errors of linking (SEL) using the bootstrap method:

1. Begin with a sample of size N . In this study, N was total sample.
2. Draw a random sample of size N with replacement.
3. Construct a linking relationship using the equipercentile procedure.
4. Repeat Steps 2 and 3 1,000 times.
5. Calculate the standard deviation of the 1,000 scale scores. This standard deviation is the estimated bootstrap.

Results

After linking was completed for the three different data sets, summary statistics were computed again to check the reasonability of the linking and characteristics of linking results. Tables B1 through B9 in Appendix B present these summary statistics. There is one table for every content area from each linked set (i.e. TN to Fall SAT/9 Linking—Reading, etc.). Equipercentile linking produces concordance tables where scale scores contain decimal places. After-linking summary statistics are computed with actual, unrounded scale scores as well as rounded scale scores (using 0.5 as the criteria for rounding up). The third and fourth rows of each grade in Tables B1 through B9 show “Unrounded” and “Rounded” subcategory for these summary statistics. The last column, “Correlation” refers to correlation between scores before linking, and these values can also be found in Appendix A tables 58 through 60.

If the equipercentile method is successfully applied to the matched data sets the distributions of the target test form and test form linked should be similar. Also, similar standard deviation, skewness, and kurtosis should be found. The data presented in Tables B1 through B9 suggest this was the case. For example Table B1 shows the mean of Fall SAT/9 was 598.45 and the mean of Fall TN was 616.02 before linking. After linking, the unrounded mean of the transformed Fall TN was 600.40, which is very similar to the corresponding SAT/9 mean of 598.45.

Figures B1 through B12 in Appendix B are plots that graph differences in percentile ranks (TN minus FS, TN minus SS, and FS minus SS) after scores had been transformed to the

corresponding scale. There are two graphs for each grade and content area, because two of the plots can be graphed with the TN scale on the X axis (TN minus FS and TN minus SS) while the third plot is graphed on the FS scale (FS minus SS). A “0” on these plots indicates that the two percentile ranks were the same. A positive value on the plot indicates that the percentile rank of the transformed scale score was larger than that of the score to which it was transformed. For example, TN was transformed to the FS scale, so a positive score for the ‘TN_minus_FS’ plot indicates that the percentile rank of TN (the transformed score) is larger than the corresponding percentile rank for FS.

Tables C1 through C24 in Appendix C show concordance tables for linking Fall TN to Fall SAT/9. These tables give the TN scale score, corresponding Fall SAT/9 scale score, and the standard error of linking (SEL). Tables D1 through D24 in Appendix D are concordance tables for linking Spring SAT/9 to Fall SAT/9, and Tables E1 through E24 in Appendix E are concordance tables for linking Spring SAT/9 to Fall TN.

Figures F1 through F36 in Appendix F show scale score differences between each of the three linked sets, as well as the corresponding frequency distributions, so each figure contains two plots. For instance, for the FS to SS link, the first plot contains FS scale scores minus SS scale scores plotted on the FS scale (the scale to which scores were transformed). The second plot in the figure is the corresponding frequency distribution of scale scores, using the same scale along the X axis (FS scale). The frequency distribution plots were provided so that the proportion of students contributing to the pattern in the scale score differences plots can be seen. Most of the time, extreme differences in scale scores were based on very small numbers of students.

Figures F37 through F48 in Appendix F show the differences between FS and SS mean scale scores, which are linked to TN scale scores. This strongly suggests that there was not a substantial difference between the Fall and Spring SAT/9 scores. These figures also do not show that SS scores were substantially or systematically higher than FS scores. In fact, the Fall scores were usually higher than Spring scores, which is the expected direction. The results together suggest the TN to FS link can be used to demonstrate continuity of spring test administrations. The correlations between FS and SS were in the typical range for the correlations between an abbreviated version and a complete version of a nationally standardized achievement test.

Summary. Results were as expected. There were no unexpected results. Scores differed within range expected by measurement error, duration between administrations, test blueprint differences, and norm group differences.

Interpretation

The purpose of this study was to aid the transition from one norm-referenced test (SAT/9) to another (TN) and to aid the interpretations of scores from the new norm-referenced test. The purpose of this study was not, however, to provide a method for converting individual student scores from one test to the other.

Important results of the study can be summarized as follows:

- The correlations between TN and Fall SAT/9 scale scores and national percentile ranks were moderate to strong, as expected given the difference in test blueprint and norms groups.
- The correlations between TN and Spring SAT/9 scale scores and national percentile ranks were moderate and somewhat lower than the correlations between TN and Fall SAT/9;

these correlations were in the expected range given difference in test blueprint, norms group, and test administration dates.

- The correlations between Fall SAT/9 and Spring SAT/9 scale score and percentile ranks were strong and, as expected, slightly higher than the correlations between TN and Fall SAT/9.
- Percentile rank differences did not show any systematic bias across all 72 linkages.
- Percentile ranks typically differed in the $|0|$ to $|5|$ range across all linkages.
- Percentile ranks rarely differed greater than $|10|$ across all linkages.
- The TN to Fall SAT/9 percentile rank differences were very similar to the Fall SAT/9 to Spring SAT/9 percentile rank differences.
- Percentile rank scores for all linkages were quite stable; That was true for the TN to Fall SAT/9 linkages, TN to Spring SAT/9 linkages, and Spring SAT/9 to Fall SAT/9 linkages. The stability can be seen in the correlations between percentile rank and the differences in percentile rank.
- Scale scores increased from Spring SAT/9 to Fall SAT/9, as expected. No systematic decreases in scores from Spring to Fall were evident; These results suggest that the Spring SAT/9 scores were not inflated due to exposure.
- No systematic bias was evident in either in scale scores or percentile rank across all linkages.

Concordance tables resulting from the linkages produced in this study are appropriate for interpretation at the level of the test scales and are not intended to predict individual student scores (Pommerich, Hanson, Harris, & Sconing, 2000). Although it is tempting to use the tables from this study to predict a student's scale score and/or percentile rank on SAT/9 given his or her scale score on TN, there are a number of reasons why this is not advisable. First, although SAT/9 and TN measure similar constructs—Reading, Language, and Mathematics—these tests are distinct measures built using different test specifications, calibration samples, and statistical models. Equating procedures, such as equipercentile linking, adjust for differences in difficulty but do not account for difference in content. The content difference between the two tests, represented by different test blueprints, could influence students' scores such that students may perform systematically better or worse on a particular test depending on local instruction or individual student strengths and weaknesses.

Second, although great care was taken to use a sample of students that represent the population of students in the state of Arizona, there is likely some degree of sampling error present in the results of the study. Third, this study represents a snapshot of the relationship between the two tests. The linking relationships based on these data are not expected to remain constant over time. Changes in student population or instruction decrease the generalizability of the study's results as time passes.

The concordance tables provided in Appendices C show how scores on TN correspond to scores on SAT/9 as well as how national percentile ranks from TN correspond to national percentile ranks from SAT/9. In other words, the tables show what scale score and percentile rank on SAT/9 represent a similar level of performance on TN (i.e., the TN scale score and TN percentile rank). For example, if a Grade 5 student received a scale score of 654 and a percentile rank of 52 on TN Reading in the Fall of 2004, this level of performance corresponded to a scale score of 656 and a percentile rank of 44 on SAT/9. This is not to say that this student received a score of 656 on SAT/9 but the within the sample of students participating in this study, the level

of ability necessary to received a score of 654 on TN was similar to the level of ability needed to receive a score of 656 on SAT/9.

Taken together, the results summarized above show a high level of continuity in the test results across all the linkages. Of course, differences in scale scores and percentile ranks were evident but none were unexpected given the differences in tests and norms groups. Results from this study suggest that the transition from SAT/9 to TN can be made without producing any serious, systematic discontinuities in norm referenced testing in Arizona.

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Table A 1
Before matching summary statistics
Grade 2 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	82573	5398	77175	76	74.21	23.269	-.149	-1.122	7	118
	scale score	82573	5398	77175	580	582.06	41.760	.275	-.554	434	759
	NP	82573	5398	77175	49	48.49	28.889	.044	-1.326	1	99
FS	raw score	2249	394	1855	49	46.66	13.925	-.487	-.731	8	70
	scale score	2249	394	1855	598	598.38	44.242	.052	-.314	484	749
	NP	2249	394	1855	52	50.60	28.329	-.124	-1.171	1	99
TN	raw score	2263	77	2186	20	18.78	4.745	-.974	.312	1	25
	scale score	2263	77	2186	616	615.21	45.487	-.638	2.912	423	722
	NP	2263	77	2186	51	51.06	29.702	.009	-1.223	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 2
Before matching summary statistics
Grade 2 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	82573	2319	80254	28	28.16	7.983	-.002	-.847	1	46
	scale score	82573	2319	80254	557	560.57	34.651	.571	.392	392	705
	NP	82573	2319	80254	35	42.06	30.417	.331	-1.267	1	99
FS	raw score	2249	190	2059	21	20.01	5.324	-.447	-.374	1	30
	scale score	2249	190	2059	597	596.63	36.112	.378	.369	470	714
	NP	2249	190	2059	48	47.55	28.934	.117	-1.237	1	99
TN	raw score	2263	80	2183	15	14.39	3.469	-.737	.163	1	20
	scale score	2263	80	2183	604	606.92	45.303	-.487	2.159	424	706
	NP	2263	80	2183	36	43.19	31.139	.392	-1.196	1	98

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 3
Before matching summary statistics
Grade 2 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	82573	3446	79127	54	51.09	13.786	-.604	-.432	2	74
	scale score	82573	3446	79127	579	577.75	42.812	.080	-.137	393	731
	NP	82573	3446	79127	57	53.43	30.724	-.138	-1.308	1	99
FS	raw score	2249	96	2153	39	37.48	8.566	-.893	.272	8	50
	scale score	2249	96	2153	588	591.07	40.885	.159	-.075	469	709
	NP	2249	96	2153	56	54.67	29.515	-.174	-1.253	1	99
TN	raw score	2263	80	2183	21	20.56	3.644	-1.014	1.556	1	26
	scale score	2263	80	2183	571	574.56	45.952	.892	3.099	347	720
	NP	2263	80	2183	36	40.99	27.750	.529	-.780	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 4
Before matching summary statistics
Grade 3 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	80433	3779	76654	54	52.67	17.375	-.228	-.985	4	84
	scale score	80433	3779	76654	609	611.22	44.502	.277	-.258	459	775
	NP	80433	3779	76654	44	46.46	28.925	.145	-1.213	1	99
FS	raw score	2335	184	2151	35	33.20	9.313	-.616	-.365	3	50
	scale score	2335	184	2151	623	620.49	42.100	-.086	-.094	469	767
	NP	2335	184	2151	42	43.50	28.123	.159	-1.144	1	99
TN	raw score	2397	70	2327	22	20.79	5.960	-.704	-.284	1	30
	scale score	2397	70	2327	628	626.30	43.704	-.563	2.435	427	750
	NP	2397	70	2327	48	49.12	29.432	.060	-1.268	1	99

SS: Spring SAT/9

FS: Fall SAT/9

TN: *TerraNova*

Table A 5
Before matching summary statistics
Grade 3 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	80433	2913	77520	29	28.93	11.494	.079	-1.065	0	54
	scale score	80433	2922	77511	586	587.76	40.120	.370	-.126	433	752
	NP	80433	2922	77511	53	51.69	29.074	-.014	-1.343	1	99
FS	raw score	2335	123	2212	19	17.93	6.112	-.244	-.856	1	30
	scale score	2335	123	2212	616	613.99	39.352	.222	-.040	470	745
	NP	2335	123	2212	45	45.57	28.311	.182	-1.118	1	99
TN	raw score	2397	72	2325	14	13.47	4.001	-.566	-.297	0	20
	scale score	2397	72	2325	625	623.82	45.888	-.698	2.654	455	730
	NP	2397	72	2325	42	44.59	29.411	.271	-1.133	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 6
Before matching summary statistics
Grade 3 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	80433	3541	76892	51	49.54	14.535	-.418	-.690	2	76
	scale score	80433	3541	76892	601	602.73	42.772	.164	-.161	425	767
	NP	80433	3541	76892	52	52.03	30.062	-.074	-1.285	1	99
FS	raw score	2335	105	2230	37	35.47	9.877	-.644	-.460	4	50
	scale score	2335	105	2230	613	617.09	47.478	.201	-.298	474	749
	NP	2335	105	2230	55	54.57	31.442	-.143	-1.363	1	99
TN	raw score	2397	76	2321	25	23.55	4.553	-1.115	1.459	2	30
	scale score	2397	76	2321	616	614.15	44.454	-.083	2.817	385	740
	NP	2397	76	2321	52	50.86	28.896	-.028	-1.174	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 7
Before matching summary statistics
Grade 4 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	79011	4424	74587	56	53.77	17.151	-.344	-.898	3	84
	scale score	79011	4424	74587	637	637.71	42.741	.187	-.300	477	799
	NP	79011	4424	74587	49	49.41	29.609	.025	-1.288	1	99
FS	raw score	2242	146	2096	36	34.37	9.970	-.648	-.437	6	50
	scale score	2242	146	2096	638	638.45	45.420	.026	-.219	515	773
	NP	2242	146	2096	37	42.51	30.285	.273	-1.195	1	99
TN	raw score	2286	39	2247	24	22.81	7.612	-.531	-.699	1	35
	scale score	2286	39	2247	636	631.84	52.117	-1.162	3.428	433	780
	NP	2286	39	2247	37	41.88	29.674	.329	-1.154	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 8
Before matching summary statistics
Grade 4 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	79011	2869	76142	32	30.81	10.628	-.150	-.945	0	54
	scale score	79011	2889	76122	608	606.50	35.234	.133	-.209	449	761
	NP	79011	2889	76122	48	47.13	26.867	.057	-1.214	1	99
FS	raw score	2242	128	2114	21	19.41	6.669	-.470	-.778	3	30
	scale score	2242	128	2114	636	633.90	46.341	.197	-.207	521	754
	NP	2242	128	2114	49	47.14	31.909	.076	-1.351	1	99
TN	raw score	2286	42	2244	15	14.90	5.671	-.190	-.914	0	25
	scale score	2286	42	2244	638	634.12	49.596	-.915	2.496	465	757
	NP	2286	42	2244	40	43.40	30.432	.281	-1.243	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 9
Before matching summary statistics
Grade 4 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	79011	2667	76344	54	51.46	15.129	-.458	-.692	2	78
	scale score	79011	2667	76344	631	630.25	40.609	.165	-.127	460	784
	NP	79011	2667	76344	56	53.33	29.646	-.125	-1.269	1	99
FS	raw score	2242	82	2160	37	35.13	9.450	-.704	-.311	2	50
	scale score	2242	82	2160	639	638.91	40.911	.050	-.043	478	767
	NP	2242	82	2160	50	50.12	30.615	-.055	-1.334	1	99
TN	raw score	2286	68	2218	24	21.83	7.244	-.695	-.408	1	32
	scale score	2286	68	2218	631	623.70	59.734	-.908	2.720	403	770
	NP	2286	68	2218	50	48.79	30.552	-.032	-1.238	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 10
Before matching summary statistics
Grade 5 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	77882	3537	74345	55	52.89	16.261	-.340	-.868	7	84
	scale score	77882	3537	74345	652	651.80	38.845	.123	-.310	530	816
	NP	77882	3537	74345	48	48.50	29.178	.048	-1.276	1	99
FS	raw score	2428	109	2319	33	32.23	8.854	-.478	-.425	7	49
	scale score	2428	109	2319	655	655.35	38.191	-.024	-.087	547	780
	NP	2428	109	2319	43	46.14	28.705	.138	-1.166	1	99
TN	raw score	2440	47	2393	21	19.78	7.422	-.345	-.985	2	32
	scale score	2440	47	2393	654	647.25	54.227	-1.112	2.263	475	790
	NP	2440	47	2393	52	50.97	30.329	-.153	-1.225	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 11
Before matching summary statistics
Grade 5 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	77882	2630	75252	35	33.04	10.431	-.384	-.761	0	54
	scale score	77882	2641	75241	620	617.18	35.944	.020	-.035	450	766
	NP	77882	2641	75241	47	45.53	27.706	.051	-1.180	1	99
FS	raw score	2428	426	2002	21	19.63	5.965	-.505	-.537	3	30
	scale score	2428	426	2002	651	648.48	39.237	.170	.030	539	765
	NP	2428	426	2002	59	53.42	29.335	-.153	-1.244	1	99
TN	raw score	2440	47	2393	18	17.05	6.424	-.269	-.977	0	28
	scale score	2440	47	2393	655	648.02	51.071	-.958	2.591	480	782
	NP	2440	47	2393	55	51.37	30.480	-.151	-1.239	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 12
Before matching summary statistics
Grade 5 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	77882	2306	75576	53	51.60	14.797	-.382	-.731	5	78
	scale score	77882	2306	75576	651	653.43	39.808	.324	.037	518	805
	NP	77882	2306	75576	56	54.30	30.126	-.121	-1.311	1	99
FS	raw score	2428	58	2370	36	33.94	9.960	-.593	-.552	3	50
	scale score	2428	58	2370	659	657.86	40.669	.109	-.052	521	788
	NP	2428	58	2370	58	54.12	30.088	-.205	-1.264	1	99
TN	raw score	2440	56	2384	24	22.18	6.646	-.736	-.243	2	32
	scale score	2440	56	2384	647	643.31	53.547	-.284	1.868	430	797
	NP	2440	56	2384	46	46.93	30.399	.061	-1.257	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 13
Before matching summary statistics
Grade 6 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	70358	2498	67860	53	52.03	15.589	-.276	-.863	5	84
	scale score	70358	2498	67860	662	663.33	35.789	.120	-.394	533	828
	NP	70358	2498	67860	49	50.26	28.693	.030	-1.244	1	99
FS	raw score	2294	126	2168	35	33.43	9.549	-.588	-.473	6	50
	scale score	2294	126	2168	670	669.92	41.562	.095	.162	553	808
	NP	2294	126	2168	46	47.52	30.149	.030	-1.276	1	99
TN	raw score	2296	63	2233	22	20.52	7.194	-.531	-.854	2	31
	scale score	2296	63	2233	660	653.73	53.658	-.768	2.251	486	800
	NP	2296	63	2233	49	47.86	29.070	-.004	-1.178	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 14
Before matching summary statistics
Grade 6 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	70358	1985	68373	34	32.77	9.733	-.301	-.735	0	54
	scale score	70358	1987	68371	630	628.70	35.325	.064	-.142	457	784
	NP	70358	1987	68371	44	45.10	29.285	.119	-1.274	1	99
FS	raw score	2294	405	1889	20	19.06	5.816	-.585	-.470	2	30
	scale score	2294	405	1889	657	655.07	37.332	-.150	-.007	530	781
	NP	2294	405	1889	53	51.29	30.249	-.158	-1.310	1	99
TN	raw score	2296	63	2233	20	18.65	6.438	-.425	-.821	0	29
	scale score	2296	63	2233	660	655.23	47.902	-.660	3.075	495	808
	NP	2296	63	2233	57	52.79	29.785	-.231	-1.199	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 15
Before matching summary statistics
Grade 6 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	70358	1558	68800	50	48.69	15.928	-.251	-.964	3	78
	scale score	70358	1558	68800	668	670.18	41.434	.269	-.288	522	831
	NP	70358	1558	68800	62	58.10	29.446	-.272	-1.248	1	99
FS	raw score	2294	74	2220	36	34.04	10.872	-.538	-.713	3	50
	scale score	2294	74	2220	676	677.94	48.767	.245	-.235	535	807
	NP	2294	74	2220	58	54.67	33.092	-.175	-1.381	1	99
TN	raw score	2296	69	2227	22	20.60	6.530	-.528	-.578	1	31
	scale score	2296	69	2227	671	666.71	50.838	-.550	1.977	477	820
	NP	2296	69	2227	57	53.48	30.695	-.235	-1.242	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 16
Before matching summary statistics
Grade 7 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	76135	2418	73717	59	55.77	15.709	-.541	-.606	7	84
	scale score	76135	2418	73717	681	678.10	39.464	-.051	-.300	545	837
	NP	76135	2418	73717	50	48.83	29.236	.015	-1.245	1	99
FS	raw score	2460	95	2365	36	34.28	9.139	-.652	-.250	7	50
	scale score	2460	95	2365	681	679.09	41.568	-.003	-.054	562	818
	NP	2460	95	2365	42	43.97	29.342	.258	-1.129	1	99
TN	raw score	2444	65	2379	22	21.27	7.150	-.376	-.835	2	33
	scale score	2444	65	2379	664	660.05	51.904	-.576	1.809	498	810
	NP	2444	65	2379	45	45.71	28.867	.074	-1.159	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 17
Before matching summary statistics
Grade 7 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	76135	1985	74150	37	35.00	10.688	-.474	-.678	0	54
	scale score	76135	1991	74144	643	641.45	40.373	.109	-.004	462	784
	NP	76135	1991	74144	55	51.95	31.766	-.139	-1.379	1	99
FS	raw score	2460	360	2100	20	19.16	5.733	-.622	-.314	1	30
	scale score	2460	360	2100	666	665.19	37.052	-.133	.171	514	791
	NP	2460	360	2100	54	52.70	28.378	-.221	-1.073	1	99
TN	raw score	2444	66	2378	18	17.30	6.117	-.391	-.848	2	27
	scale score	2444	66	2378	665	658.53	53.646	-.550	2.319	502	814
	NP	2444	66	2378	48	46.41	29.089	.010	-1.183	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 18
Before matching summary statistics
Grade 7 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	76135	1809	74326	43	44.30	16.524	.141	-1.011	3	80
	scale score	76135	1809	74326	674	679.72	40.072	.628	.242	546	854
	NP	76135	1809	74326	54	54.10	29.601	-.031	-1.328	1	99
FS	raw score	2460	92	2368	30	29.53	11.209	-.078	-1.103	3	50
	scale score	2460	92	2368	682	685.13	43.960	.481	-.077	566	831
	NP	2460	92	2368	56	53.48	31.421	-.071	-1.399	1	99
TN	raw score	2444	70	2374	23	21.18	7.342	-.511	-.808	1	32
	scale score	2444	70	2374	679	674.10	56.530	-.246	2.349	487	850
	NP	2444	70	2374	47	46.91	29.987	.062	-1.255	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 19
Before matching summary statistics
Grade 8 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	74223	2049	72174	59	55.79	14.925	-.603	-.442	7	84
	scale score	74223	2049	72174	694	690.71	35.529	-.086	-.195	566	849
	NP	74223	2049	72174	53	50.34	27.341	-.083	-1.158	1	99
FS	raw score	2143	62	2081	36	34.53	8.930	-.635	-.365	7	50
	scale score	2143	62	2081	696	696.24	38.702	.022	-.087	584	830
	NP	2143	62	2081	50	50.72	29.350	-.046	-1.275	1	99
TN	raw score	2158	29	2129	25	23.60	7.152	-.701	-.249	1	34
	scale score	2158	29	2129	681	679.81	48.224	-.402	2.292	475	820
	NP	2158	29	2129	53	52.23	28.813	-.093	-1.157	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 20
Before matching summary statistics
Grade 8 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	74223	1777	72446	35	33.94	10.454	-.365	-.774	0	54
	scale score	74223	1782	72441	647	647.78	37.965	.149	-.079	475	794
	NP	74223	1782	72441	44	47.40	31.058	.076	-1.359	1	99
FS	raw score	2143	156	1987	20	19.40	5.831	-.505	-.594	1	30
	scale score	2143	156	1987	671	672.35	38.487	.056	-.062	520	795
	NP	2143	156	1987	56	54.72	29.166	-.242	-1.160	1	99
TN	raw score	2158	31	2127	17	16.79	5.330	-.338	-.642	2	26
	scale score	2158	31	2127	672	671.79	43.823	-.035	3.048	480	819
	NP	2158	31	2127	49	49.35	28.607	.042	-1.239	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 21
Before matching summary statistics
Grade 8 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	74223	1608	72615	44	44.56	16.863	.148	-.988	3	82
	scale score	74223	1608	72615	685	688.38	38.063	.603	.305	559	861
	NP	74223	1608	72615	56	54.17	28.230	-.039	-1.285	1	99
FS	raw score	2143	248	1895	27	27.68	10.797	.099	-1.038	4	50
	scale score	2143	248	1895	688	693.52	42.568	.669	.494	589	849
	NP	2143	248	1895	54	53.31	30.820	-.053	-1.395	1	99
TN	raw score	2158	29	2129	21	20.72	5.974	-.403	-.490	1	31
	scale score	2158	29	2129	699	698.74	50.460	-.221	2.392	502	872
	NP	2158	29	2129	58	56.54	27.524	-.238	-1.052	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 22
Before matching summary statistics
Grade 9 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	69440	3564	65876	54	51.92	15.457	-.331	-.765	8	84
	scale score	69440	3564	65876	690	689.04	34.748	.102	-.181	580	853
	NP	69440	3564	65876	39	41.23	26.459	.307	-1.004	1	99
FS	raw score	2074	62	2012	34	32.79	8.226	-.547	-.160	7	50
	scale score	2074	62	2012	693	691.38	36.741	-.007	.261	579	842
	NP	2074	62	2012	38	40.77	27.347	.345	-.977	1	99
TN	raw score	2049	5	2044	23	22.22	7.166	-.538	-.583	2	34
	scale score	2049	5	2044	682	677.28	46.570	-.991	3.073	507	833
	NP	2049	5	2044	48	48.05	27.726	.022	-1.147	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 23
Before matching summary statistics
Grade 9 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	69440	2424	67016	32	31.42	10.368	-.144	-.896	0	54
	scale score	69440	2426	67014	647	647.45	35.457	.214	-.100	485	802
	NP	69440	2426	67014	40	41.65	27.220	.232	-1.108	1	99
FS	raw score	2074	68	2006	17	16.89	5.448	-.130	-.643	2	30
	scale score	2074	68	2006	668	669.35	33.339	.209	.376	558	807
	NP	2074	68	2006	38	41.60	26.445	.327	-.936	1	99
TN	raw score	2049	6	2043	16	15.57	5.871	-.274	-.898	1	26
	scale score	2049	6	2043	673	670.12	43.517	-.446	3.073	530	829
	NP	2049	6	2043	44	45.33	26.192	.151	-.917	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 24
Before matching summary statistics
Grade 9 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS	raw score	69440	2214	67226	24	24.93	9.509	.191	-.859	0	48
	scale score	69440	2215	67225	694	698.17	36.238	.549	.489	553	860
	NP	69440	2215	67225	58	56.60	27.724	-.145	-1.221	1	99
FS	raw score	2074	24	2050	15	15.19	5.961	.248	-.628	2	30
	scale score	2074	24	2050	695	697.61	37.101	.679	1.183	598	844
	NP	2074	24	2050	59	53.56	29.982	-.160	-1.277	1	99
TN	raw score	2049	67	1982	16	15.34	5.166	-.314	-.676	2	25
	scale score	2049	67	1982	697	693.40	53.079	-.335	2.452	513	877
	NP	2049	67	1982	48	48.09	27.468	.089	-1.064	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Fall SAT/9 and Fall TN matching procedure

First, a Fall SAT/9 (FS) data set and a corresponding Fall TN data set for only one grade were separated from the large data sets. They were both sorted by student number, last name, and first name. The FS data set was treated as the working file, and the ‘add cases’ function was used to add cases from the TN data set. A ‘source’ variable labeled ‘TN’ was created with a value of ‘1’ if the case came from the TN data set, and ‘0’ if it came from the FS data set.

The resulting data set included all cases and all variables from that particular grade and content, so the total N was the number of TN cases plus the total number of FS cases. Next, the SPSS data step ‘identify duplicate cases’ was used to match cases by student number, last name, and first name, and place them together in the data set. This step created a variable (MatchSequence) with a value of ‘0’ if no duplicate case was found, ‘1’ if the case was the first of a matching set, and ‘2’ if the case was the second of a matching set. Also produced was an automatic frequency output for the MatchSequence variable, or a frequency of matches (see below for an example).

Statistics (Grade 3, initial FS-TN matching)

Sequential count of matching cases

N	Valid	4512
	Missing	0

Sequential count of matching cases

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1664	36.9	36.9	36.9
1	1424	31.6	31.6	68.4
2	1424	31.6	31.6	100.0
Total	4512	100.0	100.0	

After this step, the data set looked like this:

Match Sequence	TN	Last Name	First Name	Student Number	Birth Date	School Code	Grade	Fall SS Reading	TN SS Reading
1	0	CHAIMS	KAYE	313203	082596	5958	3	0	.
2	1	CHAIMS	KAYE	313203	082596	5958	3	.	570
1	0	COUREY	SANJAY	713374	111195	6084	3	617	.
2	1	COUREY	SANJAY	713374	111195	4467	3	.	630
1	0	KAMPF	AMY	721999	101095	5011	3	642	.
2	1	KAMPF	AMY	721999	101095	4237	3	.	722

The matched cases were removed and placed in a separate file, to allow for easier manipulation of the remaining cases. The MatchSequence variable was then deleted, and the ‘identify duplicate cases’ step was repeated, but this time, using only student number and last name. As before, this procedure automatically sorted the data, placing matched cases together at the beginning of the data set, and unmatched cases at the end. The data set was then reviewed from the top, where all cases matched by student number and last name. This identified any matched cases where one or both cases had errors in the first name. An example is shown below.

Match Sequence	TN	Last Name	First Name	Student Number	Birth Date	School Code	Grade
1	0	MIRRAN	FRANCIS O	281910	082896	5958	3
2	1	MIRRAN	FRANCISC	281910	082896	5958	3
1	0	DIAMOND	BREND	265284	101295	5958	3
2	1	DIAMOND	BRENDA	265284	101295	5958	3

Again, these new matched cases were placed in the file with the other matched cases. Then the MatchSequence variable was deleted, and the ‘identify duplicate cases’ procedure was run again, this time using student number and first name, so that any errors in the last name could be identified (see below).

Match Sequence	TN	Last Name	First Name	Student Number	Birth Date	School Code	Grade
1	0	RAMIRRO	GAVREN	2653125	022396	5802	3
2	1	RAMIRRO	GAVREN	2653125	022396	5802	3
1	0	GORMAN	JAZMINE	3399202	122595	5206	3
2	1	GORMAN SWAI	JAZMINE	3399202	122595	4256	3

Finally, the whole process would be run again, but this time the MatchSequence variable would be created for first and last name. This would identify matched cases where one or both cases had errors in the student number. Care was taken to make sure the birthday also matched if a first and last name matched but the student number was missing or non-matching (see below).

Match Sequence	TN	Last Name	First Name	Student Number	Birth Date	School Code	Grade
1	1	AQUERO	HELMUT	10801613	023096	4378	3
2	0	AQUERO	HELMUT	1080161300	023096	5584	3
1	0	ADDISON	BRADY	.	121595	5025	3
2	1	ADDISON	BRADY	4762234	121595	4235	3

When all matched cases were removed, the data was then sorted by last name and first name. This would allow examination of unmatched cases in alphabetical order by last name. Often, it was easy to identify matching cases ‘by eye,’ such as in the following data set example. This would identify matched cases where one or both cases had errors in the first *and* last name.

Match Sequence	TN	Last Name	First Name	Student Number	Birth Date	School Code	Grade	Fall SS Reading	TN SS Reading
0	0	ABOU ZAID	GABRIELLA	10643407	103095	5802	3	686	.
0	1	ABOUZAID	GABRIELL	10643407	103095	5802	3	.	649
0	1	SPANKM A-	ZEKE	7774158	080995	4989	3	0	1
0	0	SPANKMAN	LUKE	.	0809	4989	3	0	0
0	1	SPANKMAN	LUKE	7775245	080995	4989	3	0	1
0	0	SPANKMAN	ZEKE	7774158	080995	4989	3	0	0

After each time the data was examined, the data would be sorted again, using every possible combination of variables:

- First name, and last name
- Birthday, and last name
- Birthday, and first name
- Student number
- Birthday

(The last two combinations would identify cases where last name and first name were reversed in one of the two cases, as follows:)

Match Sequence	TN	Last Name	First Name	Student Number	Birth Date	School Code	Grade	Fall SS Reading	TN SS Reading
0	1	CASHEROS	NA -SHA	.	010596	4378	3	.	632
0	0	CASHEROS	NATASHA	1050163200	010596	5584	3	659	.
0	0	MAZAPATIA	JOSY	303666	092395	5958	3	523	.
0	1	PATIA	JHOSELIN	303666	092395	5958	3	.	449
0	1	VIOLAT	RIZZO	2810799	100096	5320	3	.	591
0	0	RIZZO	VIOLET	2810799	100196	5320	3	576	.

In some cases, the same school code was used for FS and TN matching cases, in which case, school code was added to the list of variables used for matching. (An examination of already matched cases would identify which codes could be used.)

In some instances the same student had two cases for a single test, such as if a student had to take the test over two time periods. Therefore, when every possible matched case had been identified, a check was done to ensure that no matching pairs had the same value for the source variable. In other words, every matched pair had one case from the TN data set and one case from the FS data set. Finally, each matched pair was merged together into a single case with data from both tests. This series of procedures generally yielded a matching rate of between 95 and 98 percent. It should be noted that the student names used in these examples are fictitious.

Table A 25
After matching summary statistics; Grade 2 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2035	94	1941	78	76.10	23.094	-.249	-1.054	18	116
	scale score	2035	94	1941	583	585.37	42.005	.197	-.614	479	712
	NP	2035	94	1941	52	50.80	28.826	-.064	-1.290	1	99
SS with TN	raw score	2040	95	1945	78	75.96	23.161	-.245	-1.058	18	116
	scale score	2040	95	1945	583	585.15	42.133	.204	-.609	479	712
	NP	2040	95	1945	52	50.65	28.877	-.060	-1.288	1	99
TN with SS	raw score	2040	65	1975	20	18.81	4.698	-.951	.241	2	25
	scale score	2040	65	1975	616	615.82	44.583	-.530	2.669	423	722
	NP	2040	65	1975	51	51.26	29.685	.010	-1.230	1	99
TN with FS	raw score	2189	41	2148	20	18.79	4.707	-.961	.281	1	25
	scale score	2189	41	2148	616	615.30	45.069	-.600	2.883	423	722
	NP	2189	41	2148	51	51.02	29.608	.014	-1.220	1	99
FS with SS	raw score	2035	347	1688	49	46.76	13.880	-.480	-.740	8	69
	scale score	2035	347	1688	598	598.80	44.109	.056	-.352	484	726
	NP	2035	347	1688	52	50.81	28.298	-.122	-1.169	1	99
FS with TN	raw score	2189	374	1815	49	46.68	13.919	-.492	-.715	8	70
	scale score	2189	374	1815	598	598.46	44.228	.053	-.294	484	749
	NP	2189	374	1815	52	50.66	28.284	-.125	-1.161	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: TerraNova

Table A 26
After matching summary statistics; Grade 2 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2035	32	2003	29	28.84	8.099	-.027	-.908	7	46
	scale score	2035	32	2003	561	563.83	36.226	.639	.494	469	705
	NP	2035	32	2003	39	44.55	31.159	.236	-1.359	1	99
SS with TN	raw score	2040	29	2011	29	28.78	8.127	-.022	-.915	7	46
	scale score	2040	29	2011	561	563.59	36.306	.639	.486	469	705
	NP	2040	29	2011	39	44.35	31.210	.243	-1.360	1	99
TN with SS	raw score	2040	68	1972	15	14.44	3.436	-.724	.125	2	20
	scale score	2040	68	1972	605	607.70	44.370	-.353	1.839	424	706
	NP	2040	68	1972	37	43.49	31.120	.382	-1.203	1	98
TN with FS	raw score	2189	43	2146	15	14.40	3.452	-.729	.153	1	20
	scale score	2189	43	2146	604	607.10	44.990	-.456	2.097	424	706
	NP	2189	43	2146	36	43.24	31.139	.389	-1.203	1	98
FS with SS	raw score	2035	176	1859	21	20.01	5.322	-.449	-.354	1	30
	scale score	2035	176	1859	597	596.65	36.062	.373	.364	470	714
	NP	2035	176	1859	48	47.56	28.913	.120	-1.236	1	99
FS with TN	raw score	2189	174	2015	21	20.01	5.334	-.451	-.370	1	30
	scale score	2189	174	2015	597	596.63	36.142	.373	.369	470	714
	NP	2189	174	2015	48	47.57	28.944	.115	-1.235	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 27
After matching summary statistics; Grade 2 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2035	27	2008	53	51.27	13.732	-.603	-.296	2	74
	scale score	2035	27	2008	576	578.46	43.611	.053	.279	393	731
	NP	2035	27	2008	54	53.67	30.724	-.117	-1.313	1	99
SS with TN	raw score	2040	27	2013	54	51.27	13.713	-.616	-.268	2	74
	scale score	2040	27	2013	579	578.38	43.469	.043	.307	393	731
	NP	2040	27	2013	57	53.68	30.635	-.122	-1.305	1	99
TN with SS	raw score	2040	67	1973	21	20.62	3.570	-.932	1.143	3	26
	scale score	2040	67	1973	571	575.33	45.351	1.057	2.827	403	720
	NP	2040	67	1973	36	41.32	27.684	.519	-.788	1	99
TN with FS	raw score	2189	45	2144	21	20.59	3.619	-.987	1.465	1	26
	scale score	2189	45	2144	571	574.83	46.002	.913	3.097	347	720
	NP	2189	45	2144	36	41.11	27.789	.525	-.786	1	99
FS with SS	raw score	2035	87	1948	39	37.58	8.491	-.905	.299	9	50
	scale score	2035	87	1948	593	591.50	40.562	.161	-.054	475	709
	NP	2035	87	1948	60	55.02	29.333	-.190	-1.237	1	99
FS with TN	raw score	2189	84	2105	39	37.47	8.537	-.888	.270	8	50
	scale score	2189	84	2105	588	590.97	40.667	.162	-.087	469	709
	NP	2189	84	2105	56	54.60	29.453	-.167	-1.254	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: TerraNova

Table A 28
After matching summary statistics; Grade 3 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2059	47	2012	54	53.41	16.708	-.224	-.941	14	84
	scale score	2059	47	2012	609	612.86	42.960	.325	-.158	515	775
	NP	2059	47	2012	44	47.35	28.253	.140	-1.178	1	99
SS with TN	raw score	2146	49	2097	54	53.71	16.667	-.245	-.932	14	84
	scale score	2146	49	2097	609	613.56	42.867	.299	-.194	515	775
	NP	2146	49	2097	44	47.85	28.250	.116	-1.189	1	99
TN with SS	raw score	2146	53	2093	22	21.04	5.741	-.739	-.128	1	30
	scale score	2146	53	2093	629	627.91	42.207	-.575	2.921	427	750
	NP	2146	53	2093	49	50.04	28.890	.036	-1.243	1	99
TN with FS	raw score	2278	43	2235	22	20.70	5.979	-.678	-.328	1	30
	scale score	2278	43	2235	627	625.71	43.958	-.548	2.443	427	750
	NP	2278	43	2235	47	48.65	29.474	.084	-1.269	1	99
FS with SS	raw score	2059	148	1911	35	33.62	8.931	-.605	-.317	7	50
	scale score	2059	148	1911	623	622.24	40.683	-.030	-.083	505	767
	NP	2059	148	1911	42	44.39	27.740	.147	-1.128	1	99
FS with TN	raw score	2278	165	2113	35	33.24	9.307	-.620	-.355	3	50
	scale score	2278	165	2113	623	620.70	42.114	-.088	-.089	469	767
	NP	2278	165	2113	42	43.64	28.140	.153	-1.147	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 29
After matching summary statistics; Grade 3 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2059	32	2027	29	29.48	11.441	.022	-1.091	3	53
	scale score	2059	32	2027	586	589.51	39.681	.284	-.381	474	729
	NP	2059	32	2027	53	53.08	28.952	-.068	-1.344	1	99
SS with TN	raw score	2146	33	2113	29	29.58	11.408	.005	-1.083	3	53
	scale score	2146	33	2113	586	589.87	39.610	.284	-.343	474	729
	NP	2146	33	2113	53	53.37	28.874	-.091	-1.335	1	99
TN with SS	raw score	2146	55	2091	14	13.64	3.862	-.579	-.192	1	20
	scale score	2146	55	2091	626	625.83	44.133	-.638	2.928	455	730
	NP	2146	55	2091	43	45.56	29.034	.251	-1.121	1	99
TN with FS	raw score	2278	46	2232	14	13.42	3.999	-.539	-.355	1	20
	scale score	2278	45	2233	624	623.20	45.868	-.701	2.670	455	730
	NP	2278	45	2233	41	44.13	29.339	.290	-1.118	1	99
FS with SS	raw score	2059	96	1963	19	18.24	5.955	-.273	-.766	1	30
	scale score	2059	96	1963	616	615.89	38.691	.239	.073	470	745
	NP	2059	96	1963	45	46.82	27.899	.154	-1.090	1	99
FS with TN	raw score	2278	103	2175	19	17.99	6.102	-.253	-.843	1	30
	scale score	2278	103	2175	616	614.36	39.349	.218	-.033	470	745
	NP	2278	103	2175	45	45.83	28.303	.173	-1.119	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 30
After matching summary statistics; Grade 3 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2059	17	2042	53	50.45	14.229	-.425	-.753	5	75
	scale score	2059	17	2042	606	605.35	42.054	.132	-.336	460	744
	NP	2059	17	2042	57	53.82	30.040	-.137	-1.303	1	99
SS with TN	raw score	2146	19	2127	53	50.60	14.113	-.438	-.716	5	75
	scale score	2146	19	2127	606	605.69	41.736	.124	-.321	460	744
	NP	2146	19	2127	57	54.09	29.848	-.147	-1.286	1	99
TN with SS	raw score	2146	61	2085	25	23.73	4.357	-1.133	1.672	2	30
	scale score	2146	61	2085	616	615.76	42.777	.125	2.593	385	740
	NP	2146	61	2085	52	51.70	28.358	-.041	-1.143	1	99
TN with FS	raw score	2278	52	2226	24	23.51	4.550	-1.100	1.425	2	30
	scale score	2278	52	2226	615	613.80	44.416	-.080	2.864	385	740
	NP	2278	52	2226	51	50.56	28.871	-.012	-1.173	1	99
FS with SS	raw score	2059	83	1976	38	35.90	9.592	-.663	-.404	4	50
	scale score	2059	83	1976	617	618.87	46.724	.207	-.270	474	749
	NP	2059	83	1976	58	55.74	31.063	-.180	-1.345	1	99
FS with TN	raw score	2278	88	2190	37	35.56	9.842	-.651	-.449	4	50
	scale score	2278	88	2190	617	617.55	47.453	.201	-.302	474	749
	NP	2278	88	2190	58	54.85	31.412	-.153	-1.360	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 31
After matching summary statistics; Grade 4 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2045	98	1947	57	54.45	16.634	-.389	-.814	13	84
	scale score	2045	98	1947	639	639.06	41.367	.154	-.262	539	799
	NP	2045	98	1947	51	50.41	28.981	-.019	-1.266	1	99
SS with TN	raw score	2076	103	1973	57	54.54	16.657	-.406	-.810	13	84
	scale score	2076	103	1973	639	639.23	41.323	.125	-.303	539	799
	NP	2076	103	1973	51	50.60	29.001	-.036	-1.267	1	99
TN with SS	raw score	2076	36	2040	25	23.05	7.440	-.532	-.687	2	35
	scale score	2076	36	2040	637	634.03	49.515	-1.059	3.589	433	780
	NP	2076	36	2040	38	42.65	29.522	.307	-1.168	1	99
TN with FS	raw score	2204	25	2179	25	23.08	7.463	-.577	-.576	1	35
	scale score	2204	25	2179	637	632.84	51.636	-1.156	3.513	433	780
	NP	2204	25	2179	38	42.49	29.695	.298	-1.171	1	99
FS with SS	raw score	2045	122	1923	36	34.64	9.787	-.666	-.371	6	50
	scale score	2045	122	1923	638	639.55	44.888	.040	-.165	515	773
	NP	2045	122	1923	37	43.09	30.125	.257	-1.191	1	99
FS with TN	raw score	2204	139	2065	36	34.32	9.968	-.642	-.447	6	50
	scale score	2204	139	2065	638	638.17	45.312	.025	-.220	515	773
	NP	2204	139	2065	37	42.33	30.241	.278	-1.193	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 32
After matching summary statistics; Grade 4 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2045	44	2001	32	31.27	10.295	-.227	-.907	4	53
	scale score	2045	44	2001	608	607.75	33.830	.089	-.309	500	739
	NP	2045	44	2001	48	48.19	26.216	-.031	-1.178	1	99
SS with TN	raw score	2076	45	2031	33	31.34	10.329	-.238	-.892	4	53
	scale score	2076	45	2031	611	608.00	34.024	.072	-.288	500	739
	NP	2076	45	2031	51	48.41	26.287	-.040	-1.178	1	99
TN with SS	raw score	2076	38	2038	16	15.11	5.570	-.200	-.926	0	25
	scale score	2076	38	2038	639	636.15	47.556	-.850	2.597	465	757
	NP	2076	38	2038	41	44.34	30.275	.249	-1.259	1	99
TN with FS	raw score	2204	32	2172	16	15.08	5.608	-.215	-.908	1	25
	scale score	2204	28	2176	639	634.89	49.612	-.937	2.541	465	757
	NP	2204	28	2176	41	44.05	30.438	.243	-1.256	1	99
FS with SS	raw score	2045	108	1937	21	19.61	6.595	-.506	-.715	3	30
	scale score	2045	108	1937	636	635.16	46.033	.180	-.184	521	754
	NP	2045	108	1937	49	48.03	31.775	.039	-1.349	1	99
FS with TN	raw score	2204	116	2088	21	19.38	6.677	-.466	-.784	3	30
	scale score	2204	116	2088	636	633.71	46.342	.196	-.213	521	754
	NP	2204	116	2088	49	47.02	31.923	.082	-1.351	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 33
After matching summary statistics; Grade 4 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2045	25	2020	54	52.16	14.513	-.494	-.559	7	78
	scale score	2045	25	2020	631	631.78	39.347	.200	.104	508	784
	NP	2045	25	2020	56	54.46	28.774	-.164	-1.201	1	99
SS with TN	raw score	2076	24	2052	54	52.22	14.551	-.497	-.572	7	78
	scale score	2076	24	2052	631	631.98	39.432	.189	.060	508	784
	NP	2076	24	2052	56	54.61	28.865	-.171	-1.210	1	99
TN with SS	raw score	2076	63	2013	24	22.04	7.166	-.750	-.293	2	32
	scale score	2076	63	2013	632	625.13	59.333	-.959	2.922	403	770
	NP	2076	63	2013	51	49.71	30.317	-.070	-1.215	1	99
TN with FS	raw score	2204	53	2151	24	22.16	6.955	-.700	-.331	1	32
	scale score	2204	53	2151	632	626.32	57.456	-.912	3.266	403	770
	NP	2204	53	2151	51	49.83	30.092	-.053	-1.215	1	99
FS with SS	raw score	2045	69	1976	38	35.55	9.192	-.724	-.273	7	50
	scale score	2045	69	1976	643	640.60	40.188	.082	-.071	528	767
	NP	2045	69	1976	55	51.29	30.319	-.099	-1.311	1	99
FS with TN	raw score	2204	75	2129	37	35.13	9.424	-.692	-.348	7	50
	scale score	2204	75	2129	639	638.94	40.772	.075	-.112	528	767
	NP	2204	75	2129	50	50.11	30.615	-.052	-1.338	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 34
After matching summary statistics; Grade 5 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2225	67	2158	56	53.92	15.474	-.436	-.662	10	84
	scale score	2225	67	2158	654	653.79	36.919	.049	-.113	546	816
	NP	2225	67	2158	50	50.10	28.125	-.027	-1.217	1	99
SS with TN	raw score	2222	66	2156	56	53.92	15.537	-.424	-.695	10	84
	scale score	2222	66	2156	654	653.85	37.100	.056	-.150	546	816
	NP	2222	66	2156	50	50.13	28.274	-.024	-1.233	1	99
TN with SS	raw score	2222	36	2186	21	20.13	7.287	-.388	-.921	2	32
	scale score	2222	36	2186	657	649.91	52.394	-1.118	2.549	475	790
	NP	2222	36	2186	56	52.38	29.930	-.202	-1.179	1	99
TN with FS	raw score	2383	34	2349	21	19.86	7.381	-.356	-.965	2	32
	scale score	2383	34	2349	655	647.84	53.628	-1.121	2.338	475	790
	NP	2383	34	2349	54	51.27	30.199	-.165	-1.212	1	99
FS with SS	raw score	2225	94	2131	34	32.68	8.564	-.500	-.334	7	49
	scale score	2225	94	2131	659	657.18	37.175	-.011	-.004	547	780
	NP	2225	94	2131	47	47.37	28.284	.100	-1.150	1	99
FS with TN	raw score	2383	102	2281	33	32.29	8.831	-.484	-.410	7	49
	scale score	2383	102	2281	655	655.59	38.123	-.027	-.075	547	780
	NP	2383	102	2281	43	46.31	28.673	.131	-1.165	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 35
After matching summary statistics; Grade 5 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2225	39	2186	36	33.93	9.724	-.529	-.448	0	53
	scale score	2225	40	2185	623	619.72	33.149	-.099	.002	518	743
	NP	2225	40	2185	50	47.57	26.219	-.064	-1.073	1	99
SS with TN	raw score	2222	42	2180	36	33.97	9.734	-.542	-.423	0	53
	scale score	2222	43	2179	623	619.83	33.199	-.114	.020	518	743
	NP	2222	43	2179	50	47.69	26.215	-.071	-1.070	1	99
TN with SS	raw score	2222	36	2186	18	17.34	6.332	-.323	-.916	0	28
	scale score	2222	36	2186	656	650.32	49.482	-.971	2.833	480	782
	NP	2222	36	2186	56	52.82	30.096	-.208	-1.191	1	99
TN with FS	raw score	2383	35	2348	18	17.13	6.389	-.276	-.972	1	28
	scale score	2383	34	2349	655	648.62	50.707	-.948	2.635	480	782
	NP	2383	34	2349	55	51.71	30.379	-.164	-1.225	1	99
FS with SS	raw score	2225	376	1849	21	19.91	5.829	-.540	-.453	3	30
	scale score	2225	376	1849	651	650.18	38.656	.166	.074	539	765
	NP	2225	376	1849	59	54.72	28.958	-.201	-1.212	1	99
FS with TN	raw score	2383	413	1970	21	19.68	5.938	-.514	-.513	3	30
	scale score	2383	413	1970	651	648.78	39.093	.161	.029	539	765
	NP	2383	413	1970	59	53.66	29.256	-.160	-1.237	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 36
After matching summary statistics; Grade 5 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2225	23	2202	54	52.22	13.824	-.412	-.603	12	78
	scale score	2225	23	2202	653	654.31	37.085	.360	.328	554	805
	NP	2225	23	2202	58	55.32	28.679	-.166	-1.225	1	99
SS with TN	raw score	2222	24	2198	54	52.28	13.849	-.423	-.589	12	78
	scale score	2222	24	2198	653	654.47	37.172	.348	.316	554	805
	NP	2222	24	2198	58	55.46	28.700	-.174	-1.220	1	99
TN with SS	raw score	2222	45	2177	24	22.50	6.423	-.771	-.118	2	32
	scale score	2222	45	2177	649	646.07	50.849	-.071	1.637	430	797
	NP	2222	45	2177	48	48.12	29.982	.026	-1.233	1	99
TN with FS	raw score	2383	43	2340	24	22.23	6.597	-.735	-.236	2	32
	scale score	2383	43	2340	647	643.89	52.868	-.207	1.731	430	797
	NP	2383	43	2340	46	47.12	30.346	.059	-1.253	1	99
FS with SS	raw score	2225	44	2181	37	34.51	9.636	-.629	-.461	3	50
	scale score	2225	44	2181	662	660.01	39.821	.126	-.016	521	788
	NP	2225	44	2181	61	55.68	29.554	-.259	-1.209	1	99
FS with TN	raw score	2383	52	2331	36	34.01	9.930	-.595	-.548	3	50
	scale score	2383	52	2331	659	658.12	40.596	.108	-.054	521	788
	NP	2383	52	2331	58	54.30	30.061	-.211	-1.262	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 37
After matching summary statistics; Grade 6 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2038	60	1978	57	54.78	14.679	-.487	-.585	13	83
	scale score	2038	60	1978	670	669.31	34.189	-.004	-.242	573	806
	NP	2038	60	1978	57	55.26	27.571	-.206	-1.120	1	99
SS with TN	raw score	2070	59	2011	57	54.56	14.783	-.469	-.620	13	83
	scale score	2070	59	2011	670	668.86	34.390	.004	-.265	573	806
	NP	2070	59	2011	57	54.86	27.723	-.188	-1.140	1	99
TN with SS	raw score	2070	45	2025	23	20.93	6.963	-.583	-.739	2	31
	scale score	2070	45	2025	662	656.90	51.199	-.709	2.619	486	800
	NP	2070	45	2025	51	49.34	28.546	-.046	-1.141	1	99
TN with FS	raw score	2237	44	2193	22	20.57	7.183	-.540	-.839	2	31
	scale score	2237	44	2193	660	654.21	53.333	-.748	2.275	486	800
	NP	2237	44	2193	49	48.06	29.050	-.011	-1.175	1	99
FS with SS	raw score	2038	99	1939	36	34.24	8.976	-.608	-.361	6	50
	scale score	2038	99	1939	675	673.11	39.750	.161	.319	553	808
	NP	2038	99	1939	51	49.59	29.460	-.031	-1.247	1	99
FS with TN	raw score	2237	114	2123	36	33.56	9.516	-.600	-.455	6	50
	scale score	2237	114	2123	675	670.49	41.526	.092	.168	553	808
	NP	2237	114	2123	50	47.94	30.144	.012	-1.274	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 38
After matching summary statistics; Grade 6 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2038	49	1989	36	34.63	9.077	-.552	-.375	7	53
	scale score	2038	49	1989	637	635.06	33.173	-.114	-.094	532	761
	NP	2038	49	1989	52	50.70	28.121	-.160	-1.171	1	99
SS with TN	raw score	2070	49	2021	36	34.52	9.127	-.541	-.401	7	53
	scale score	2070	49	2021	637	634.67	33.318	-.110	-.113	532	761
	NP	2070	49	2021	52	50.37	28.212	-.146	-1.182	1	99
TN with SS	raw score	2070	45	2025	20	19.03	6.261	-.488	-.680	0	29
	scale score	2070	45	2025	662	657.98	46.357	-.617	3.576	495	808
	NP	2070	45	2025	59	54.51	29.068	-.293	-1.119	1	99
TN with FS	raw score	2237	45	2192	20	18.71	6.414	-.427	-.825	1	29
	scale score	2237	44	2193	660	655.66	47.676	-.635	3.086	495	808
	NP	2237	44	2193	57	53.02	29.753	-.239	-1.192	1	99
FS with SS	raw score	2038	341	1697	21	19.45	5.580	-.635	-.324	2	30
	scale score	2038	341	1697	663	657.39	36.053	-.138	.096	530	781
	NP	2038	341	1697	61	53.09	29.562	-.232	-1.235	1	99
FS with TN	raw score	2237	385	1852	20	19.14	5.785	-.596	-.449	2	30
	scale score	2237	385	1852	657	655.53	37.171	-.145	-.011	530	781
	NP	2237	385	1852	53	51.64	30.166	-.174	-1.298	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 39
After matching summary statistics; Grade 6 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2038	34	2004	54	51.80	14.897	-.472	-.636	13	78
	scale score	2038	34	2004	677	677.81	39.844	.163	-.163	582	831
	NP	2038	34	2004	70	63.90	27.536	-.548	-.876	3	99
SS with TN	raw score	2070	37	2033	54	51.57	15.018	-.452	-.686	13	78
	scale score	2070	37	2033	677	677.26	40.055	.168	-.198	582	831
	NP	2070	37	2033	70	63.46	27.782	-.524	-.928	3	99
TN with SS	raw score	2070	52	2018	22	21.00	6.345	-.587	-.439	1	31
	scale score	2070	52	2018	674	669.77	49.005	-.513	2.116	477	820
	NP	2070	52	2018	60	55.32	30.096	-.305	-1.167	1	99
TN with FS	raw score	2237	49	2188	22	20.67	6.510	-.535	-.568	1	31
	scale score	2237	49	2188	672	667.23	50.726	-.547	2.001	477	820
	NP	2237	49	2188	58	53.80	30.661	-.248	-1.233	1	99
FS with SS	raw score	2038	59	1979	37	35.08	10.295	-.619	-.528	6	50
	scale score	2038	59	1979	680	682.13	47.274	.253	-.182	562	807
	NP	2038	59	1979	62	57.56	32.071	-.282	-1.281	1	99
FS with TN	raw score	2237	60	2177	36	34.19	10.822	-.554	-.685	3	50
	scale score	2237	60	2177	676	678.54	48.692	.239	-.227	535	807
	NP	2237	60	2177	58	55.10	33.003	-.193	-1.369	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 40
After matching summary statistics; Grade 7 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2249	56	2193	61	57.62	15.014	-.731	-.274	12	84
	scale score	2249	56	2193	686	682.35	37.888	-.195	-.129	569	837
	NP	2249	56	2193	55	52.22	28.411	-.167	-1.152	1	99
SS with TN	raw score	2241	56	2185	61	57.53	15.084	-.736	-.270	12	84
	scale score	2241	56	2185	686	682.14	38.028	-.201	-.122	569	837
	NP	2241	56	2185	55	52.09	28.439	-.166	-1.148	1	99
TN with SS	raw score	2241	50	2191	23	21.65	6.979	-.417	-.788	2	33
	scale score	2241	50	2191	666	662.74	50.034	-.536	1.986	498	810
	NP	2241	50	2191	47	47.10	28.518	.019	-1.135	1	99
TN with FS	raw score	2397	53	2344	22	21.32	7.133	-.383	-.819	2	33
	scale score	2397	53	2344	664	660.38	51.843	-.577	1.841	498	810
	NP	2397	53	2344	45	45.89	28.825	.069	-1.151	1	99
FS with SS	raw score	2249	74	2175	36	34.82	8.821	-.690	-.106	7	50
	scale score	2249	74	2175	681	681.35	40.632	.009	.034	562	818
	NP	2249	74	2175	42	45.39	29.068	.215	-1.138	1	99
FS with TN	raw score	2397	84	2313	36	34.34	9.120	-.662	-.220	7	50
	scale score	2397	84	2313	681	679.35	41.552	-.006	-.037	562	818
	NP	2397	84	2313	42	44.14	29.333	.255	-1.129	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 41
After matching summary statistics; Grade 7 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2249	50	2199	39	36.43	10.174	-.678	-.321	7	54
	scale score	2249	50	2199	650	646.32	38.621	-.055	-.010	537	784
	NP	2249	50	2199	64	56.33	30.665	-.357	-1.192	1	99
SS with TN	raw score	2241	51	2190	38.50	36.38	10.200	-.670	-.335	7	54
	scale score	2241	51	2190	648.50	646.15	38.734	-.047	-.012	537	784
	NP	2241	51	2190	62	56.16	30.713	-.349	-1.200	1	99
TN with SS	raw score	2241	51	2190	18	17.61	5.998	-.443	-.771	2	27
	scale score	2241	51	2190	666	661.23	51.859	-.514	2.610	502	814
	NP	2241	51	2190	49	47.85	28.737	-.046	-1.152	1	99
TN with FS	raw score	2397	54	2343	18	17.35	6.104	-.399	-.835	2	27
	scale score	2397	54	2343	665	658.94	53.518	-.545	2.348	502	814
	NP	2397	54	2343	48	46.65	29.066	.000	-1.180	1	99
FS with SS	raw score	2249	315	1934	21	19.46	5.584	-.668	-.203	3	30
	scale score	2249	315	1934	672	666.98	36.236	-.118	.170	556	791
	NP	2249	315	1934	60	54.08	27.905	-.281	-.996	1	99
FS with TN	raw score	2397	342	2055	20	19.20	5.720	-.632	-.286	1	30
	scale score	2397	342	2055	666	665.44	37.034	-.137	.196	514	791
	NP	2397	342	2055	54	52.90	28.326	-.228	-1.062	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 42
After matching summary statistics; Grade 7 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	2249	45	2204	48	47.27	16.066	-.065	-.959	12	79
	scale score	2249	45	2204	684	686.50	39.649	.507	.179	601	831
	NP	2249	45	2204	64	59.58	28.578	-.287	-1.177	3	99
SS with TN	raw score	2241	44	2197	47	47.22	16.084	-.052	-.971	12	79
	scale score	2241	44	2197	682	686.42	39.720	.519	.171	601	831
	NP	2241	44	2197	62	59.46	28.611	-.274	-1.190	3	99
TN with SS	raw score	2241	58	2183	23	21.59	7.155	-.570	-.690	1	32
	scale score	2241	58	2183	681	677.15	54.812	-.176	2.564	487	850
	NP	2241	58	2183	49	48.43	29.630	.011	-1.233	1	99
TN with FS	raw score	2397	55	2342	23	21.24	7.331	-.523	-.788	1	32
	scale score	2397	55	2342	679	674.47	56.619	-.254	2.372	487	850
	NP	2397	55	2342	47	47.15	29.984	.052	-1.254	1	99
FS with SS	raw score	2249	75	2174	31	30.19	11.021	-.130	-1.059	4	50
	scale score	2249	75	2174	685	687.57	43.625	.469	-.060	577	831
	NP	2249	75	2174	59	55.29	30.968	-.141	-1.360	1	99
FS with TN	raw score	2397	80	2317	30	29.64	11.186	-.085	-1.101	4	50
	scale score	2397	80	2317	682	685.58	43.941	.484	-.084	577	831
	NP	2397	80	2317	56	53.79	31.372	-.082	-1.395	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 43
After matching summary statistics; Grade 8 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	1734	35	1699	60	57.48	13.775	-.663	-.208	10	82
	scale score	1734	35	1699	696	694.39	33.300	-.112	-.131	581	801
	NP	1734	35	1699	55	53.09	26.211	-.169	-1.089	1	99
SS with TN	raw score	1922	42	1880	60	57.75	13.613	-.678	-.119	10	82
	scale score	1922	42	1880	696	695.01	33.093	-.106	-.063	581	801
	NP	1922	42	1880	55	53.54	26.014	-.175	-1.065	1	99
TN with SS	raw score	1922	27	1895	26	24.03	6.896	-.747	-.124	1	34
	scale score	1922	27	1895	684	682.58	46.081	-.275	2.265	507	820
	NP	1922	27	1895	56	53.81	28.283	-.148	-1.111	1	99
TN with FS	raw score	1914	29	1885	25	23.58	7.230	-.706	-.261	1	34
	scale score	1914	29	1885	681	679.67	48.721	-.435	2.245	475	820
	NP	1914	29	1885	53	52.25	29.048	-.099	-1.185	1	99
FS with SS	raw score	1734	48	1686	36	34.67	8.699	-.625	-.331	8	50
	scale score	1734	48	1686	696	696.66	37.950	.082	.051	590	830
	NP	1734	48	1686	50	50.91	28.916	-.042	-1.253	1	99
FS with TN	raw score	1914	51	1863	36	34.15	8.984	-.577	-.457	7	50
	scale score	1914	51	1863	696	694.64	38.782	.081	-.051	584	830
	NP	1914	51	1863	50	49.42	29.368	.013	-1.281	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 44
After matching summary statistics; Grade 8 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	1734	27	1707	37	35.30	9.971	-.486	-.545	2	53
	scale score	1734	27	1707	654	652.53	37.058	.114	.134	500	772
	NP	1734	27	1707	55	51.24	30.461	-.078	-1.332	1	99
SS with TN	raw score	1922	32	1890	37	35.27	9.906	-.480	-.539	2	53
	scale score	1922	32	1890	654	652.36	36.746	.114	.140	500	772
	NP	1922	32	1890	55	51.09	30.339	-.069	-1.334	1	99
TN with SS	raw score	1922	29	1893	18	17.11	5.181	-.371	-.581	2	26
	scale score	1922	29	1893	674	674.10	42.786	.034	3.252	523	819
	NP	1922	29	1893	51	50.89	28.187	-.012	-1.213	1	99
TN with FS	raw score	1914	31	1883	17	16.79	5.370	-.339	-.679	2	26
	scale score	1914	31	1883	672	671.70	44.141	-.050	2.959	480	819
	NP	1914	31	1883	49	49.35	28.787	.037	-1.258	1	99
FS with SS	raw score	1734	105	1629	20	19.51	5.624	-.486	-.574	1	30
	scale score	1734	105	1629	671	672.83	37.134	.083	.013	520	795
	NP	1734	105	1629	56	55.11	28.524	-.239	-1.136	1	99
FS with TN	raw score	1914	119	1795	20	19.20	5.805	-.473	-.619	1	30
	scale score	1914	119	1795	671	670.94	38.037	.072	-.020	520	795
	NP	1914	119	1795	56	53.72	29.036	-.201	-1.174	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 45
After matching summary statistics; Grade 8 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	1734	21	1713	47	47.58	16.730	.006	-1.035	6	82
	scale score	1734	21	1713	691	695.14	38.630	.535	.268	585	861
	NP	1734	21	1713	62	59.14	27.676	-.213	-1.238	1	99
SS with TN	raw score	1922	24	1898	47	47.65	16.553	.015	-1.044	6	82
	scale score	1922	24	1898	691	695.20	38.052	.537	.235	585	861
	NP	1922	24	1898	62	59.27	27.437	-.208	-1.240	1	99
TN with SS	raw score	1922	26	1896	22	21.03	5.846	-.439	-.395	1	31
	scale score	1922	26	1896	701	701.30	49.458	-.167	2.600	502	872
	NP	1922	26	1896	60	57.97	27.031	-.283	-1.000	1	99
TN with FS	raw score	1914	28	1886	21	20.74	5.962	-.391	-.518	1	31
	scale score	1914	28	1886	699	699.03	50.380	-.175	2.328	502	872
	NP	1914	28	1886	58	56.64	27.590	-.239	-1.068	1	99
FS with SS	raw score	1734	80	1654	28	28.27	10.715	.056	-1.040	5	50
	scale score	1734	80	1654	691	695.78	42.593	.668	.506	598	849
	NP	1734	80	1654	57	54.96	30.559	-.119	-1.376	1	99
FS with TN	raw score	1914	86	1828	27	27.75	10.807	.088	-1.046	4	50
	scale score	1914	86	1828	688	693.76	42.558	.651	.458	589	849
	NP	1914	86	1828	54	53.52	30.849	-.062	-1.398	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 46
After matching summary statistics; Grade 9 Reading

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	1666	33	1633	51	49.74	14.091	-.162	-.642	12	83
	scale score	1666	33	1633	684	683.77	30.927	.292	.420	597	830
	NP	1666	33	1633	33	36.47	23.684	.571	-.551	1	99
SS with TN	raw score	1828	32	1796	52	50.86	14.247	-.229	-.665	12	83
	scale score	1828	32	1796	686	686.22	31.453	.212	.187	597	830
	NP	1828	32	1796	35	38.51	24.368	.464	-.752	1	99
TN with SS	raw score	1828	3	1825	24	22.46	7.102	-.564	-.540	2	34
	scale score	1828	3	1825	683	678.74	46.433	-.997	3.212	507	833
	NP	1828	3	1825	49	49.03	27.717	-.017	-1.150	1	99
TN with FS	raw score	1808	3	1805	23	21.87	7.186	-.491	-.638	2	34
	scale score	1808	3	1805	680	675.31	46.542	-1.008	3.028	507	833
	NP	1808	3	1805	47	46.73	27.546	.071	-1.129	1	99
FS with SS	raw score	1666	54	1612	34	32.87	8.194	-.548	-.139	7	50
	scale score	1666	54	1612	693	691.77	36.733	.012	.311	579	842
	NP	1666	54	1612	38	41.01	27.365	.344	-.975	1	99
FS with TN	raw score	1808	56	1752	34	32.58	8.283	-.519	-.244	7	50
	scale score	1808	56	1752	693	690.51	36.853	.011	.223	579	842
	NP	1808	56	1752	38	40.15	27.375	.365	-.974	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 47
After matching summary statistics; Grade 9 Language

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	1666	37	1629	30	29.79	9.422	.015	-.710	4	53
	scale score	1666	37	1629	641	641.59	31.221	.316	.142	537	779
	NP	1666	37	1629	34	36.73	24.458	.462	-.737	1	99
SS with TN	raw score	1828	39	1789	31	30.69	9.715	-.029	-.769	4	53
	scale score	1828	39	1789	644	644.72	32.677	.296	-.038	537	779
	NP	1828	39	1789	37	39.22	25.597	.383	-.888	1	99
TN with SS	raw score	1828	4	1824	16	15.75	5.816	-.289	-.871	2	26
	scale score	1828	4	1824	674	671.47	42.785	-.387	3.148	530	829
	NP	1828	4	1824	45	46.10	26.136	.138	-.916	1	99
TN with FS	raw score	1808	4	1804	16	15.27	5.846	-.217	-.920	1	26
	scale score	1808	4	1804	671	668.28	43.133	-.470	3.034	530	829
	NP	1808	4	1804	42	43.99	25.912	.212	-.862	1	99
FS with SS	raw score	1666	41	1625	17	17.03	5.436	-.164	-.624	3	30
	scale score	1666	41	1625	668	670.16	33.351	.203	.449	574	807
	NP	1666	41	1625	38	42.29	26.445	.288	-.968	1	99
FS with TN	raw score	1808	42	1766	17	16.86	5.449	-.128	-.643	2	30
	scale score	1808	42	1766	668	669.11	33.350	.217	.430	558	807
	NP	1808	42	1766	38	41.42	26.410	.332	-.937	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 48
After matching summary statistics; Grade 9 Mathematics

		Total Case	Invalid Case	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
SS with FS	raw score	1666	12	1654	24	24.78	8.856	.181	-.788	5	48
	scale score	1666	12	1654	694	697.25	32.683	.463	.247	613	860
	NP	1666	12	1654	58	56.63	26.293	-.156	-1.131	2	99
SS with TN	raw score	1828	12	1816	25	25.53	9.096	.148	-.824	5	48
	scale score	1828	12	1816	697	700.17	34.146	.490	.232	613	860
	NP	1828	12	1816	61	58.64	26.514	-.223	-1.103	2	99
TN with SS	raw score	1828	57	1771	16	15.52	5.106	-.336	-.627	2	25
	scale score	1828	57	1771	698	695.28	52.432	-.237	2.553	513	877
	NP	1828	57	1771	49	48.93	27.319	.071	-1.052	1	99
TN with FS	raw score	1808	60	1748	15	15.03	5.141	-.265	-.693	2	25
	scale score	1808	60	1748	694	690.31	52.583	-.429	2.413	513	877
	NP	1808	60	1748	46	46.39	27.195	.157	-1.022	1	99
FS with SS	raw score	1666	21	1645	15	15.45	5.978	.233	-.614	2	30
	scale score	1666	21	1645	695	699.28	37.616	.721	1.270	598	844
	NP	1666	21	1645	59	54.86	29.784	-.212	-1.235	1	99
FS with TN	raw score	1808	23	1785	15	15.22	5.956	.269	-.593	2	30
	scale score	1808	23	1785	695	697.89	37.315	.726	1.315	598	844
	NP	1808	23	1785	59	53.68	29.846	-.155	-1.265	1	99

SS: Spring SAT/9 FS: Fall SAT/9 TN: *TerraNova*

Table A 49
Data for students contributing to
Fall SAT/9 to TN Linking--Reading

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	FS	Raw	1789	49	46.66	13.937	-.491	-.719	8	70
		Scale	1789	598	598.45	44.256	.052	-.298	484	749
		P Rank	1789	52	50.65	28.303	-.125	-1.165	1	99
	TN	Raw	1789	20	18.87	4.661	-.970	.293	4	25
		Scale	1789	616	616.02	44.938	-.599	2.897	423	722
		P Rank	1789	51	51.52	29.573	-.001	-1.221	1	99
3	FS	Raw	2072	35	33.26	9.316	-.619	-.362	3	50
		Scale	2072	623	620.80	42.184	-.084	-.092	469	767
		P Rank	2072	42	43.70	28.180	.151	-1.148	1	99
	TN	Raw	2072	22	20.76	5.911	-.681	-.301	1	30
		Scale	2072	628	626.11	43.479	-.530	2.473	427	750
		P Rank	2072	48	48.85	29.332	.081	-1.262	1	99
4	FS	Raw	2046	36	34.32	9.950	-.647	-.436	6	50
		Scale	2046	638	638.15	45.182	.021	-.210	515	773
		P Rank	2046	37	42.31	30.164	.277	-1.188	1	99
	TN	Raw	2046	25	23.26	7.307	-.586	-.542	2	35
		Scale	2046	638	633.98	50.272	-1.144	3.714	433	780
		P Rank	2046	39	42.93	29.412	.285	-1.161	1	99
5	FS	Raw	2251	33	32.30	8.842	-.485	-.405	7	49
		Scale	2251	655	655.67	38.200	-.026	-.075	547	780
		P Rank	2251	43	46.37	28.708	.131	-1.167	1	99
	TN	Raw	2251	21	19.97	7.360	-.378	-.946	2	32
		Scale	2251	656	648.47	53.435	-1.131	2.373	475	790
		P Rank	2251	55	51.71	30.153	-.185	-1.200	1	99

Table A 49 (cont.)
Data for students contributing to
Fall SAT/9 to TN Linking--Reading

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	FS	Raw	2092	36	33.61	9.497	-.605	-.449	6	50
		Scale	2092	675	670.67	41.465	.092	.177	553	808
		P Rank	2092	50	48.07	30.121	.006	-1.274	1	99
	TN	Raw	2092	23	20.77	7.128	-.576	-.792	2	31
		Scale	2092	661	655.42	53.184	-.757	2.357	486	800
		P Rank	2092	50	48.84	28.998	-.047	-1.165	1	99
7	FS	Raw	2263	36	34.37	9.139	-.666	-.217	7	50
		Scale	2263	681	679.50	41.683	-.008	-.039	562	818
		P Rank	2263	42	44.27	29.392	.249	-1.135	1	99
	TN	Raw	2263	22	21.38	7.119	-.386	-.811	2	33
		Scale	2263	665	660.85	51.703	-.551	1.838	498	810
		P Rank	2263	46	46.10	28.848	.065	-1.150	1	99
8	FS	Raw	1838	36	34.17	9.007	-.581	-.461	7	50
		Scale	1838	696	694.74	38.887	.075	-.059	584	830
		P Rank	1838	50	49.52	29.420	.006	-1.284	1	99
	TN	Raw	1838	25	23.65	7.177	-.707	-.270	1	34
		Scale	1838	682	680.06	48.124	-.434	2.236	475	820
		P Rank	1838	54	52.49	28.971	-.108	-1.181	1	99
9	FS	Raw	1749	34	32.60	8.285	-.522	-.241	7	50
		Scale	1749	693	690.56	36.864	.008	.223	579	842
		P Rank	1749	38	40.19	27.377	.362	-.975	1	99
	TN	Raw	1749	23	22.03	7.109	-.494	-.636	3	34
		Scale	1749	680	676.23	46.031	-.999	3.155	507	833
		P Rank	1749	47	47.23	27.477	.059	-1.125	1	99

Table A 50
Data for students contributing to
Fall SAT/9 to TN Linking--Language

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	FS	Raw	1979	21	20.00	5.349	-.448	-.376	1	30
		Scale	1979	597	596.63	36.248	.373	.356	470	714
		P Rank	1979	48	47.55	29.006	.118	-1.238	1	99
	TN	Raw	1979	15	14.41	3.430	-.742	.206	1	20
		Scale	1979	604	607.26	44.834	-.467	2.146	424	706
		P Rank	1979	36	43.33	31.085	.391	-1.201	1	98
3	FS	Raw	2137	19	17.98	6.105	-.253	-.846	1	30
		Scale	2137	616	614.29	39.326	.212	-.044	470	745
		P Rank	2137	45	45.79	28.308	.174	-1.120	1	99
	TN	Raw	2136	14	13.49	3.934	-.521	-.366	1	20
		Scale	2137	625	624.05	45.073	-.650	2.678	455	730
		P Rank	2137	42	44.50	29.261	.288	-1.116	1	99
4	FS	Raw	2066	21	19.38	6.668	-.469	-.779	3	30
		Scale	2066	636	633.65	46.220	.192	-.207	521	754
		P Rank	2066	49	47.00	31.876	.080	-1.350	1	99
	TN	Raw	2063	16	15.11	5.608	-.232	-.904	1	25
		Scale	2066	639	635.10	49.405	-.959	2.599	465	757
		P Rank	2066	41	44.26	30.409	.227	-1.265	1	99
5	FS	Raw	1950	21	19.69	5.958	-.516	-.523	3	30
		Scale	1950	651	648.88	39.235	.156	.012	539	765
		P Rank	1950	59	53.73	29.342	-.164	-1.243	1	99
	TN	Raw	1950	19	17.58	6.395	-.373	-.888	1	28
		Scale	1950	658	651.74	50.729	-.940	2.689	480	782
		P Rank	1950	59	53.93	30.312	-.261	-1.166	1	99

Table A 50 (cont.)
Data for students contributing to
Fall SAT/9 to TN Linking--Language

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	FS	Raw	1827	20	19.13	5.793	-.595	-.450	2	30
		Scale	1827	657	655.52	37.242	-.144	-.010	530	781
		P Rank	1827	53	51.63	30.196	-.172	-1.300	1	99
	TN	Raw	1826	20	19.25	6.239	-.530	-.652	1	29
		Scale	1827	664	659.08	46.355	-.674	3.501	495	808
		P Rank	1827	61	55.53	29.102	-.349	-1.078	1	99
7	FS	Raw	2011	20	19.23	5.716	-.632	-.282	1	30
		Scale	2011	666	665.66	37.064	-.132	.196	514	791
		P Rank	2011	54	53.04	28.333	-.231	-1.060	1	99
	TN	Raw	2011	19	17.76	6.061	-.497	-.713	2	27
		Scale	2011	668	662.00	53.068	-.560	2.461	502	814
		P Rank	2011	51	48.73	28.975	-.094	-1.151	1	99
8	FS	Raw	1771	20	19.20	5.803	-.473	-.617	1	30
		Scale	1771	671	670.94	38.018	.072	-.012	520	795
		P Rank	1771	56	53.72	29.022	-.201	-1.174	1	99
	TN	Raw	1771	17	16.94	5.272	-.334	-.678	2	26
		Scale	1771	673	672.85	43.369	-.001	3.070	480	819
		P Rank	1771	50	50.06	28.588	.014	-1.250	1	99
9	FS	Raw	1763	17	16.86	5.451	-.131	-.642	2	30
		Scale	1763	668	669.15	33.362	.214	.429	558	807
		P Rank	1763	38	41.46	26.415	.329	-.938	1	99
	TN	Raw	1763	16	15.36	5.836	-.238	-.901	1	26
		Scale	1763	672	668.98	42.861	-.450	3.095	530	829
		P Rank	1763	43	44.41	25.882	.197	-.865	1	99

Table A 51
Data for students contributing to
Fall SAT/9 to TN Linking--Mathematics

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	FS	Raw	2065	39	37.46	8.518	-.877	.234	8	50
		Scale	2065	588	590.90	40.535	.174	-.091	469	709
		P Rank	2065	56	54.54	29.432	-.166	-1.256	1	99
	TN	Raw	2065	21	20.62	3.578	-.966	1.421	1	26
		Scale	2065	571	575.09	45.720	.930	3.156	347	720
		P Rank	2065	36	41.25	27.748	.524	-.790	1	99
3	FS	Raw	2145	37	35.59	9.831	-.654	-.445	4	50
		Scale	2145	617	617.65	47.418	.202	-.295	474	749
		P Rank	2145	58	54.93	31.377	-.157	-1.355	1	99
	TN	Raw	2145	25	23.55	4.523	-1.099	1.440	2	30
		Scale	2145	615	614.29	44.173	-.009	2.658	385	740
		P Rank	2145	51	50.83	28.885	-.020	-1.175	1	99
4	FS	Raw	2085	37	35.13	9.401	-.687	-.343	7	50
		Scale	2085	639	638.92	40.719	.084	-.102	528	767
		P Rank	2085	50	50.05	30.580	-.045	-1.336	1	99
	TN	Raw	2085	24	22.26	6.879	-.706	-.294	1	32
		Scale	2085	633	627.15	56.801	-.904	3.404	403	770
		P Rank	2085	52	50.17	29.937	-.059	-1.204	1	99
5	FS	Raw	2291	36	34.03	9.927	-.593	-.553	3	50
		Scale	2291	659	658.21	40.627	.113	-.054	521	788
		P Rank	2291	58	54.35	30.068	-.212	-1.261	1	99
	TN	Raw	2291	24	22.24	6.593	-.733	-.241	2	32
		Scale	2291	647	643.92	52.797	-.195	1.689	430	797
		P Rank	2291	46	47.12	30.343	.061	-1.252	1	99

Table A 51 (cont.)
Data for students contributing to
Fall SAT/9 to TN Linking--Mathematics

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	FS	Raw	2135	36.	34.25	10.796	-.566	-.663	3	50
		Scale	2135	676	678.70	48.486	.220	-.237	535	807
		P Rank	2135	58	55.28	32.942	-.202	-1.361	1	99
	TN	Raw	2135	22	20.71	6.515	-.547	-.553	1	31
		Scale	2135	672	667.56	50.811	-.543	1.986	477	820
		P Rank	2135	58	54.03	30.671	-.260	-1.226	1	99
7	FS	Raw	2275	30	29.68	11.160	-.083	-1.102	4	50
		Scale	2275	682	685.72	43.882	.494	-.072	577	831
		P Rank	2275	56	53.87	31.321	-.085	-1.393	1	99
	TN	Raw	2275	23	21.32	7.294	-.534	-.760	1	32
		Scale	2275	679	675.11	56.532	-.245	2.431	487	850
		P Rank	2275	47	47.47	29.932	.043	-1.249	1	99
8	FS	Raw	1806	27	27.72	10.803	.091	-1.041	4	50
		Scale	1806	688	693.66	42.572	.658	.480	589	849
		P Rank	1806	54	53.44	30.833	-.059	-1.396	1	99
	TN	Raw	1806	21	20.91	5.930	-.411	-.496	1	31
		Scale	1806	701	700.39	49.970	-.125	2.299	502	872
		P Rank	1806	60	57.37	27.491	-.265	-1.060	1	99
9	FS	Raw	1727	15	15.30	5.972	.257	-.602	2	30
		Scale	1727	695	698.34	37.492	.720	1.300	598	844
		P Rank	1727	59	54.04	29.860	-.171	-1.260	1	99
	TN	Raw	1727	15	15.07	5.108	-.265	-.680	2	25
		Scale	1727	694	690.65	51.967	-.432	2.451	513	877
		P Rank	1727	46	46.53	27.090	.156	-1.020	1	99

Table A 52
Data for students contributing to
Fall to Spring SAT/9 Linking--Reading

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	FS	Raw	1615	49	46.98	13.831	-.498	-.711	8	69
		Scale	1615	598	599.57	43.931	.050	-.343	484	726
		P Rank	1615	52	51.30	28.196	-.138	-1.162	1	99
	SS	Raw	1615	79	76.73	22.969	-.263	-1.062	26	116
		Scale	1615	585	586.53	41.929	.194	-.642	499	712
		P Rank	1615	54	51.56	28.789	-.091	-1.290	2	99
3	FS	Raw	1873	35	33.80	8.827	-.624	-.252	7	50
		Scale	1873	623	622.99	40.338	-.032	-.035	505	767
		P Rank	1873	42	44.86	27.591	.133	-1.121	1	99
	SS	Raw	1873	54	53.60	16.585	-.228	-.948	14	84
		Scale	1873	609	613.24	42.525	.308	-.214	515	775
		P Rank	1873	44	47.62	28.146	.130	-1.185	1	99
4	FS	Raw	1838	37	34.91	9.690	-.695	-.305	6	50
		Scale	1838	642	640.77	44.720	.030	-.141	515	773
		P Rank	1838	41	43.88	30.110	.226	-1.202	1	99
	SS	Raw	1838	57	54.65	16.423	-.400	-.783	13	84
		Scale	1838	639	639.41	40.814	.149	-.228	539	799
		P Rank	1838	51	50.68	28.721	-.028	-1.253	1	99
5	FS	Raw	2068	34	32.93	8.440	-.517	-.268	7	49
		Scale	2068	659	658.19	36.800	-.010	.042	547	780
		P Rank	2068	47	48.09	28.107	.080	-1.143	1	99
	SS	Raw	2068	56	54.12	15.411	-.453	-.628	10	84
		Scale	2068	654	654.25	36.852	.045	-.076	546	816
		P Rank	2068	50	50.45	28.041	-.043	-1.204	1	99

Table A 52 (cont.)
Data for students contributing to
Fall to Spring SAT/9 Linking--Reading

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	FS	Raw	1884	36	34.46	8.865	-.624	-.318	6	50
		Scale	1884	675	674.02	39.472	.167	.355	553	808
		P Rank	1884	51	50.24	29.315	-.056	-1.237	1	99
	SS	Raw	1884	58	55.30	14.476	-.533	-.475	13	83
		Scale	1884	673	670.46	33.882	-.028	-.169	573	806
		P Rank	1884	60	56.22	27.268	-.247	-1.071	1	99
7	FS	Raw	2125	36	34.95	8.753	-.700	-.074	7	50
		Scale	2125	681	681.90	40.427	.009	.047	562	818
		P Rank	2125	42	45.76	29.006	.202	-1.141	1	99
	SS	Raw	2125	61	57.66	14.992	-.730	-.280	12	84
		Scale	2125	686	682.45	37.830	-.196	-.138	569	837
		P Rank	2125	55	52.29	28.416	-.169	-1.156	1	99
8	FS	Raw	1651	37	34.94	8.505	-.637	-.265	8	50
		Scale	1651	701	697.74	37.392	.095	.107	590	830
		P Rank	1651	55	51.67	28.626	-.061	-1.239	1	99
	SS	Raw	1651	60	57.59	13.760	-.668	-.191	10	82
		Scale	1651	696	694.66	33.329	-.114	-.122	581	801
		P Rank	1651	55	53.30	26.218	-.176	-1.088	1	99
9	FS	Raw	1581	34	32.90	8.174	-.544	-.144	7	50
		Scale	1581	693	691.91	36.686	.024	.314	579	842
		P Rank	1581	38	41.08	27.352	.345	-.968	1	99
	SS	Raw	1581	51	50.08	13.974	-.165	-.632	12	83
		Scale	1581	684	684.48	30.751	.304	.448	597	830
		P Rank	1581	33	36.96	23.687	.558	-.571	1	99

Table A 53
Data for students contributing to
Fall to Spring SAT/9 Linking--Language

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	FS	Raw	1830	21	20.07	5.287	-.446	-.349	1	30
		Scale	1830	597	597.02	35.941	.386	.373	470	714
		P Rank	1830	48	47.83	28.855	.114	-1.237	1	99
	SS	Raw	1830	29	28.65	8.009	.000	-.901	10	46
		Scale	1830	561	562.90	35.559	.654	.517	487	705
		P Rank	1830	39	43.76	30.860	.270	-1.331	1	99
3	FS	Raw	1936	19	18.28	5.953	-.282	-.755	1	30
		Scale	1936	616	616.14	38.717	.234	.078	470	745
		P Rank	1936	45	47.00	27.899	.147	-1.090	1	99
	SS	Raw	1936	29	29.64	11.410	.017	-1.091	3	53
		Scale	1936	586	590.08	39.602	.283	-.391	474	729
		P Rank	1936	53	53.46	28.867	-.078	-1.340	1	99
4	FS	Raw	1898	21	19.74	6.521	-.520	-.680	3	30
		Scale	1898	636	636.01	45.698	.185	-.164	521	754
		P Rank	1898	49	48.56	31.633	.021	-1.341	1	99
	SS	Raw	1898	33	31.41	10.249	-.237	-.887	4	53
		Scale	1898	611	608.20	33.738	.088	-.278	500	739
		P Rank	1898	51	48.53	26.135	-.041	-1.169	1	99
5	FS	Raw	1820	21	19.99	5.787	-.548	-.434	3	30
		Scale	1820	651	650.69	38.480	.169	.084	539	765
		P Rank	1820	59	55.10	28.842	-.215	-1.200	1	99
	SS	Raw	1820	36	34.62	9.503	-.571	-.432	6	53
		Scale	1820	623	622.02	32.673	-.111	.018	518	743
		P Rank	1820	50	49.39	26.065	-.146	-1.055	1	99

Table A 53 (cont.)
Data for students contributing to
Fall to Spring SAT/9 Linking--Language

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	FS	Raw	1655	21	19.60	5.516	-.667	-.239	2	30
		Scale	1655	663	658.31	35.767	-.152	.158	530	781
		P Rank	1655	61	53.86	29.341	-.265	-1.204	1	99
	SS	Raw	1655	37	35.56	8.652	-.633	-.138	7	53
		Scale	1655	640	638.33	32.046	-.135	.085	532	761
		P Rank	1655	56	53.46	27.364	-.267	-1.080	1	99
7	FS	Raw	1891	21	19.54	5.551	-.680	-.167	3	30
		Scale	1891	672	667.51	36.109	-.117	.190	556	791
		P Rank	1891	60	54.48	27.802	-.295	-.976	1	99
	SS	Raw	1891	39	37.37	9.818	-.785	-.052	7	54
		Scale	1891	650	649.76	37.866	-.093	.129	537	784
		P Rank	1891	64	59.15	29.903	-.482	-1.037	1	99
8	FS	Raw	1603	21	19.62	5.571	-.501	-.533	1	30
		Scale	1603	677	673.49	36.905	.079	.047	520	795
		P Rank	1603	61	55.63	28.331	-.257	-1.113	1	99
	SS	Raw	1603	37	35.52	9.955	-.517	-.492	2	53
		Scale	1603	654	653.33	37.153	.094	.158	500	772
		P Rank	1603	55	51.93	30.445	-.108	-1.323	1	99
9	FS	Raw	1594	17	17.06	5.442	-.168	-.618	3	30
		Scale	1594	668	670.33	33.420	.201	.455	574	807
		P Rank	1594	38	42.43	26.480	.284	-.973	1	99
	SS	Raw	1594	30	29.93	9.387	.000	-.696	4	53
		Scale	1594	641	642.03	31.126	.305	.158	537	779
		P Rank	1594	34	37.07	24.416	.447	-.746	1	99

Table A 54
Data for students contributing to
Fall to Spring SAT/9 Linking--Mathematics

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	FS	Raw	1923	39	37.61	8.489	-.910	.319	9	50
		Scale	1923	593	591.63	40.608	.161	-.053	475	709
		P Rank	1923	60	55.11	29.338	-.192	-1.237	1	99
	SS	Raw	1923	54	51.48	13.654	-.617	-.257	2	74
		Scale	1923	579	579.09	43.552	.047	.322	393	731
		P Rank	1923	57	54.12	30.641	-.135	-1.305	1	99
3	FS	Raw	1962	38	35.98	9.558	-.672	-.377	4	50
		Scale	1962	617	619.21	46.648	.204	-.263	474	749
		P Rank	1962	59	55.96	30.998	-.188	-1.339	1	99
	SS	Raw	1962	53	50.66	14.182	-.429	-.747	5	75
		Scale	1962	606	605.97	42.065	.132	-.338	460	744
		P Rank	1962	57	54.22	30.027	-.148	-1.304	1	99
4	FS	Raw	1951	38	35.65	9.122	-.735	-.228	7	50
		Scale	1951	643	641.02	40.021	.084	-.047	528	767
		P Rank	1951	55	51.58	30.212	-.107	-1.305	1	99
	SS	Raw	1951	54	52.38	14.337	-.491	-.553	7	78
		Scale	1951	631	632.33	39.007	.221	.129	508	784
		P Rank	1951	56	54.83	28.577	-.172	-1.193	1	99
5	FS	Raw	2158	37	34.64	9.542	-.632	-.448	3	50
		Scale	2158	662	660.47	39.569	.137	-.002	521	788
		P Rank	2158	61	56.00	29.396	-.269	-1.195	1	99
	SS	Raw	2158	54	52.25	13.787	-.415	-.589	12	78
		Scale	2158	653	654.35	36.975	.354	.321	554	805
		P Rank	2158	58	55.36	28.620	-.166	-1.220	1	99

Table A 54 (cont.)
Data for students contributing to
Fall to Spring SAT/9 Linking--Mathematics

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	FS	Raw	1948	37	35.23	10.183	-.626	-.498	6	50
		Scale	1948	680	682.70	46.989	.262	-.162	562	807
		P Rank	1948	62	57.94	31.859	-.293	-1.263	1	99
	SS	Raw	1948	54	52.01	14.854	-.485	-.617	13	78
		Scale	1948	677	678.38	39.841	.158	-.160	582	831
		P Rank	1948	70	64.29	27.447	-.566	-.850	3	99
7	FS	Raw	2131	31	30.37	10.956	-.138	-1.056	4	50
		Scale	2131	685	688.24	43.470	.473	-.061	577	831
		P Rank	2131	59	55.76	30.834	-.157	-1.351	1	99
	SS	Raw	2131	48	47.45	16.030	-.072	-.962	12	79
		Scale	2131	684	686.96	39.631	.509	.183	601	831
		P Rank	2131	64	59.91	28.502	-.299	-1.169	3	99
8	FS	Raw	1634	28	28.37	10.697	.051	-1.043	5	50
		Scale	1634	691	696.16	42.567	.670	.500	598	849
		P Rank	1634	57	55.24	30.509	-.128	-1.372	1	99
	SS	Raw	1634	48	48.03	16.632	-.010	-1.038	7	82
		Scale	1634	692	696.15	38.532	.542	.267	591	861
		P Rank	1634	63	59.88	27.476	-.239	-1.221	1	99
9	FS	Raw	1633	15	15.47	5.980	.230	-.615	2	30
		Scale	1633	695	699.37	37.650	.720	1.269	598	844
		P Rank	1633	59	54.93	29.783	-.216	-1.233	1	99
	SS	Raw	1633	25	24.81	8.845	.172	-.789	5	48
		Scale	1633	697	697.31	32.616	.450	.239	613	860
		P Rank	1633	61	56.72	26.269	-.164	-1.125	2	99

Table A 55
Data for students contributing to
TN to Spring SAT/9 Linking--Reading

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	SS	Raw	1882	78	76.08	23.082	-.246	-1.050	18	116
		Scale	1882	583	585.36	42.049	.209	-.595	479	712
		P Rank	1882	52	50.78	28.810	-.062	-1.284	1	99
	TN	Raw	1882	20	18.90	4.651	-.971	.308	2	25
		Scale	1882	617	616.61	44.510	-.552	2.788	423	722
		P Rank	1882	52	51.83	29.621	-.010	-1.227	1	99
3	SS	Raw	2047	54	53.79	16.656	-.247	-.929	14	84
		Scale	2047	609	613.78	42.904	.300	-.188	515	775
		P Rank	2047	44	47.99	28.260	.113	-1.192	1	99
	TN	Raw	2047	22	21.19	5.632	-.745	-.095	1	30
		Scale	2047	630	628.84	41.558	-.548	3.000	427	750
		P Rank	2047	50	50.61	28.685	.020	-1.233	1	99
4	SS	Raw	1943	57	54.62	16.624	-.417	-.795	13	84
		Scale	1943	639	639.37	41.184	.107	-.322	539	799
		P Rank	1943	51	50.74	28.947	-.046	-1.262	1	99
	TN	Raw	1943	25	23.25	7.381	-.556	-.651	2	35
		Scale	1943	639	635.43	48.596	-1.005	3.576	433	780
		P Rank	1943	40	43.38	29.494	.280	-1.178	1	99
5	SS	Raw	2120	56	54.00	15.516	-.432	-.681	10	84
		Scale	2120	654	654.02	37.077	.052	-.137	546	816
		P Rank	2120	50	50.27	28.247	-.031	-1.229	1	99
	TN	Raw	2120	22	20.32	7.227	-.415	-.892	2	32
		Scale	2120	658	651.09	51.846	-1.124	2.649	475	790
		P Rank	2120	57	53.12	29.788	-.235	-1.153	1	99

Table A 55 (cont.)
Data for students contributing to
TN to Spring SAT/9 Linking--Reading

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	SS	Raw	1969	57	54.67	14.760	-.477	-.603	13	83
		Scale	1969	670	669.11	34.385	.000	-.254	573	806
		P Rank	1969	57	55.07	27.695	-.196	-1.132	1	99
	TN	Raw	1969	23	21.08	6.914	-.612	-.689	2	31
		Scale	1969	662	657.87	50.857	-.702	2.682	486	800
		P Rank	1969	51	49.93	28.440	-.069	-1.127	1	99
7	SS	Raw	2140	61	57.58	15.037	-.731	-.292	13	84
		Scale	2140	686	682.23	37.834	-.209	-.183	573	837
		P Rank	2140	55	52.16	28.423	-.169	-1.150	1	99
	TN	Raw	2140	23	21.78	6.934	-.441	-.740	2	33
		Scale	2140	667	663.60	49.682	-.532	2.055	498	810
		P Rank	2140	48	47.59	28.404	.000	-1.123	1	99
8	SS	Raw	1853	60	57.75	13.632	-.687	-.116	10	82
		Scale	1853	696	695.00	33.058	-.128	-.091	581	801
		P Rank	1853	55	53.57	26.028	-.183	-1.066	1	99
	TN	Raw	1853	26	24.21	6.800	-.782	.000	1	34
		Scale	1853	685	683.66	45.488	-.253	2.365	507	820
		P Rank	1853	57	54.48	28.006	-.165	-1.089	1	99
9	SS	Raw	1793	52	50.88	14.246	-.232	-.662	12	83
		Scale	1793	686	686.27	31.456	.209	.188	597	830
		P Rank	1793	35	38.55	24.369	.461	-.753	1	99
	TN	Raw	1793	24	22.47	7.091	-.568	-.529	2	34
		Scale	1793	683	678.68	46.393	-1.032	3.243	507	833
		P Rank	1793	49	49.05	27.676	-.019	-1.147	1	99

Table A 56
Data for students contributing to
TN to Spring SAT/9 Linking--Language

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	SS	Raw	1943	29	28.81	8.114	-.031	-.900	7	46
		Scale	1943	561	563.72	36.279	.636	.502	469	705
		P Rank	1943	39	44.48	31.155	.236	-1.358	1	99
	TN	Raw	1943	15	14.47	3.414	-.733	.145	2	20
		Scale	1943	605	608.04	44.178	-.368	1.924	424	706
		P Rank	1943	37	43.71	31.040	.374	-1.205	1	98
3	SS	Raw	2060	29	29.65	11.411	-.004	-1.084	3	53
		Scale	2060	586	590.08	39.584	.268	-.372	474	729
		P Rank	2060	53	53.55	28.873	-.099	-1.333	1	99
	TN	Raw	2060	14	13.70	3.818	-.571	-.208	1	20
		Scale	2060	627	626.42	43.600	-.609	2.947	455	730
		P Rank	2060	44	45.87	28.970	.242	-1.125	1	99
4	SS	Raw	1994	33	31.42	10.285	-.249	-.880	4	53
		Scale	1994	611	608.23	33.876	.065	-.269	500	739
		P Rank	1994	51	48.60	26.198	-.051	-1.172	1	99
	TN	Raw	1994	16	15.22	5.539	-.224	-.897	0	25
		Scale	1994	640	637.07	47.176	-.867	2.737	465	757
		P Rank	1994	42	44.91	30.168	.227	-1.261	1	99
5	SS	Raw	2143	36	34.02	9.706	-.537	-.461	6	53
		Scale	2143	623	619.98	33.202	-.114	.016	518	743
		P Rank	2143	50	47.81	26.222	-.079	-1.067	1	99
	TN	Raw	2143	18	17.46	6.290	-.347	-.881	0	28
		Scale	2143	657	651.14	49.086	-.976	2.917	480	782
		P Rank	2143	58	53.39	29.918	-.234	-1.163	1	99

Table A 56 (cont.)
Data for students contributing to
TN to Spring SAT/9 Linking--Language

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	SS	Raw	1979	36	34.60	9.106	-.549	-.382	7	53
		Scale	1979	637	634.95	33.286	-.110	-.103	532	761
		P Rank	1979	52	50.60	28.173	-.154	-1.174	1	99
	TN	Raw	1979	20	19.15	6.218	-.509	-.647	0	29
		Scale	1979	662	658.87	45.812	-.582	3.661	495	808
		P Rank	1979	59	55.09	28.894	-.319	-1.089	1	99
7	SS	Raw	2141	39	36.41	10.171	-.665	-.341	7	54
		Scale	2141	650	646.28	38.644	-.042	-.027	537	784
		P Rank	2141	64	56.23	30.683	-.350	-1.199	1	99
	TN	Raw	2141	19	17.71	5.978	-.466	-.735	2	27
		Scale	2141	667	661.93	51.750	-.512	2.654	502	814
		P Rank	2141	50	48.31	28.670	-.066	-1.139	1	99
8	SS	Raw	1861	37	35.27	9.919	-.489	-.541	2	53
		Scale	1861	654	652.33	36.660	.085	.099	500	772
		P Rank	1861	55	51.15	30.375	-.076	-1.339	1	99
	TN	Raw	1861	18	17.20	5.147	-.387	-.548	2	26
		Scale	1861	675	674.85	42.386	.072	3.318	523	819
		P Rank	1861	52	51.39	28.036	-.029	-1.203	1	99
9	SS	Raw	1785	31	30.72	9.705	-.030	-.768	4	53
		Scale	1785	644	644.81	32.646	.297	-.037	537	779
		P Rank	1785	37	39.28	25.587	.381	-.889	1	99
	TN	Raw	1785	16	15.79	5.806	-.300	-.852	2	26
		Scale	1785	674	671.76	42.787	-.386	3.198	530	829
		P Rank	1785	45	46.29	26.093	.132	-.911	1	99

Table A 57
Data for students contributing to
TN to Spring SAT/9 Linking--Mathematics

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
2	SS	Raw	1948	54	51.27	13.736	-.622	-.259	2	74
		Scale	1948	579	578.42	43.587	.042	.327	393	731
		P Rank	1948	57	53.71	30.641	-.126	-1.299	1	99
	TN	Raw	1948	21	20.64	3.565	-.945	1.195	3	26
		Scale	1948	572	575.52	45.415	1.059	2.837	403	720
		P Rank	1948	37	41.42	27.652	.517	-.785	1	99
3	SS	Raw	2069	53	50.71	14.102	-.453	-.702	5	75
		Scale	2069	606	605.99	41.706	.110	-.315	460	744
		P Rank	2069	57	54.35	29.827	-.163	-1.279	1	99
	TN	Raw	2069	25	23.76	4.316	-1.120	1.655	2	30
		Scale	2069	616	616.04	42.561	.156	2.580	385	740
		P Rank	2069	52	51.84	28.289	-.042	-1.140	1	99
4	SS	Raw	1991	54	52.33	14.450	-.503	-.551	7	78
		Scale	1991	631	632.17	39.058	.159	-.017	508	784
		P Rank	1991	56	54.80	28.736	-.174	-1.200	1	99
	TN	Raw	1991	24	22.09	7.157	-.762	-.266	2	32
		Scale	1991	633	625.45	59.213	-.957	2.936	403	770
		P Rank	1991	52	49.89	30.281	-.077	-1.209	1	99
5	SS	Raw	2155	54	52.27	13.835	-.417	-.587	12	78
		Scale	2155	653	654.47	37.199	.361	.335	554	805
		P Rank	2155	58	55.43	28.675	-.170	-1.218	1	99
	TN	Raw	2155	24	22.55	6.407	-.788	-.074	2	32
		Scale	2155	649	646.40	50.877	-.082	1.664	430	797
		P Rank	2155	48	48.35	29.933	.015	-1.225	1	99

Table A 57 (cont.)
Data for students contributing to
TN to Spring SAT/9 Linking--Mathematics

Grade	Test	Score	Valid case	Median	Mean	SD	Skewness	Kurtosis	Min	Max
6	SS	Raw	1981	54	51.76	14.923	-.465	-.664	13	78
		Scale	1981	677	677.71	39.824	.156	-.198	582	831
		P Rank	1981	70	63.82	27.620	-.540	-.901	3	99
	TN	Raw	1981	22	21.09	6.297	-.601	-.391	1	31
		Scale	1981	674	670.42	48.689	-.508	2.182	477	820
		P Rank	1981	60	55.72	29.924	-.319	-1.143	1	99
7	SS	Raw	2139	47	47.26	16.079	-.051	-.973	12	79
		Scale	2139	682	686.54	39.738	.523	.177	601	831
		P Rank	2139	62	59.53	28.595	-.274	-1.190	3	99
	TN	Raw	2139	23	21.69	7.132	-.589	-.658	1	32
		Scale	2139	681	677.80	54.839	-.182	2.597	487	850
		P Rank	2139	49	48.84	29.618	-.007	-1.231	1	99
8	SS	Raw	1872	47	47.63	16.534	.018	-1.040	6	82
		Scale	1872	691	695.16	38.036	.545	.260	585	861
		P Rank	1872	62	59.24	27.408	-.205	-1.240	1	99
	TN	Raw	1872	22	21.09	5.810	-.441	-.375	1	31
		Scale	1872	702	701.87	48.963	-.115	2.573	502	872
		P Rank	1872	61	58.24	26.869	-.286	-.988	1	99
9	SS	Raw	1759	25	25.63	9.091	.143	-.829	5	48
		Scale	1759	697	700.55	34.147	.487	.224	613	860
		P Rank	1759	61	58.94	26.453	-.230	-1.098	2	99
	TN	Raw	1759	16	15.52	5.104	-.344	-.619	2	25
		Scale	1759	698	695.26	52.355	-.261	2.539	513	877
		P Rank	1759	49	48.97	27.302	.065	-1.048	1	99

Table A 58
Pearson’s correlations, After matching—Reading

	Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
TN with FS	Raw	.773	.795	.749	.745	.803	.792	.823	.754
	Scale	.736	.764	.721	.685	.699	.752	.786	.713
	P Rank	.792	.798	.772	.756	.807	.806	.837	.766
FS with SS	Raw	.829	.810	.844	.825	.847	.853	.826	.792
	Scale	.853	.805	.842	.820	.840	.847	.821	.804
	P Rank	.859	.817	.848	.830	.846	.848	.837	.820
TN with SS	Raw	.694	.751	.662	.706	.776	.770	.789	.715
	Scale	.670	.730	.671	.650	.677	.730	.759	.662
	P Rank	.720	.769	.736	.723	.785	.788	.806	.736

Table A 59
Pearson’s correlations, After matching—Language

	Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
TN with FS	Raw	.674	.769	.751	.707	.748	.727	.758	.696
	Scale	.658	.719	.711	.646	.687	.668	.707	.649
	P Rank	.693	.770	.776	.707	.761	.742	.786	.725
FS with SS	Raw	.712	.752	.771	.744	.756	.755	.791	.735
	Scale	.722	.749	.768	.735	.743	.737	.773	.736
	P Rank	.731	.754	.778	.752	.758	.749	.801	.754
TN with SS	Raw	.639	.697	.670	.683	.731	.736	.763	.714
	Scale	.619	.660	.660	.629	.663	.671	.727	.651
	P Rank	.656	.705	.710	.700	.744	.752	.788	.733

Table A 60
Pearson's correlations, After matching—Mathematics

	Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
TN with FS	Raw	.717	.782	.737	.733	.833	.809	.822	.700
	Scale	.684	.738	.672	.719	.785	.744	.789	.676
	P Rank	.698	.780	.772	.774	.849	.834	.832	.701
FS with SS	Raw	.757	.824	.826	.832	.860	.880	.880	.764
	Scale	.753	.817	.817	.824	.852	.876	.872	.761
	P Rank	.773	.829	.833	.841	.858	.877	.877	.741
TN with SS	Raw	.678	.718	.624	.665	.780	.782	.807	.723
	Scale	.605	.692	.570	.678	.748	.725	.776	.689
	P Rank	.632	.729	.700	.743	.806	.811	.821	.739

Appendix B

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Table B 1
After linking summary statistics
TN to Fall SAT/9 Linking--Reading

Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa TN	616.02	44.93	-0.5985	5.8858	423	722	0.7361
	Fa SAT9	598.45	44.24	0.0516	2.6992	370	749	
	Unrounded	600.40	48.94	0.6431	4.1110			
	Rounded	600.38	48.93	0.6451	4.1116			
3	Fa TN	626.11	43.47	-0.5300	5.4637	427	750	0.7642
	Fa SAT9	620.80	42.17	-0.0843	2.9055	427	767	
	Unrounded	621.49	43.63	0.2111	3.5725			
	Rounded	621.48	43.64	0.2115	3.5693			
4	Fa TN	633.98	50.26	-1.1428	6.7023	433	780	0.7209
	Fa SAT9	638.15	45.17	0.0214	2.7878	445	773	
	Unrounded	638.47	45.34	0.0929	2.8183			
	Rounded	638.46	45.35	0.0928	2.8193			
5	Fa TN	648.47	53.42	-1.1300	5.3652	475	790	0.6849
	Fa SAT9	655.67	38.19	-0.0262	2.9228	470	804	
	Unrounded	656.42	38.66	0.3353	3.6891			
	Rounded	656.39	38.66	0.3371	3.6901			
6	Fa TN	655.42	53.17	-0.7567	5.3481	486	800	0.6991
	Fa SAT9	670.67	41.45	0.0918	3.1732	483	808	
	Unrounded	671.30	42.23	0.3381	3.6403			
	Rounded	671.31	42.22	0.3363	3.6422			
7	Fa TN	660.85	51.69	-0.5502	4.8313	498	810	0.7518
	Fa SAT9	679.50	41.67	-0.0081	2.9580	485	818	
	Unrounded	680.29	42.58	0.2814	3.4468			
	Rounded	680.32	42.57	0.2800	3.4405			
8	Fa TN	680.17	47.89	-0.4040	5.1489	507	820	0.7852
	Fa SAT9	694.79	38.83	0.0787	2.9374	507	830	
	Unrounded	695.61	40.39	0.4269	3.7653			
	Rounded	695.57	40.36	0.4259	3.7779			
9	Fa TN	676.33	45.85	-0.9870	6.1374	512	833	0.7153
	Fa SAT9	690.57	36.86	0.0070	3.2180	501	842	
	Unrounded	691.06	36.85	0.2653	3.6669			
	Rounded	691.05	36.86	0.2702	3.6632			

Table B 2
After linking summary statistics
Fall to Spring SAT/9 Linking--Reading

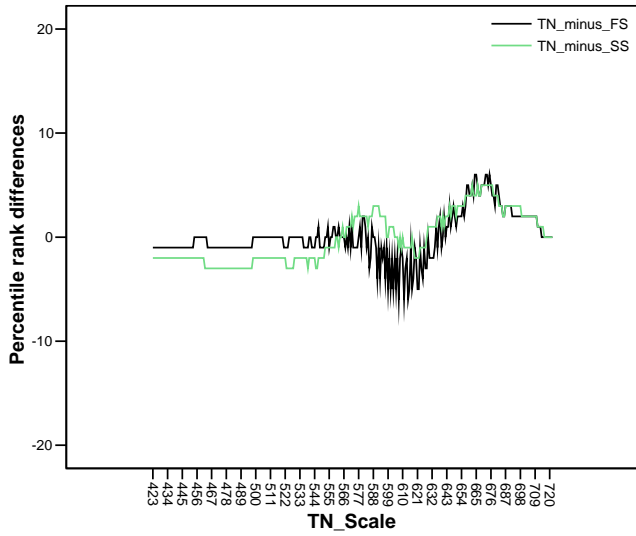
Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa SAT9	599.57	43.92	0.0501	2.6546	370	749	0.8525
	Sp SAT9	586.53	41.92	0.1943	2.3564	359	759	
	Unrounded	586.41	41.68	0.1842	2.3483			
	Rounded	586.46	41.72	0.1807	2.3411			
3	Fa SAT9	622.99	40.33	-0.0321	2.9614	427	767	0.8053
	Sp SAT9	613.24	42.51	0.3078	2.7831	406	775	
	Unrounded	612.99	42.22	0.2891	2.7528			
	Rounded	613.00	42.25	0.2890	2.7522			
4	Fa SAT9	640.77	44.71	0.0298	2.8556	445	773	0.8421
	Sp SAT9	639.41	40.80	0.1494	2.7694	437	799	
	Unrounded	639.38	41.08	0.2302	3.2082			
	Rounded	639.36	41.08	0.2251	3.2002			
5	Fa SAT9	658.19	36.79	-0.0102	3.0394	470	804	0.8198
	Sp SAT9	654.25	36.84	0.0448	2.9208	457	816	
	Unrounded	654.20	36.69	0.0264	2.8609			
	Rounded	654.20	36.70	0.0218	2.8543			
6	Fa SAT9	674.02	39.46	0.1669	3.3507	483	808	0.8400
	Sp SAT9	670.46	33.87	-0.0284	2.8287	473	828	
	Unrounded	670.67	34.64	0.2080	3.8333			
	Rounded	670.66	34.67	0.2080	3.8240			
7	Fa SAT9	681.90	40.42	0.0090	3.0442	485	818	0.8467
	Sp SAT9	682.45	37.82	-0.1958	2.8597	471	837	
	Unrounded	682.40	37.82	-0.1690	3.0271			
	Rounded	682.35	37.75	-0.1647	3.0352			
8	Fa SAT9	697.74	37.38	0.0946	3.1035	507	830	0.8209
	Sp SAT9	694.66	33.32	-0.1139	2.8746	493	849	
	Unrounded	694.69	33.52	-0.0235	3.2065			
	Rounded	694.59	33.51	-0.0272	3.2109			
9	Fa SAT9	691.91	36.67	0.0242	3.3091	501	842	0.8043
	Sp SAT9	684.48	30.74	0.3041	3.4431	503	853	
	Unrounded	684.42	30.65	0.3021	3.5409			
	Rounded	684.36	30.62	0.3058	3.5427			

Table B 3
After linking summary statistics
TN to Spring SAT/9 Linking--Reading

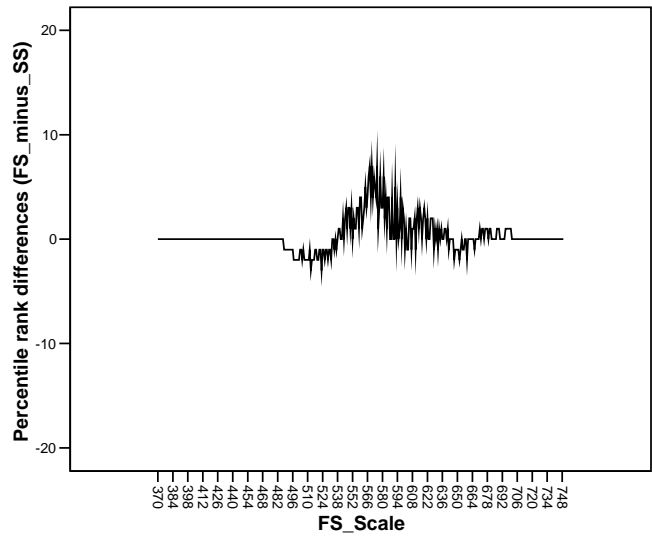
Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa TN	616.61	44.50	-0.5515	5.7772	423	722	0.6695
	Sp SAT9	585.36	42.04	0.2087	2.4030	359	759	
	Unrounded	587.36	47.12	0.8615	4.2792			
	Rounded	587.39	47.15	0.8683	4.3083			
3	Fa TN	628.84	41.55	-0.5475	5.9901	427	750	0.7302
	Sp SAT9	613.78	42.89	0.3002	2.8091	406	775	
	Unrounded	614.39	44.61	0.5873	3.8165			
	Rounded	614.40	44.61	0.5853	3.8150			
4	Fa TN	635.43	48.58	-1.0041	6.5639	433	780	0.6711
	Sp SAT9	639.37	41.17	0.1071	2.6753	437	799	
	Unrounded	639.82	42.23	0.3509	3.4835			
	Rounded	639.87	42.25	0.3475	3.4786			
5	Fa TN	651.09	51.83	-1.1235	5.6396	475	790	0.6504
	Sp SAT9	654.02	37.07	0.0515	2.8603	457	816	
	Unrounded	654.86	38.39	0.5551	4.4483			
	Rounded	654.82	38.36	0.5617	4.4605			
6	Fa TN	657.87	50.84	-0.7014	5.6721	486	800	0.6774
	Sp SAT9	669.11	34.38	-0.0002	2.7433	473	828	
	Unrounded	670.46	37.98	0.8283	5.4193			
	Rounded	670.47	37.98	0.8285	5.4241			
7	Fa TN	663.60	49.67	-0.5320	5.0471	498	810	0.7298
	Sp SAT9	682.23	37.83	-0.2088	2.8146	471	837	
	Unrounded	683.31	40.45	0.4241	4.6317			
	Rounded	683.33	40.42	0.4261	4.6384			
8	Fa TN	683.66	45.48	-0.2532	5.3555	507	820	0.7589
	Sp SAT9	695.00	33.05	-0.1283	2.9055	493	849	
	Unrounded	696.14	35.90	0.5857	4.7968			
	Rounded	696.14	35.91	0.5813	4.8021			
9	Fa TN	678.78	46.22	-1.0204	6.2261	512	833	0.6635
	Sp SAT9	686.28	31.45	0.2082	3.1840	503	853	
	Unrounded	686.81	32.58	0.7464	5.6202			
	Rounded	686.78	32.58	0.7463	5.6332			

Figure B 1
Percentile rank differences
Reading Grades 2 - 3

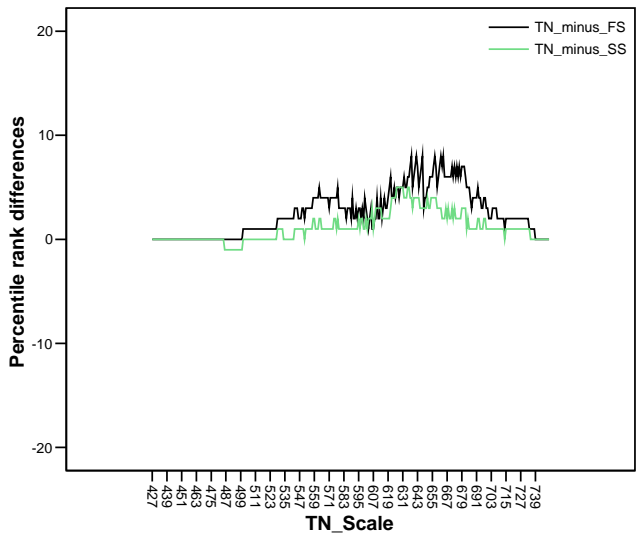
Reading Grade 2



Reading Grade 2



Reading Grade 3



Reading Grade 3

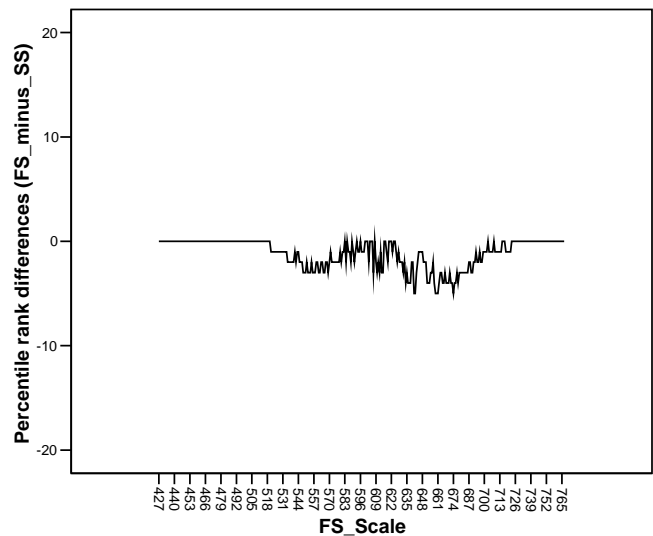
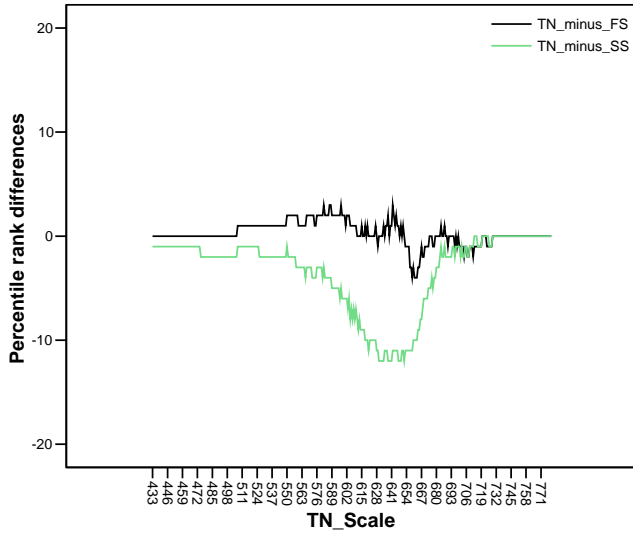
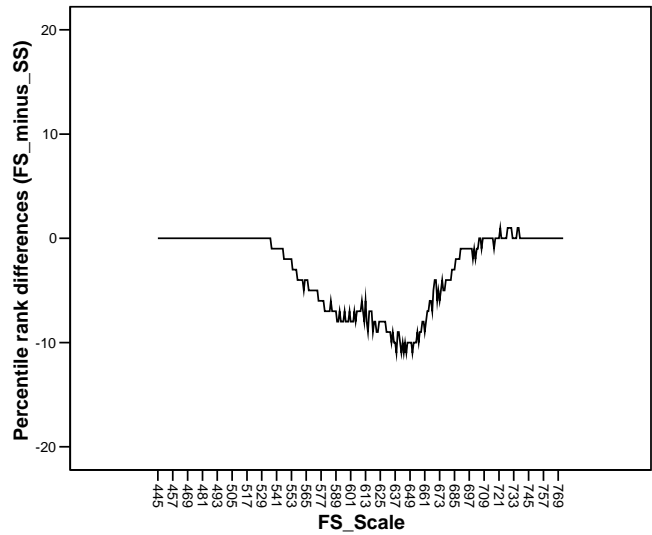


Figure B 2
Percentile rank differences
Reading Grades 4 – 5

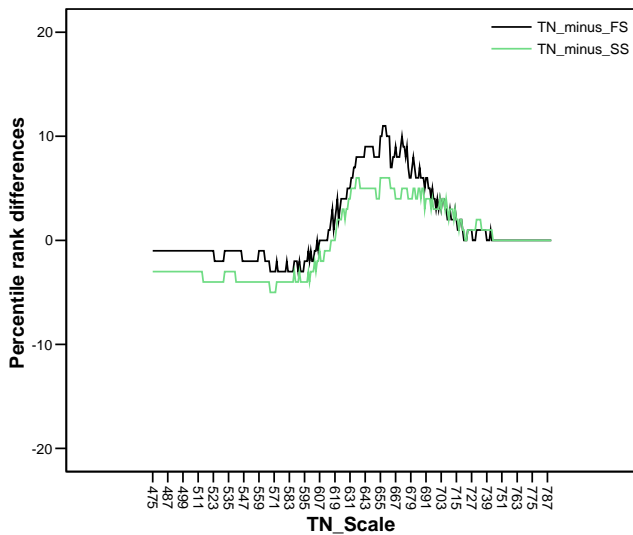
Reading Grade 4



Reading Grade 4



Reading Grade 5



Reading Grade 5

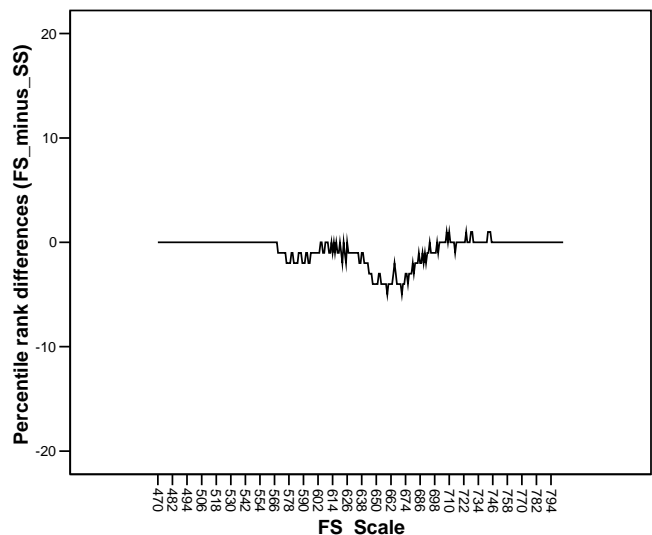
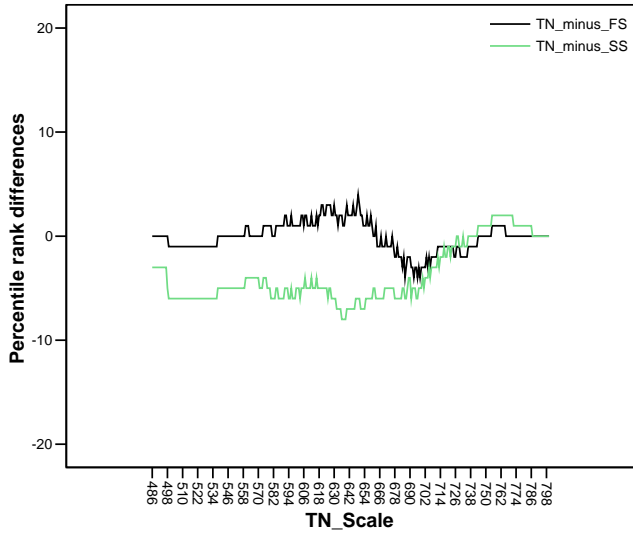
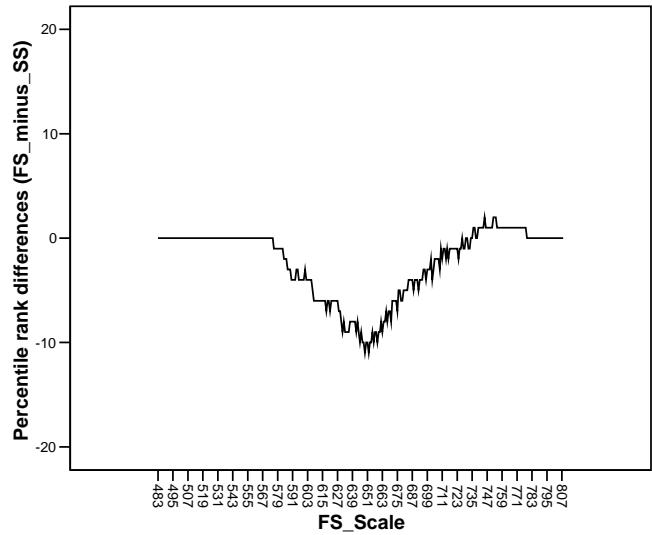


Figure B 3
Percentile rank differences
Reading Grades 6 – 7

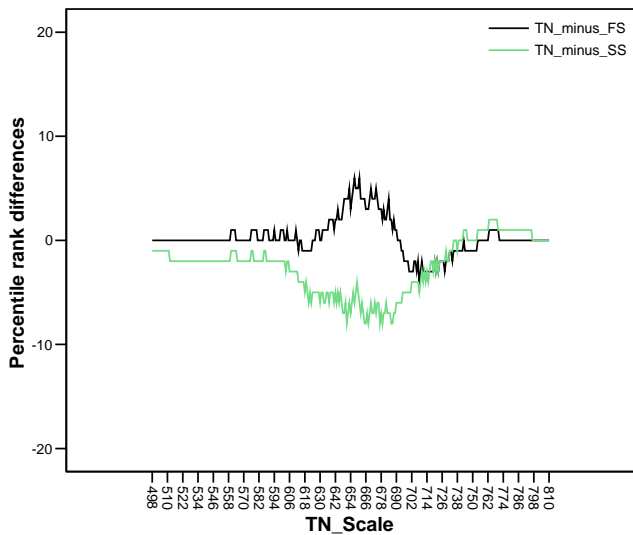
Reading Grade 6



Reading Grade 6



Reading Grade 7



Reading Grade 7

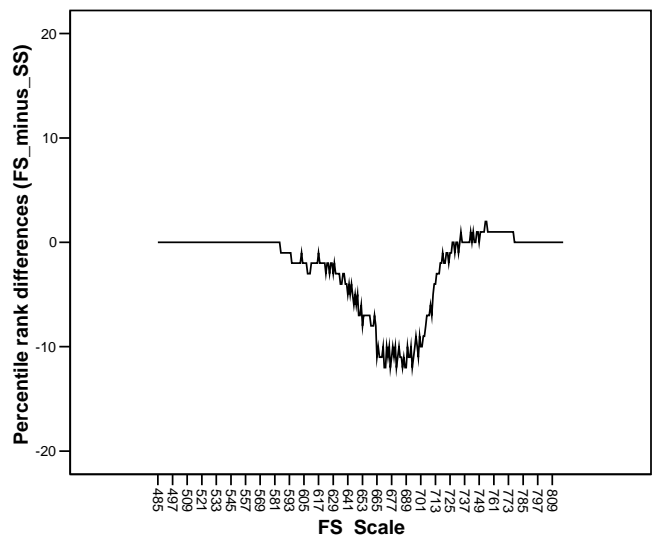
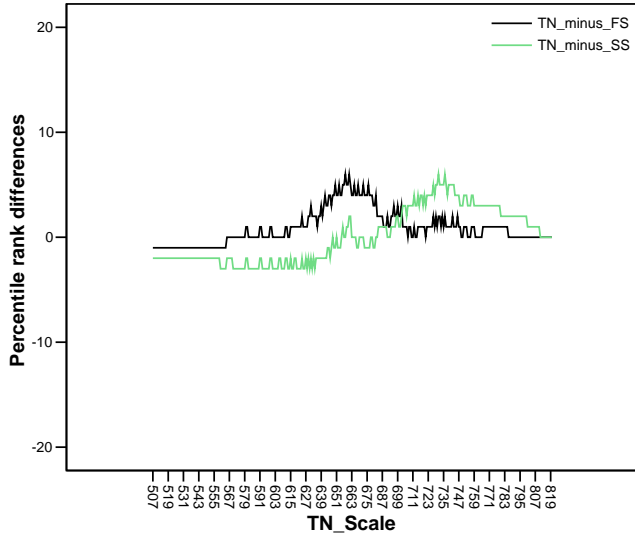
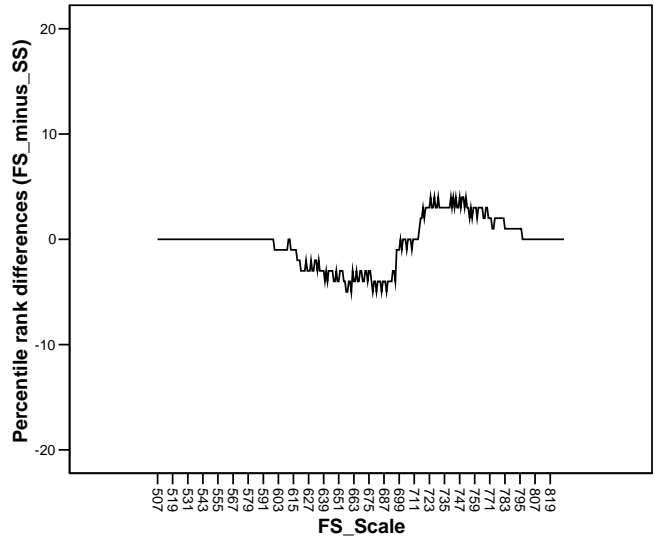


Figure B 4
Percentile rank differences
Reading Grades 8 – 9

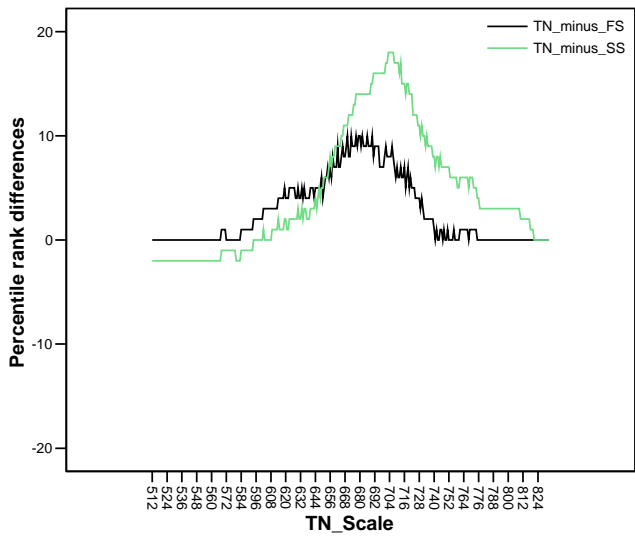
Reading Grade 8



Reading Grade 8



Reading Grade 9



Reading Grade 9

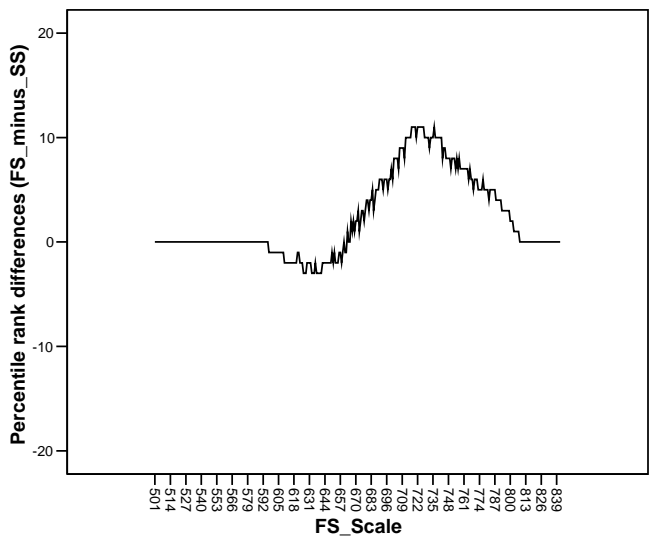


Table B 4
After linking summary statistics
TN to Fall SAT/9 Linking--Language

Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa TN	607.26	44.82	-0.4668	5.1375	424	706	0.6577
	Fa SAT9	596.63	36.24	0.3729	3.3521	437	714	
	Unrounded	597.04	36.00	0.4802	3.3857			
	Rounded	597.06	35.99	0.4796	3.3813			
3	Fa TN	624.05	45.06	-0.6491	5.6690	455	730	0.7193
	Fa SAT9	614.29	39.32	0.2120	2.9529	470	745	
	Unrounded	615.50	41.11	0.6005	3.8420			
	Rounded	615.54	41.09	0.6007	3.8383			
4	Fa TN	635.10	49.39	-0.9578	5.5900	465	757	0.7107
	Fa SAT9	633.65	46.21	0.1917	2.7908	479	754	
	Unrounded	634.14	45.92	0.2545	2.6822			
	Rounded	634.14	45.93	0.2548	2.6790			
5	Fa TN	651.74	50.72	-0.9394	5.6786	480	782	0.6460
	Fa SAT9	648.88	39.23	0.1561	3.0086	497	765	
	Unrounded	649.55	39.42	0.3317	3.0912			
	Rounded	649.61	39.46	0.3275	3.0817			
6	Fa TN	659.08	46.34	-0.6734	6.4881	495	808	0.6872
	Fa SAT9	655.52	37.23	-0.1440	2.9865	505	781	
	Unrounded	656.44	38.20	0.2312	3.5054			
	Rounded	656.40	38.16	0.2290	3.5165			
7	Fa TN	662.00	53.05	-0.5597	5.4523	502	814	0.6675
	Fa SAT9	665.66	37.05	-0.1316	3.1926	514	791	
	Unrounded	667.14	38.96	0.4739	4.0654			
	Rounded	667.16	38.96	0.4706	4.0694			
8	Fa TN	672.95	43.13	0.0423	5.9662	523	819	0.7067
	Fa SAT9	670.99	37.97	0.0742	2.9868	520	795	
	Unrounded	671.89	39.41	0.4159	3.5496			
	Rounded	671.96	39.40	0.4168	3.5426			
9	Fa TN	668.98	42.85	-0.4494	6.0824	530	829	0.6493
	Fa SAT9	669.15	33.35	0.2137	3.4243	532	807	
	Unrounded	669.75	33.87	0.5784	4.2864			
	Rounded	669.72	33.86	0.5825	4.2897			

Table B 5
After linking summary statistics
Fall to Spring SAT/9 Linking--Language

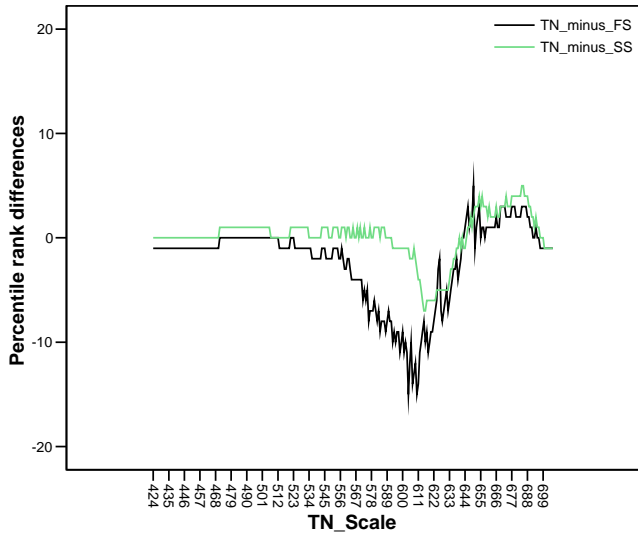
Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa SAT9	597.02	35.93	0.3853	3.3683	437	714	0.7216
	Sp SAT9	562.90	35.55	0.6535	3.5125	392	705	
	Unrounded	562.47	35.92	0.6994	3.9706			
	Rounded	562.32	35.89	0.7036	3.9871			
3	Fa SAT9	616.14	38.71	0.2342	3.0746	470	745	0.7489
	Sp SAT9	590.08	39.59	0.2832	2.6066	433	752	
	Unrounded	589.84	39.80	0.3295	2.7621			
	Rounded	589.91	39.86	0.3248	2.7510			
4	Fa SAT9	636.01	45.69	0.1853	2.8335	479	754	0.7678
	Sp SAT9	608.20	33.73	0.0883	2.7198	449	761	
	Unrounded	608.98	36.46	0.7533	5.0928			
	Rounded	609.05	36.46	0.7557	5.0873			
5	Fa SAT9	650.69	38.47	0.1691	3.0808	497	765	0.7346
	Sp SAT9	622.02	32.66	-0.1112	3.0145	450	766	
	Unrounded	622.13	33.27	0.1401	3.9251			
	Rounded	622.21	33.26	0.1385	3.9601			
6	Fa SAT9	658.31	35.76	-0.1524	3.1540	505	781	0.7432
	Sp SAT9	638.33	32.04	-0.1351	3.0814	457	784	
	Unrounded	638.22	31.99	-0.0620	3.5012			
	Rounded	638.19	31.98	-0.0570	3.5078			
7	Fa SAT9	667.51	36.10	-0.1170	3.1864	514	791	0.7373
	Sp SAT9	649.76	37.86	-0.0926	3.1251	462	784	
	Unrounded	649.58	37.45	-0.1355	3.0125			
	Rounded	649.57	37.43	-0.1308	3.0166			
8	Fa SAT9	673.49	36.89	0.0794	3.0429	520	795	0.7733
	Sp SAT9	653.33	37.14	0.0937	3.1538	475	794	
	Unrounded	653.21	36.87	0.1304	3.2260			
	Rounded	653.12	36.80	0.1255	3.2329			
9	Fa SAT9	670.33	33.41	0.2013	3.4498	532	807	0.7364
	Sp SAT9	642.03	31.12	0.3046	3.1533	485	802	
	Unrounded	642.02	31.08	0.4020	3.5590			
	Rounded	641.95	31.12	0.4080	3.5540			

Table B 6
After linking summary statistics
TN to Spring SAT/9 Linking--Language

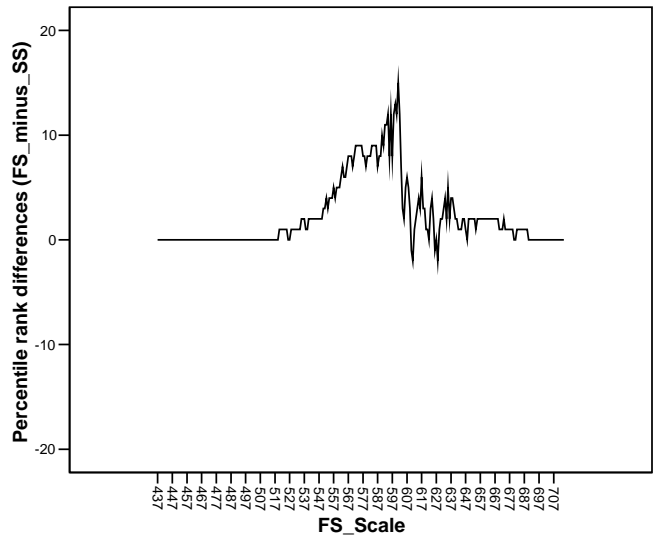
Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa TN	608.04	44.17	-0.3674	4.9163	424	706	0.6191
	Sp SAT9	563.72	36.27	0.6356	3.4975	392	705	
	Unrounded	564.10	37.34	0.9055	4.5872			
	Rounded	564.08	37.31	0.9041	4.5876			
3	Fa TN	626.42	43.59	-0.6084	5.9366	455	730	0.6603
	Sp SAT9	590.08	39.57	0.2673	2.6265	433	752	
	Unrounded	591.79	43.59	0.9371	4.6214			
	Rounded	591.81	43.63	0.9445	4.6506			
4	Fa TN	637.07	47.16	-0.8666	5.7275	465	757	0.6600
	Sp SAT9	608.23	33.87	0.0652	2.7285	449	761	
	Unrounded	609.15	36.14	0.7357	5.1694			
	Rounded	609.17	36.10	0.7373	5.1840			
5	Fa TN	651.14	49.07	-0.9752	5.9074	480	782	0.6288
	Sp SAT9	619.98	33.19	-0.1140	3.0131	450	766	
	Unrounded	621.13	35.48	0.6813	5.3763			
	Rounded	621.10	35.49	0.6822	5.3750			
6	Fa TN	658.87	45.80	-0.5818	6.6483	495	808	0.6626
	Sp SAT9	634.95	33.28	-0.1102	2.8946	457	784	
	Unrounded	636.27	36.62	0.7951	5.7961			
	Rounded	636.31	36.62	0.7945	5.7847			
7	Fa TN	661.93	51.74	-0.5121	5.6446	502	814	0.6705
	Sp SAT9	646.28	38.63	-0.0420	2.9707	462	784	
	Unrounded	647.73	41.40	0.5600	4.2904			
	Rounded	647.74	41.42	0.5602	4.2866			
8	Fa TN	674.85	42.37	0.0720	6.3062	523	819	0.7271
	Sp SAT9	652.33	36.65	0.0852	3.0955	475	794	
	Unrounded	653.58	39.60	0.7348	4.7985			
	Rounded	653.65	39.62	0.7289	4.7899			
9	Fa TN	671.76	42.77	-0.3857	6.1861	530	829	0.6509
	Sp SAT9	644.81	32.64	0.2966	2.9597	485	802	
	Unrounded	645.56	34.23	0.8532	5.0149			
	Rounded	645.54	34.23	0.8606	5.0646			

Figure B 5
Percentile rank differences
Language Grades 2 – 3

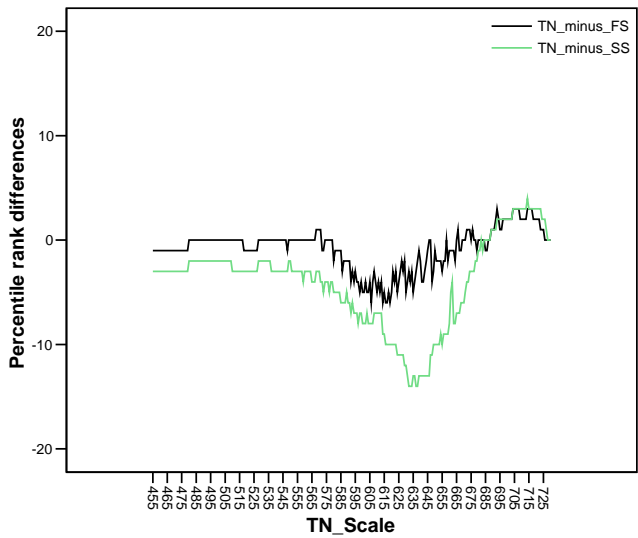
Language Grade 2



Language Grade 2



Language Grade 3



Language Grade 3

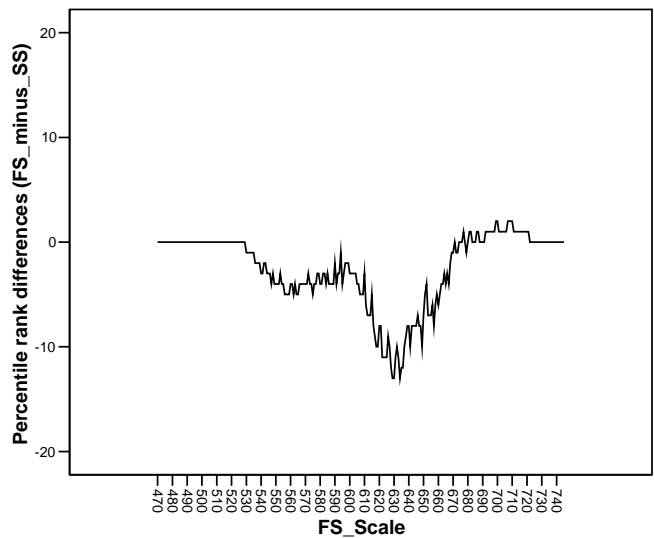
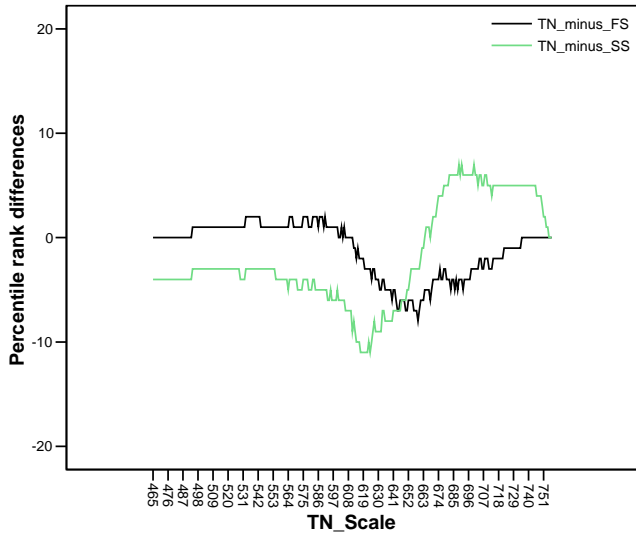
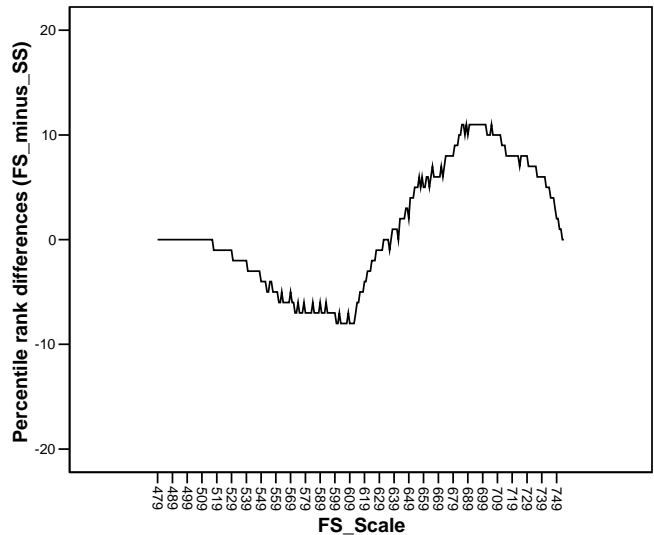


Figure B 6
Percentile rank differences
Language Grades 4 – 5

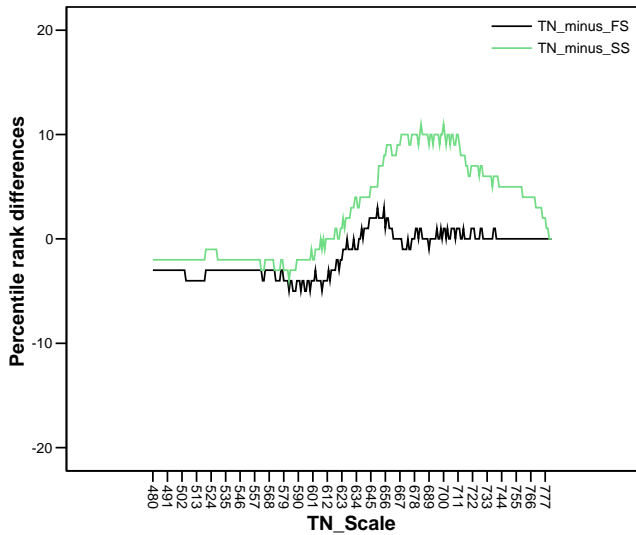
Language Grade 4



Language Grade 4



Language Grade 5



Language Grade 5

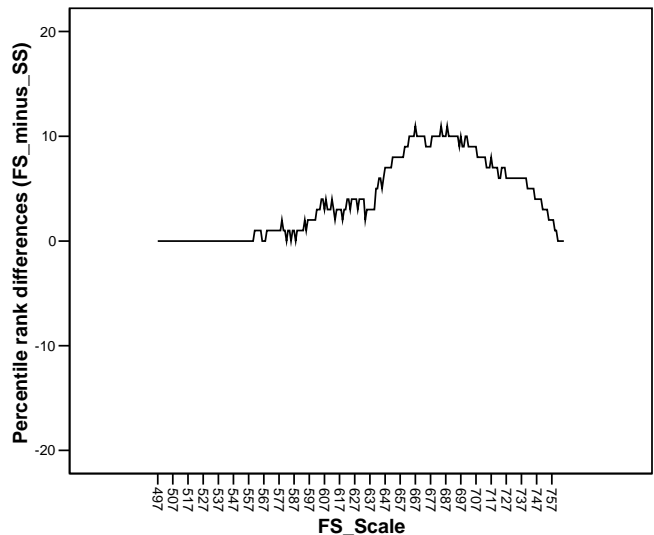
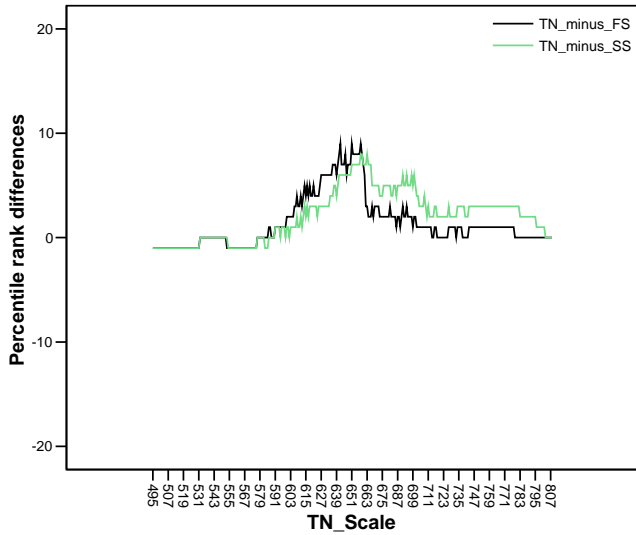
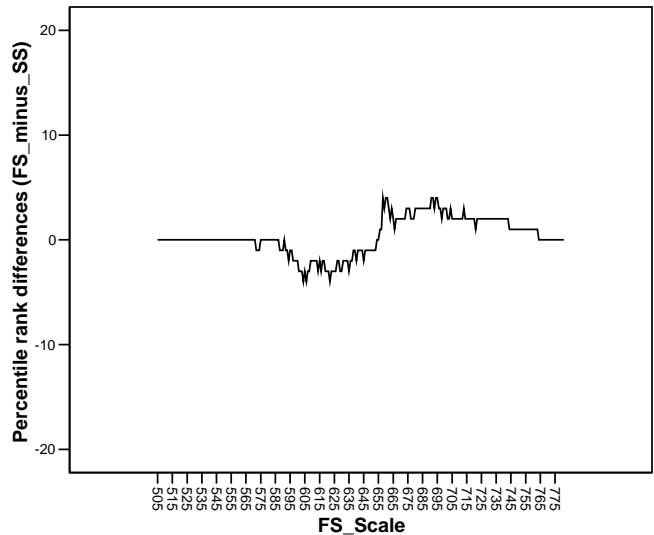


Figure B 7
Percentile rank differences
Language Grades 6 – 7

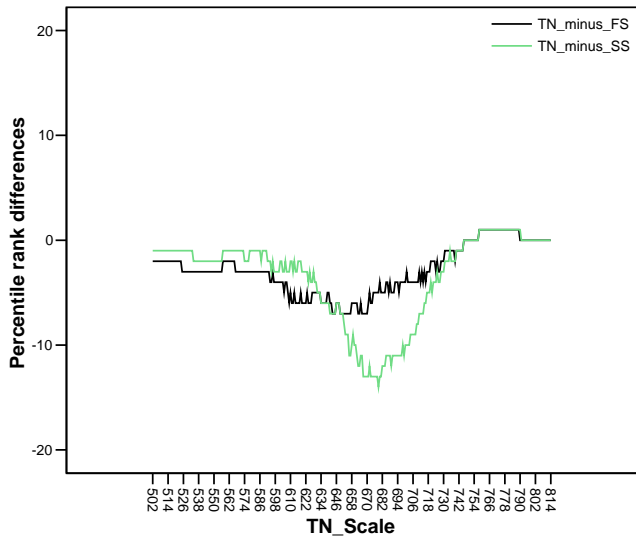
Language Grade 6



Language Grade 6



Language Grade 7



Language Grade 7

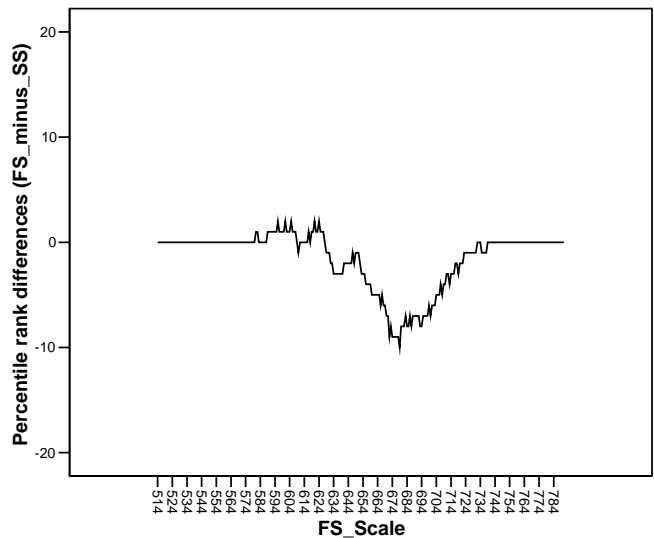
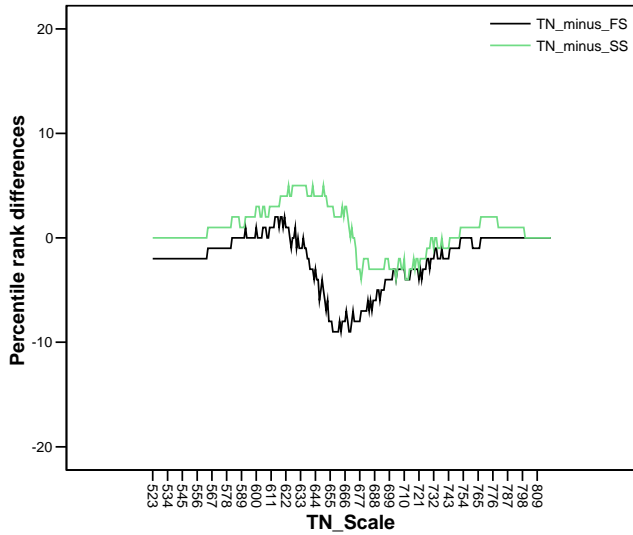
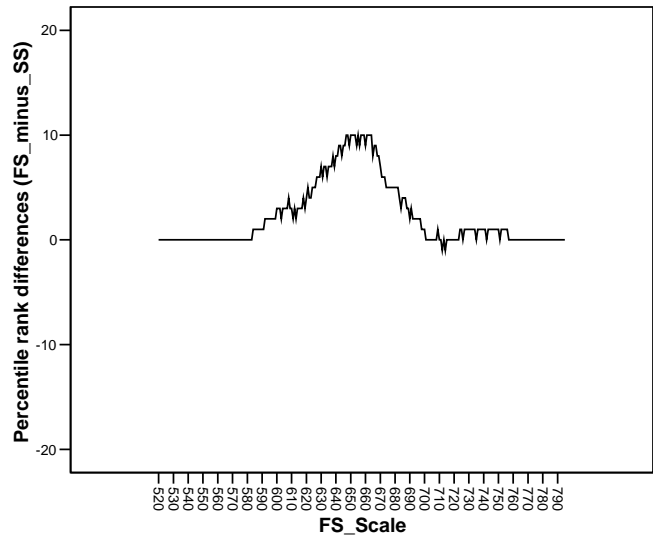


Figure B 8
Percentile rank differences
Language Grades 8 – 9

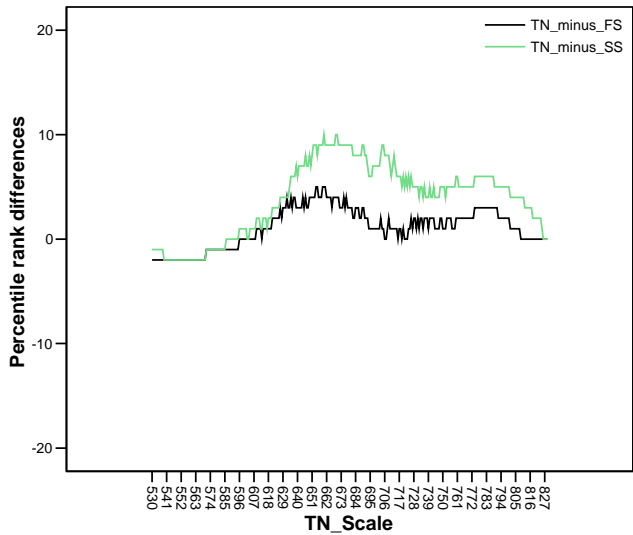
Language Grade 8



Language Grade 8



Language Grade 9



Language Grade 9

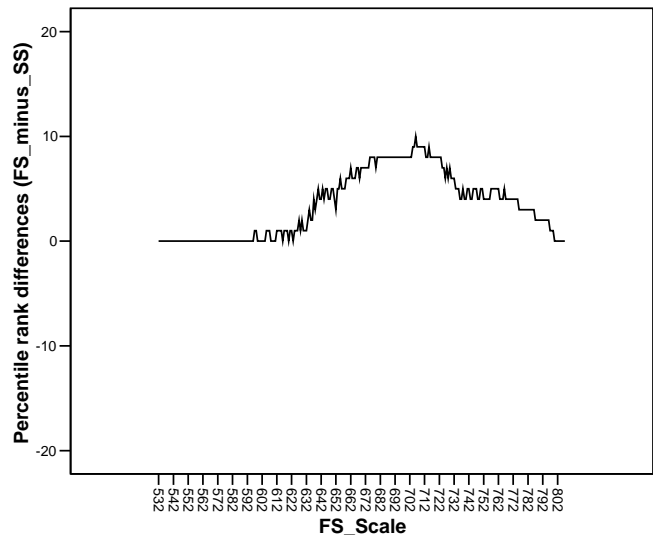


Table B 7
After linking summary statistics
TN to Fall SAT/9 Linking--Mathematics

Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa TN	575.09	45.71	0.9296	6.1455	347	720	0.6844
	Fa SAT9	590.90	40.53	0.1739	2.9064	387	709	
	Unrounded	592.26	43.46	0.5121	3.5501			
	Rounded	592.30	43.48	0.5140	3.5447			
3	Fa TN	614.29	44.16	-0.0086	5.6494	385	740	0.7382
	Fa SAT9	617.65	47.41	0.2018	2.7033	422	749	
	Unrounded	618.54	49.28	0.4011	3.0818			
	Rounded	618.57	49.26	0.4013	3.0825			
4	Fa TN	627.15	56.79	-0.9029	6.3926	403	770	0.6724
	Fa SAT9	638.92	40.71	0.0840	2.8953	453	767	
	Unrounded	639.98	42.70	0.4325	3.5749			
	Rounded	639.92	42.69	0.4349	3.5811			
5	Fa TN	643.92	52.79	-0.1948	4.6830	430	797	0.7192
	Fa SAT9	658.21	40.62	0.1127	2.9431	481	788	
	Unrounded	659.00	42.19	0.3940	3.4979			
	Rounded	658.99	42.20	0.3934	3.4986			
6	Fa TN	667.56	50.80	-0.5427	4.9789	477	820	0.7850
	Fa SAT9	678.70	48.47	0.2200	2.7608	494	807	
	Unrounded	679.00	48.58	0.2565	2.7111			
	Rounded	679.02	48.55	0.2561	2.7144			
7	Fa TN	675.11	56.52	-0.2448	5.4234	487	850	0.7445
	Fa SAT9	685.72	43.87	0.4940	2.9254	525	831	
	Unrounded	686.51	45.47	0.7457	3.6463			
	Rounded	686.49	45.46	0.7465	3.6479			
8	Fa TN	700.39	49.96	-0.1246	5.2896	502	872	0.7892
	Fa SAT9	693.66	42.56	0.6571	3.4751	537	849	
	Unrounded	693.97	43.34	0.7951	3.9692			
	Rounded	693.97	43.35	0.7961	3.9686			
9	Fa TN	690.65	51.95	-0.4319	5.4400	513	877	0.6756
	Fa SAT9	698.34	37.48	0.7194	4.2930	572	844	
	Unrounded	698.58	37.39	0.8232	4.3306			
	Rounded	698.57	37.41	0.8219	4.3297			

Table B 8
After linking summary statistics
Fall to Spring SAT/9 Linking--Mathematics

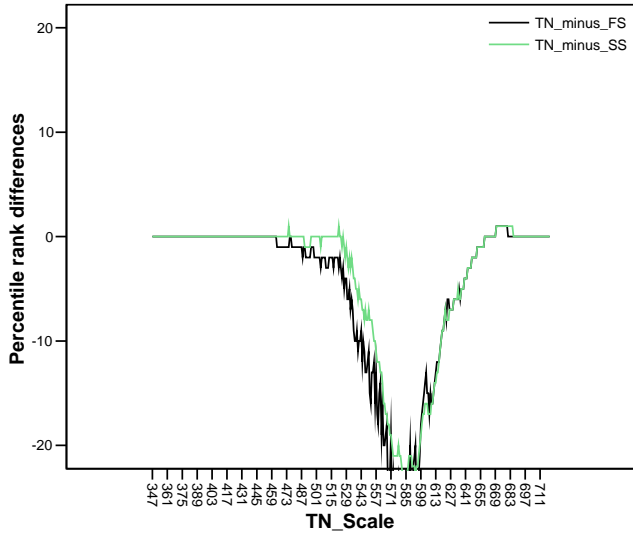
Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa SAT9	591.63	40.60	0.1605	2.9440	387	709	0.7527
	Sp SAT9	579.09	43.54	0.0473	3.3185	368	731	
	Unrounded	579.09	44.00	0.1330	3.6910			
	Rounded	579.03	44.01	0.1321	3.6791			
3	Fa SAT9	619.21	46.64	0.2036	2.7346	422	749	0.8173
	Sp SAT9	605.97	42.05	0.1314	2.6594	399	767	
	Unrounded	606.17	43.02	0.3335	3.4650			
	Rounded	606.06	42.99	0.3385	3.4717			
4	Fa SAT9	641.02	40.01	0.0838	2.9496	453	767	0.8172
	Sp SAT9	632.33	39.00	0.2207	3.1254	435	784	
	Unrounded	632.23	38.91	0.2488	3.2987			
	Rounded	632.30	38.91	0.2390	3.2889			
5	Fa SAT9	660.47	39.56	0.1365	2.9957	481	788	0.8237
	Sp SAT9	654.35	36.97	0.3540	3.3171	458	805	
	Unrounded	654.25	36.97	0.3918	3.5681			
	Rounded	654.27	36.96	0.3871	3.5711			
6	Fa SAT9	682.70	46.98	0.2618	2.8358	494	807	0.8524
	Sp SAT9	678.38	39.83	0.1578	2.8369	482	831	
	Unrounded	678.98	42.02	0.5660	4.3143			
	Rounded	678.99	42.08	0.5612	4.2993			
7	Fa SAT9	688.24	43.46	0.4722	2.9365	525	831	0.8760
	Sp SAT9	686.96	39.62	0.5090	3.1797	507	854	
	Unrounded	686.92	39.60	0.5383	3.3662			
	Rounded	686.85	39.65	0.5365	3.3627			
8	Fa SAT9	696.16	42.55	0.6693	3.4953	537	849	0.8719
	Sp SAT9	696.15	38.52	0.5410	3.2623	520	861	
	Unrounded	696.20	38.78	0.6170	3.6442			
	Rounded	696.14	38.78	0.6167	3.6411			
9	Fa SAT9	699.37	37.64	0.7190	4.2612	572	844	0.7606
	Sp SAT9	697.31	32.61	0.4500	3.2341	553	860	
	Unrounded	697.66	33.76	0.8334	5.2053			
	Rounded	697.68	33.71	0.8406	5.2361			

Table B 9
After linking summary statistics
TN to Spring SAT/9 Linking--Mathematics

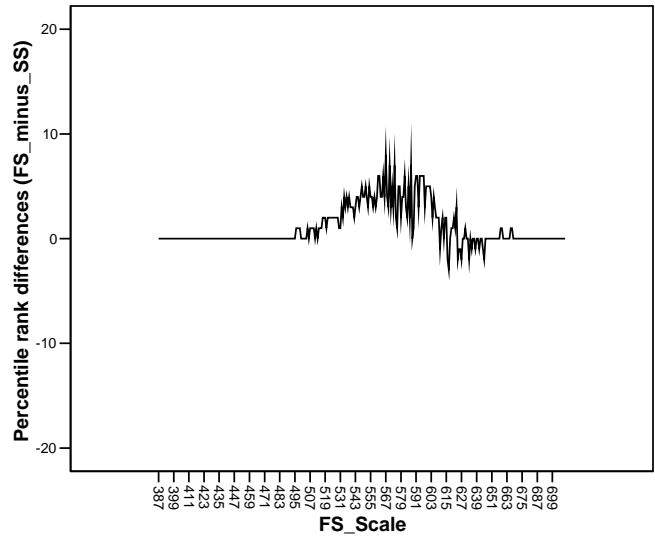
Grade		Mean	SD	Skewness	Kurtosis	Min	Max	Correlation
2	Fa TN	575.52	45.40	1.0584	5.8265	347	720	0.6047
	Sp SAT9	578.42	43.58	0.0416	3.3230	368	731	
	Unrounded	581.09	50.35	0.7951	4.8031			
	Rounded	581.09	50.34	0.7947	4.8057			
3	Fa TN	616.04	42.55	0.1557	5.5710	385	740	0.6921
	Sp SAT9	605.99	41.70	0.1099	2.6826	399	767	
	Unrounded	608.09	46.97	0.7990	4.4165			
	Rounded	608.13	47.06	0.8046	4.4311			
4	Fa TN	625.45	59.20	-0.9559	5.9252	403	770	0.5698
	Sp SAT9	632.17	39.05	0.1593	2.9804	435	784	
	Unrounded	633.85	43.24	0.8813	5.0050			
	Rounded	633.85	43.24	0.8800	5.0071			
5	Fa TN	646.40	50.86	-0.0823	4.6573	430	797	0.6778
	Sp SAT9	654.47	37.19	0.3604	3.3314	458	805	
	Unrounded	655.63	40.64	0.9486	5.3282			
	Rounded	655.62	40.61	0.9515	5.3361			
6	Fa TN	670.42	48.68	-0.5072	5.1732	477	820	0.7477
	Sp SAT9	677.71	39.81	0.1560	2.7998	482	831	
	Unrounded	678.45	41.83	0.5349	4.0528			
	Rounded	678.44	41.83	0.5372	4.0527			
7	Fa TN	677.80	54.83	-0.1815	5.5882	487	850	0.7252
	Sp SAT9	686.54	39.73	0.5227	3.1742	507	854	
	Unrounded	687.66	42.92	1.0320	5.0291			
	Rounded	687.72	42.97	1.0362	5.0527			
8	Fa TN	701.87	48.95	-0.1149	5.5633	502	872	0.7759
	Sp SAT9	695.16	38.03	0.5441	3.2559	520	861	
	Unrounded	695.89	40.24	1.0028	5.1820			
	Rounded	695.88	40.22	1.0049	5.1936			
9	Fa TN	695.26	52.34	-0.2611	5.5286	513	877	0.6895
	Sp SAT9	700.55	34.14	0.4867	3.2201	553	860	
	Unrounded	701.28	36.44	1.0376	5.6457			
	Rounded	701.28	36.45	1.0359	5.6404			

Figure B 9
Percentile rank differences
Mathematics Grades 2 – 3

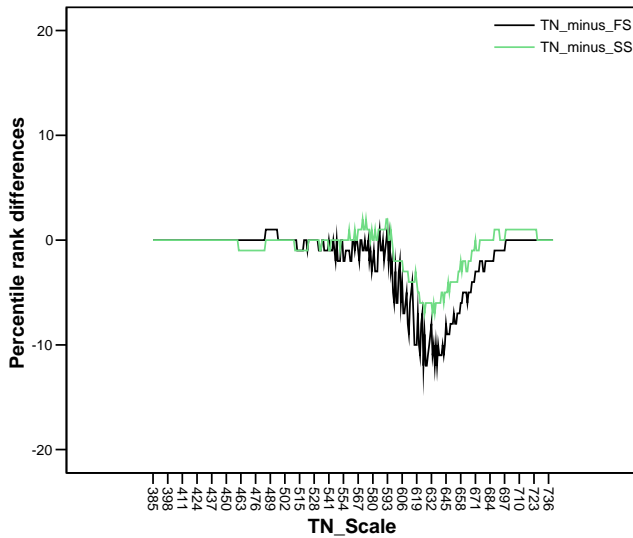
Mathematics Grade 2



Mathematics Grade 2



Mathematics Grade 3



Mathematics Grade 3

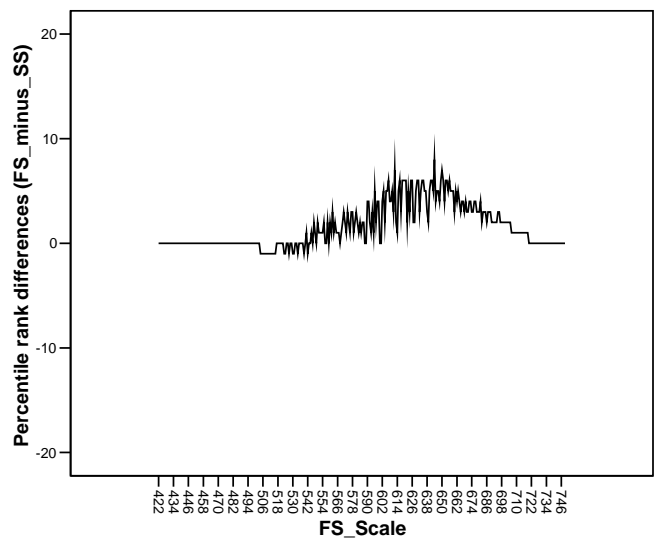
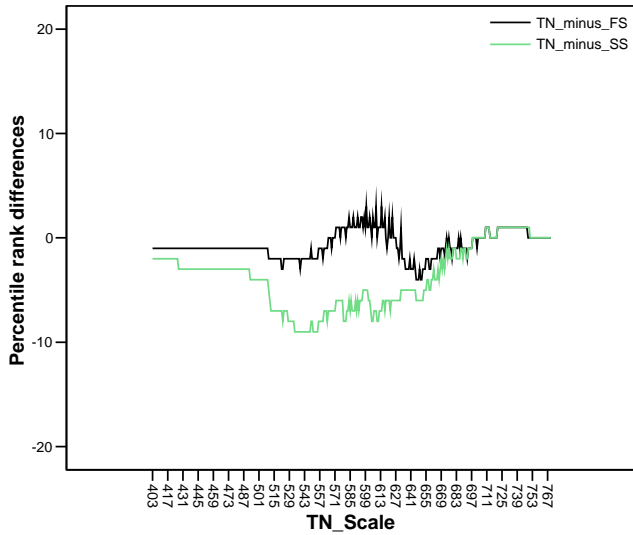
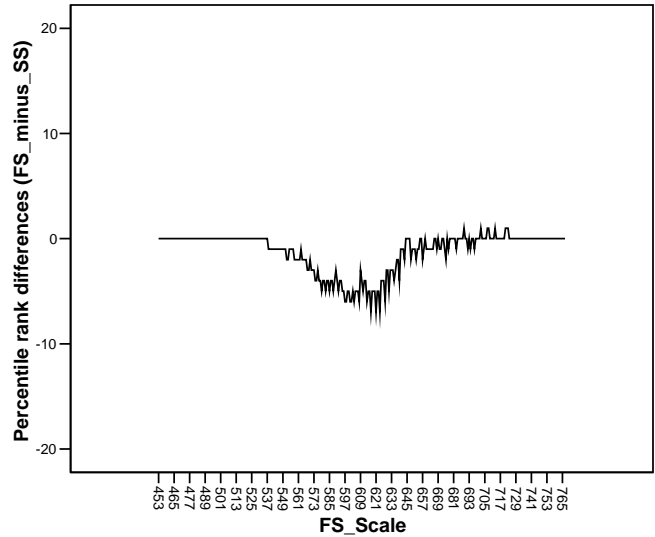


Figure B 10
Percentile rank differences
Mathematics Grades 4 – 5

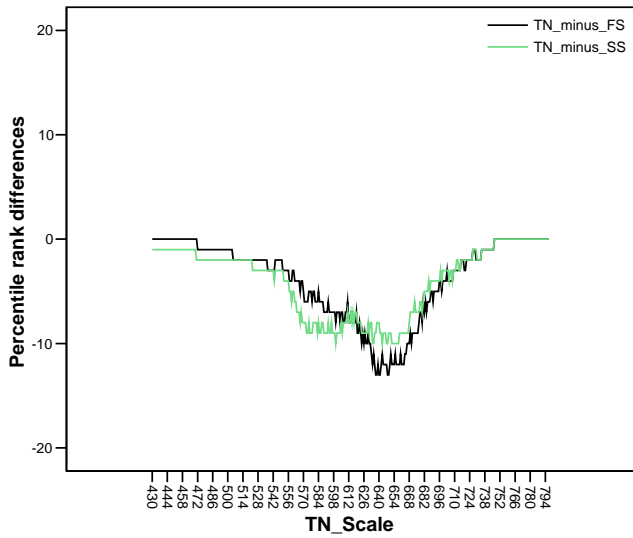
Mathematics Grade 4



Mathematics Grade 4



Mathematics Grade 5



Mathematics Grade 5

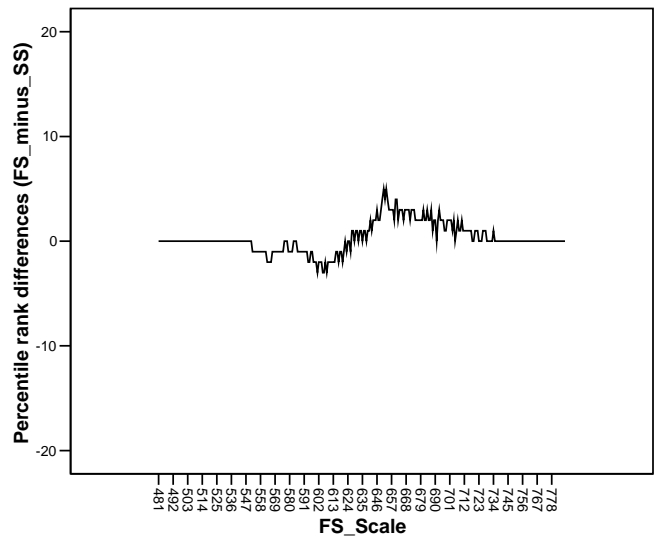
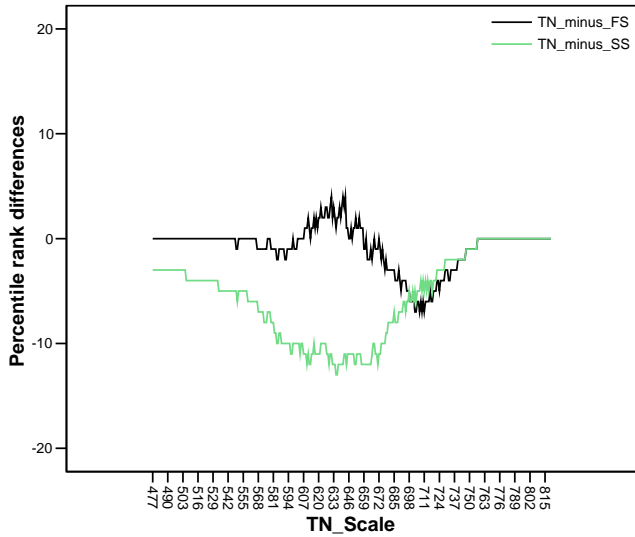
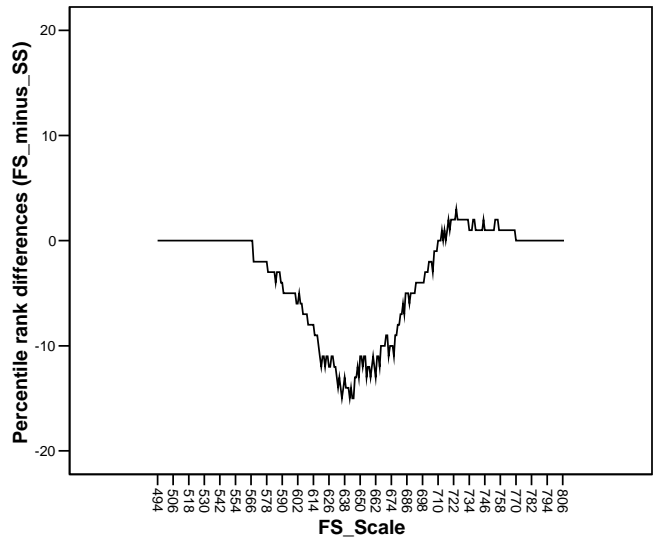


Figure B 11
Percentile rank differences
Mathematics Grades 6 – 7

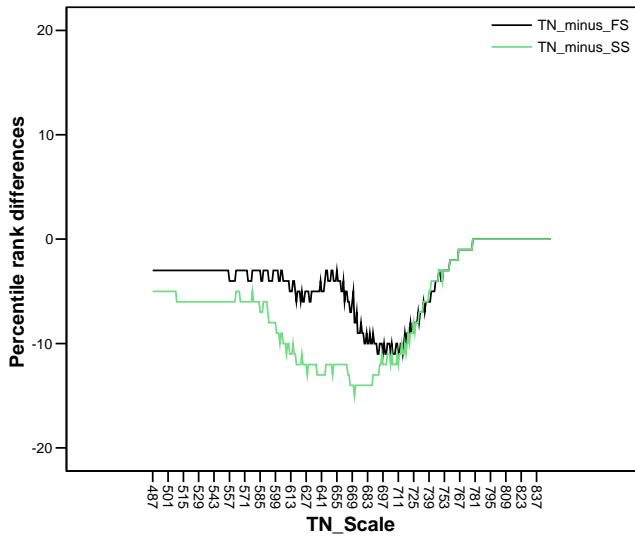
Mathematics Grade 6



Mathematics Grade 6



Mathematics Grade 7



Mathematics Grade 7

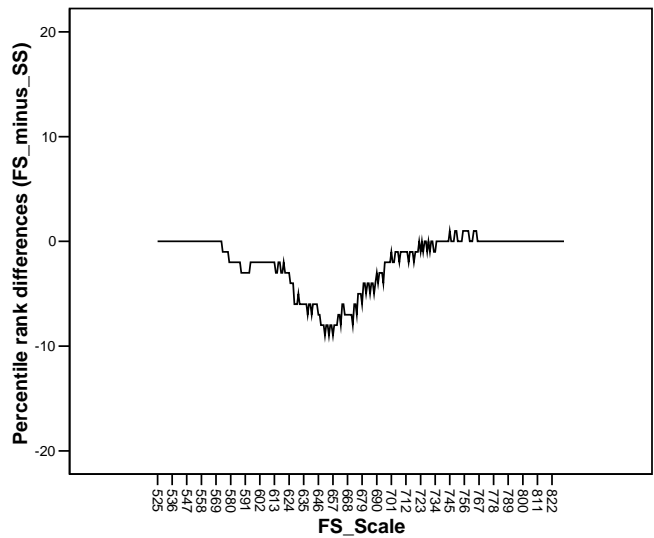
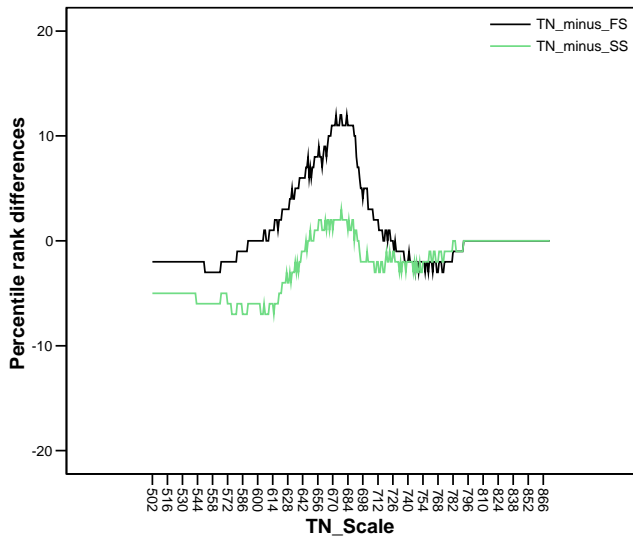
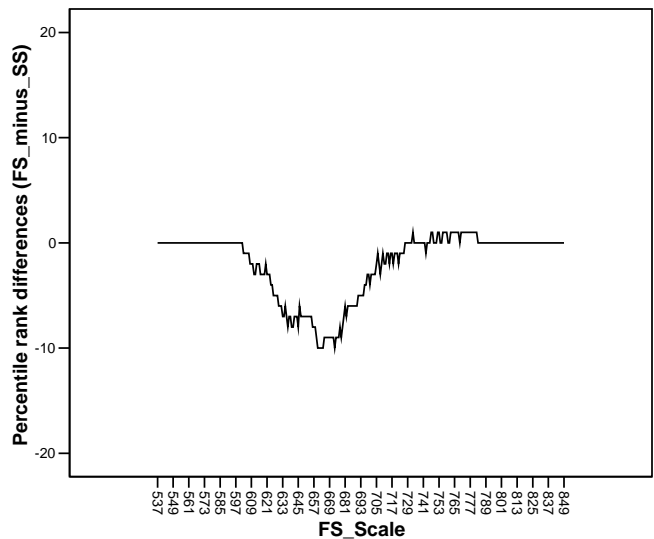


Figure B 12
Percentile rank differences
Mathematics Grades 8 – 9

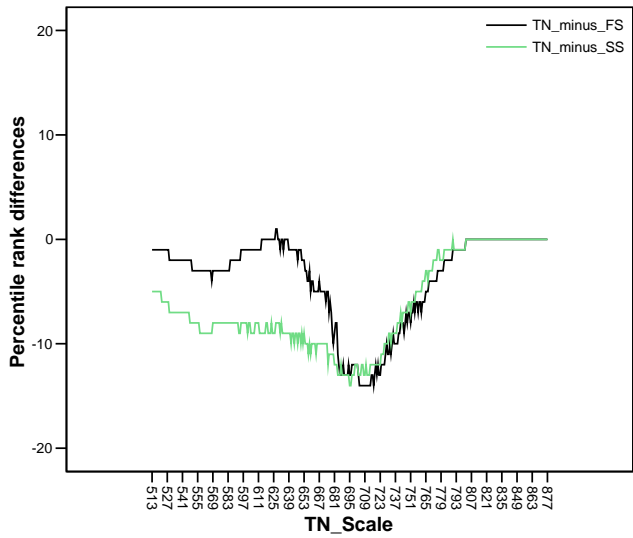
Mathematics Grade 8



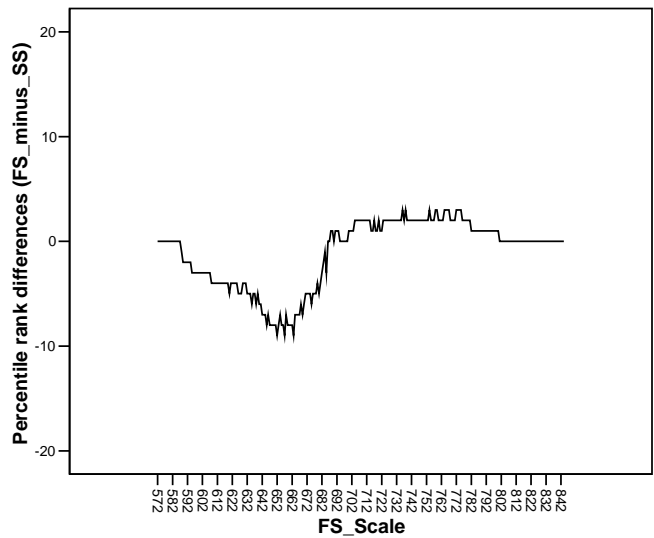
Mathematics Grade 8



Mathematics Grade 9



Mathematics Grade 9



Appendix C

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Table C 1
Fall SAT/9 and TN Linking Table—Reading Grade 2

TN Scale	FS Scale	SEM
423	504	3.41
424	504	3.41
425	504	3.41
426	504	3.41
427	504	3.41
428	504	3.41
429	504	3.41
430	504	3.41
431	504	3.41
432	504	3.41
433	504	3.41
434	504	3.41
435	504	3.41
436	504	3.41
437	504	3.38
438	504	3.36
439	504	3.33
440	504	3.3
441	504	3.27
442	504	3.25
443	504	3.22
444	504	3.2
445	504	3.17
446	504	3.15
447	504	3.13
448	504	3.11
449	504	3.09
450	504	3.07
451	504	3.05
452	504	3.03
453	504	3.02
454	505	3.01
455	505	2.98
456	505	2.95
457	505	2.94
458	505	2.92

TN Scale	FS Scale	SEM
459	505	2.91
460	505	2.9
461	505	2.89
462	505	2.89
463	505	2.89
464	506	2.88
465	506	2.88
466	506	2.88
467	506	2.88
468	506	2.88
469	506	2.87
470	506	2.87
471	506	2.87
472	506	2.86
473	506	2.86
474	506	2.86
475	506	2.86
476	506	2.86
477	506	2.86
478	507	2.86
479	507	2.86
480	507	2.86
481	507	2.86
482	507	2.85
483	507	2.85
484	507	2.85
485	507	2.84
486	507	2.84
487	507	2.84
488	507	2.84
489	507	2.84
490	507	2.84
491	507	2.83
492	507	2.84
493	507	2.83
494	507	2.83

**Table C 1 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 2**

TN Scale	FS Scale	SEM
495	507	2.83
496	508	2.83
497	508	2.83
498	508	2.83
499	508	2.8
500	508	2.78
501	508	2.77
502	508	2.77
503	508	2.76
504	508	2.75
505	508	2.75
506	508	2.74
507	509	2.74
508	509	2.72
509	509	2.71
510	509	2.7
511	509	2.69
512	509	2.69
513	509	2.68
514	509	2.67
515	509	2.67
516	509	2.66
517	509	2.65
518	510	2.65
519	510	2.65
520	511	2.64
521	512	2.64
522	512	2.61
523	512	2.58
524	512	2.54
525	513	2.48
526	513	2.43
527	513	2.35
528	513	2.3
529	514	2.27
530	514	2.25

TN Scale	FS Scale	SEM
531	514	2.23
532	514	2.22
533	515	2.24
534	516	2.29
535	516	2.31
536	517	2.33
537	517	2.31
538	518	2.29
539	519	2.25
540	519	2.21
541	520	2.09
542	521	1.9
543	522	1.67
544	522	1.47
545	523	1.34
546	523	1.25
547	523	1.22
548	524	1.27
549	524	1.33
550	524	1.4
551	525	1.47
552	525	1.52
553	525	1.56
554	526	1.63
555	527	1.65
556	527	1.64
557	528	1.63
558	529	1.63
559	529	1.66
560	530	1.81
561	531	1.97
562	532	2.06
563	533	2.1
564	534	2.18
565	536	2.12
566	538	1.94

**Table C 1 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 2**

TN Scale	FS Scale	SEM
567	539	1.76
568	539	1.67
569	540	1.67
570	541	1.81
571	543	1.84
572	544	1.72
573	545	1.6
574	546	1.57
575	548	1.49
576	549	1.34
577	549	1.12
578	550	1
579	551	0.96
580	552	1.07
581	552	1.36
582	555	1.55
583	556	1.44
584	558	1.42
585	560	1.28
586	560	1.2
587	561	1.29
588	563	1.5
589	563	1.78
590	566	1.99
591	568	1.55
592	569	1.11
593	570	1.05
594	571	1.28
595	574	1.37
596	574	1.13
597	575	1.02
598	576	1.29
599	578	1.47
600	579	1.54
601	581	1.32
602	582	1.1

TN Scale	FS Scale	SEM
603	583	0.96
604	584	1.02
605	585	1.23
606	587	1.54
607	589	1.41
608	590	1.3
609	590	1.3
610	593	1.18
611	594	1.21
612	596	1.16
613	596	0.94
614	597	0.8
615	597	0.87
616	598	0.95
617	599	0.97
618	600	1.1
619	601	1.46
620	604	1.57
621	605	1.37
622	606	1.25
623	607	1.24
624	608	1.33
625	610	1.44
626	611	1.52
627	612	1.56
628	613	1.55
629	614	1.49
630	615	1.41
631	616	1.3
632	618	1.2
633	619	1.14
634	620	1.13
635	621	1.33
636	622	1.55
637	624	1.53
638	624	1.34

**Table C 1 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 2**

TN Scale	FS Scale	SEM
639	625	1.1
640	626	1.05
641	628	1.1
642	629	1.2
643	630	1.3
644	631	1.49
645	632	1.87
646	633	2.07
647	637	2.08
648	637	1.8
649	638	1.43
650	639	1.34
651	640	1.36
652	641	1.44
653	643	1.46
654	644	1.43
655	644	1.4
656	645	1.39
657	645	1.37
658	647	1.34
659	647	1.32
660	648	1.34
661	649	1.37
662	649	1.41
663	650	1.46
664	652	1.51
665	652	1.51
666	653	1.54
667	654	1.59
668	654	1.66
669	654	1.7
670	655	1.79
671	655	1.92
672	656	2.04
673	656	2.16
674	658	2.3

TN Scale	FS Scale	SEM
675	659	2.37
676	661	2.3
677	662	2.11
678	663	1.94
679	665	1.85
680	666	1.89
681	666	2.04
682	667	2.41
683	668	2.87
684	669	3.17
685	674	3.18
686	674	3.14
687	674	3.09
688	675	3.03
689	675	2.98
690	675	2.91
691	675	2.83
692	676	2.76
693	676	2.69
694	676	2.6
695	676	2.51
696	676	2.43
697	677	2.38
698	677	2.34
699	677	2.3
700	677	2.27
701	678	2.29
702	678	2.32
703	678	2.35
704	678	2.41
705	679	2.54
706	680	2.79
707	680	3.14
708	682	3.51
709	684	3.83
710	686	4.03

Table C 1 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 2

TN Scale	FS Scale	SEM
711	688	4.1
712	690	4.17
713	692	4.31
714	695	4.54
715	699	4.7
716	702	4.59
717	706	4.33
718	710	4.28
719	713	5
720	722	5.79
721	731	4.53
722	749	4.1

Table C 2
Fall SAT/9 and TN Linking Table—Reading Grade 3

TN Scale	FS Scale	SEM
427	519	5.23
428	519	5.23
429	519	5.23
430	519	5.23
431	519	5.23
432	519	5.23
433	519	5.23
434	519	5.23
435	519	5.23
436	519	5.23
437	519	5.23
438	519	5.23
439	519	5.23
440	519	5.23
441	519	5.23
442	519	5.23
443	519	5.23
444	519	5.23
445	519	5.21
446	519	5.2
447	519	5.18
448	519	5.16
449	519	5.14
450	519	5.13
451	519	5.11
452	519	5.09
453	519	5.07
454	519	5.05
455	519	5.03
456	520	5.01
457	520	4.99
458	520	4.98
459	520	4.96
460	520	4.94
461	520	4.92
462	520	4.91

TN Scale	FS Scale	SEM
463	520	4.89
464	520	4.88
465	520	4.86
466	520	4.84
467	520	4.82
468	520	4.79
469	521	4.77
470	521	4.75
471	521	4.73
472	521	4.68
473	521	4.63
474	522	4.58
475	522	4.54
476	522	4.5
477	522	4.45
478	522	4.41
479	522	4.37
480	523	4.33
481	523	4.29
482	523	4.25
483	523	4.21
484	523	4.17
485	523	4.14
486	523	4.1
487	524	4.07
488	524	4.04
489	524	4.02
490	524	3.99
491	524	3.96
492	524	3.94
493	524	3.91
494	524	3.89
495	524	3.87
496	524	3.84
497	524	3.82
498	525	3.8

**Table C 2 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 3**

TN Scale	FS Scale	SEM
499	525	3.74
500	526	3.67
501	526	3.63
502	526	3.59
503	526	3.55
504	526	3.51
505	526	3.43
506	526	3.36
507	526	3.29
508	526	3.23
509	526	3.18
510	527	3.13
511	527	3.08
512	527	3.04
513	527	2.99
514	527	2.94
515	527	2.89
516	527	2.83
517	527	2.75
518	528	2.69
519	528	2.67
520	529	2.68
521	529	2.68
522	529	2.69
523	529	2.69
524	530	2.7
525	530	2.69
526	530	2.69
527	531	2.67
528	532	2.66
529	533	2.65
530	533	2.64
531	534	2.63
532	534	2.63
533	534	2.62
534	535	2.6

TN Scale	FS Scale	SEM
535	535	2.55
536	536	2.52
537	536	2.42
538	537	2.34
539	537	2.27
540	538	2.21
541	538	2.16
542	539	2.07
543	540	1.97
544	540	1.89
545	540	1.82
546	541	1.78
547	541	1.73
548	541	1.69
549	542	1.65
550	542	1.62
551	543	1.6
552	543	1.57
553	544	1.58
554	544	1.57
555	545	1.59
556	545	1.72
557	546	1.78
558	546	1.85
559	547	1.95
560	547	2
561	550	2.01
562	550	2.01
563	550	2.01
564	551	2.04
565	551	2
566	554	1.91
567	554	1.66
568	555	1.53
569	556	1.59
570	557	1.69

**Table C 2 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 3**

TN Scale	FS Scale	SEM
571	559	1.73
572	560	1.69
573	561	1.56
574	562	1.43
575	563	1.41
576	564	1.48
577	564	1.74
578	565	2.06
579	568	2.07
580	570	1.81
581	571	1.5
582	572	1.35
583	573	1.28
584	574	1.27
585	575	1.29
586	576	1.33
587	577	1.4
588	578	1.5
589	579	1.57
590	580	1.58
591	582	1.5
592	583	1.34
593	584	1.43
594	585	1.61
595	588	1.54
596	588	1.25
597	589	1
598	589	0.9
599	590	1.01
600	591	1.38
601	592	1.63
602	595	1.44
603	596	1.25
604	596	1.31
605	599	1.35
606	600	1.01

TN Scale	FS Scale	SEM
607	600	0.89
608	601	0.96
609	602	1.03
610	603	1.06
611	605	1
612	606	0.89
613	607	0.85
614	608	0.83
615	609	0.84
616	610	1.1
617	611	1.4
618	613	1.28
619	614	0.84
620	614	1.05
621	614	1.52
622	617	1.56
623	618	1.14
624	619	0.9
625	620	1.19
626	620	1.49
627	623	1.31
628	624	0.88
629	624	0.74
630	625	0.84
631	626	0.95
632	627	0.99
633	628	0.97
634	629	0.95
635	630	0.92
636	631	0.91
637	632	1.07
638	632	1.27
639	635	1.34
640	635	1.1
641	636	0.86
642	636	0.95

Table C 2 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 3

TN Scale	FS Scale	SEM
643	637	1.39
644	640	1.34
645	640	0.84
646	641	1.12
647	641	2.25
648	647	2.41
649	647	1.87
650	648	1.17
651	648	0.83
652	649	0.75
653	649	0.76
654	650	0.82
655	651	0.87
656	652	0.9
657	652	1.01
658	653	1.33
659	657	1.74
660	658	1.42
661	658	1.06
662	658	1.04
663	659	1.49
664	659	1.9
665	663	1.9
666	664	1.49
667	665	1.24
668	666	1.09
669	666	1.03
670	667	1.02
671	668	1.11
672	669	1.29
673	670	1.44
674	672	1.51
675	672	1.53
676	673	1.52
677	674	1.54
678	675	1.61

TN Scale	FS Scale	SEM
679	675	1.69
680	676	1.83
681	677	1.99
682	679	2.08
683	682	2.05
684	683	2.02
685	684	2.03
686	685	2.04
687	687	2.06
688	688	2.08
689	689	2.08
690	689	2.07
691	690	2.07
692	690	2.03
693	691	2.02
694	692	2.03
695	694	2.16
696	695	2.38
697	695	2.5
698	695	2.66
699	696	2.97
700	698	3.25
701	699	3.41
702	700	3.59
703	701	3.62
704	702	3.66
705	702	3.7
706	702	3.72
707	702	3.75
708	703	3.74
709	704	3.71
710	705	3.7
711	706	3.76
712	707	3.86
713	707	3.96
714	708	4.13

Table C 2 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 3

TN Scale	FS Scale	SEM
715	708	4.15
716	708	4.17
717	708	4.2
718	709	4.23
719	709	4.27
720	709	4.31
721	709	4.35
722	709	4.39
723	709	4.44
724	710	4.49
725	710	4.55
726	710	4.6
727	711	4.66
728	711	4.72
729	711	4.79
730	712	4.85
731	712	4.92
732	713	4.98
733	714	5.05
734	715	5.09
735	717	5.07
736	718	5
737	720	4.88
738	721	4.7
739	723	4.48
740	724	4.31
741	726	4.28
742	727	4.47
743	729	4.95
744	730	5.74
745	734	6.62
746	740	7.25
747	746	7.24
748	751	6.36
749	758	4.96
750	767	3.54

Table C 3
Fall SAT/9 and TN Linking Table—Reading Grade 4

TN Scale	FS Scale	SEM
433	543	2.12
434	543	2.12
435	543	2.12
436	543	2.13
437	543	2.13
438	543	2.13
439	543	2.14
440	543	2.14
441	544	2.15
442	544	2.15
443	544	2.16
444	544	2.16
445	544	2.16
446	544	2.17
447	544	2.18
448	544	2.19
449	544	2.2
450	544	2.22
451	544	2.23
452	545	2.24
453	545	2.25
454	545	2.26
455	545	2.27
456	545	2.28
457	545	2.29
458	545	2.3
459	545	2.31
460	545	2.32
461	545	2.33
462	545	2.35
463	545	2.36
464	545	2.37
465	545	2.38
466	546	2.4
467	546	2.42
468	546	2.43

TN Scale	FS Scale	SEM
469	546	2.45
470	546	2.46
471	546	2.47
472	546	2.48
473	546	2.51
474	547	2.54
475	548	2.57
476	548	2.59
477	548	2.6
478	548	2.6
479	549	2.59
480	549	2.58
481	549	2.58
482	549	2.57
483	549	2.56
484	549	2.55
485	549	2.54
486	549	2.53
487	549	2.52
488	549	2.51
489	549	2.49
490	550	2.48
491	550	2.47
492	550	2.46
493	550	2.45
494	550	2.44
495	550	2.43
496	550	2.42
497	550	2.41
498	550	2.4
499	550	2.39
500	550	2.38
501	550	2.36
502	550	2.34
503	551	2.3
504	551	2.27

**Table C 3 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 4**

TN Scale	FS Scale	SEM
505	551	2.26
506	551	2.24
507	551	2.22
508	551	2.2
509	551	2.18
510	551	2.15
511	551	2.13
512	551	2.11
513	552	2.09
514	552	2.05
515	552	2.02
516	552	1.97
517	552	1.92
518	552	1.88
519	552	1.84
520	553	1.82
521	553	1.79
522	553	1.76
523	553	1.75
524	553	1.74
525	553	1.73
526	554	1.71
527	554	1.74
528	554	1.77
529	554	1.79
530	554	1.82
531	555	1.84
532	555	1.87
533	555	1.91
534	555	1.96
535	555	1.99
536	555	2.02
537	556	2.04
538	556	2.07
539	556	2.1
540	556	2.14

TN Scale	FS Scale	SEM
541	557	2.18
542	557	2.2
543	557	2.2
544	558	2.21
545	558	2.21
546	558	2.21
547	558	2.21
548	559	2.2
549	559	2.17
550	560	2.14
551	560	2.12
552	560	2.09
553	560	2.05
554	561	2.01
555	561	1.92
556	562	1.82
557	562	1.75
558	562	1.71
559	563	1.71
560	564	1.75
561	564	1.75
562	564	1.77
563	565	1.78
564	566	1.81
565	566	1.85
566	567	1.86
567	567	1.86
568	568	1.87
569	568	1.88
570	569	1.86
571	570	1.8
572	571	1.72
573	571	1.64
574	572	1.58
575	572	1.54
576	572	1.52

**Table C 3 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 4**

TN Scale	FS Scale	SEM
577	573	1.51
578	573	1.53
579	574	1.56
580	574	1.64
581	576	1.79
582	577	1.84
583	578	1.79
584	579	1.75
585	579	1.69
586	580	1.67
587	580	1.65
588	581	1.68
589	582	1.79
590	584	1.86
591	585	1.8
592	586	1.7
593	586	1.52
594	588	1.44
595	589	1.45
596	590	1.49
597	591	1.53
598	592	1.51
599	594	1.5
600	595	1.49
601	596	1.41
602	597	1.32
603	598	1.32
604	599	1.39
605	600	1.47
606	602	1.5
607	603	1.46
608	604	1.43
609	605	1.38
610	606	1.37
611	608	1.36
612	609	1.28

TN Scale	FS Scale	SEM
613	610	1.14
614	611	1.02
615	612	0.98
616	613	1.01
617	614	1.03
618	615	1.06
619	616	1.05
620	617	1.04
621	619	1.05
622	620	1.04
623	621	1.01
624	623	1.03
625	624	1.07
626	625	1.1
627	626	1.12
628	627	1.1
629	629	1.05
630	630	1.03
631	631	1.02
632	632	1.01
633	634	1.03
634	634	1.03
635	635	1.04
636	636	1.08
637	637	1.15
638	638	1.15
639	640	1.1
640	640	1.03
641	641	0.99
642	642	0.98
643	643	1.05
644	645	1.17
645	646	1.24
646	647	1.25
647	648	1.25
648	650	1.25

**Table C 3 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 4**

TN Scale	FS Scale	SEM
649	651	1.24
650	652	1.23
651	653	1.2
652	655	1.17
653	657	1.19
654	658	1.25
655	659	1.33
656	661	1.39
657	663	1.35
658	664	1.23
659	666	1.15
660	667	1.15
661	668	1.14
662	669	1.09
663	670	1.05
664	671	1.02
665	672	0.99
666	673	0.97
667	673	0.96
668	674	0.96
669	675	0.98
670	676	1.03
671	677	1.09
672	678	1.15
673	679	1.14
674	680	1.11
675	681	1.1
676	682	1.11
677	683	1.17
678	684	1.34
679	685	1.45
680	686	1.52
681	687	1.56
682	688	1.56
683	689	1.57
684	689	1.56

TN Scale	FS Scale	SEM
685	691	1.63
686	692	1.78
687	693	1.91
688	694	2.05
689	696	2.1
690	698	2.1
691	699	2.09
692	701	2.14
693	702	2.25
694	703	2.36
695	704	2.47
696	706	2.55
697	707	2.55
698	708	2.53
699	709	2.47
700	711	2.4
701	712	2.42
702	714	2.66
703	716	2.95
704	718	3.21
705	720	3.38
706	721	3.42
707	723	3.4
708	725	3.36
709	725	3.32
710	726	3.31
711	726	3.29
712	728	3.21
713	729	3.14
714	731	3.09
715	731	3.12
716	731	3.19
717	732	3.18
718	733	3.33
719	734	3.52
720	734	3.63

**Table C 3 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 4**

TN Scale	FS Scale	SEM
721	735	3.73
722	735	3.84
723	735	4
724	736	4.27
725	737	4.76
726	738	4.99
727	740	5.27
728	742	5.56
729	744	5.85
730	744	5.86
731	744	5.89
732	745	5.9
733	745	5.93
734	745	5.96
735	745	5.97
736	746	5.99
737	746	6
738	746	5.99
739	746	5.99
740	747	5.99
741	747	5.99
742	747	5.99
743	747	5.97
744	748	5.95
745	748	5.94
746	748	5.92
747	749	5.9
748	749	5.88
749	749	5.86
750	749	5.84
751	750	5.83
752	750	5.81
753	750	5.8
754	751	5.78
755	751	5.77
756	751	5.76

TN Scale	FS Scale	SEM
757	751	5.75
758	752	5.75
759	752	5.74
760	752	5.74
761	753	5.75
762	754	5.54
763	754	5.32
764	755	5.1
765	756	4.87
766	757	4.64
767	758	4.42
768	759	4.21
769	760	4.02
770	761	3.83
771	762	3.66
772	763	3.5
773	765	3.34
774	766	3.16
775	767	2.93
776	768	2.61
777	769	2.18
778	771	1.67
779	772	0.99
780	773	0

Table C 4
Fall SAT/9 and TN Linking Table—Reading Grade 5

TN Scale	FS Scale	SEM
475	581	2.41
476	581	2.41
477	581	2.41
478	581	2.41
479	581	2.41
480	581	2.41
481	581	2.4
482	581	2.38
483	582	2.37
484	582	2.36
485	582	2.36
486	582	2.36
487	582	2.36
488	583	2.36
489	583	2.37
490	583	2.37
491	583	2.37
492	583	2.37
493	583	2.36
494	583	2.36
495	583	2.36
496	583	2.35
497	583	2.35
498	583	2.35
499	583	2.35
500	583	2.34
501	583	2.34
502	584	2.34
503	584	2.33
504	584	2.33
505	584	2.33
506	584	2.32
507	584	2.32
508	584	2.32
509	584	2.31
510	584	2.31

TN Scale	FS Scale	SEM
511	584	2.31
512	584	2.31
513	584	2.31
514	584	2.3
515	584	2.29
516	584	2.29
517	585	2.29
518	585	2.29
519	585	2.29
520	585	2.28
521	585	2.28
522	585	2.27
523	585	2.27
524	586	2.27
525	586	2.28
526	586	2.29
527	586	2.29
528	586	2.3
529	586	2.3
530	586	2.31
531	586	2.31
532	587	2.32
533	587	2.33
534	587	2.35
535	587	2.37
536	588	2.38
537	588	2.39
538	588	2.41
539	588	2.46
540	589	2.5
541	590	2.53
542	590	2.54
543	591	2.54
544	591	2.53
545	591	2.52
546	592	2.52

Table C 4 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 5

TN Scale	FS Scale	SEM
547	592	2.51
548	592	2.48
549	593	2.44
550	593	2.39
551	594	2.33
552	594	2.3
553	594	2.28
554	594	2.26
555	594	2.24
556	594	2.2
557	595	2.17
558	595	2.16
559	595	2.14
560	595	2.12
561	595	2.09
562	595	2.08
563	595	2.07
564	596	2.05
565	596	2.01
566	597	1.99
567	597	1.98
568	598	1.99
569	598	1.98
570	599	1.98
571	599	1.97
572	600	1.95
573	600	1.94
574	601	1.91
575	601	1.88
576	602	1.84
577	602	1.81
578	602	1.79
579	603	1.77
580	603	1.75
581	603	1.74
582	604	1.73

TN Scale	FS Scale	SEM
583	604	1.72
584	605	1.7
585	605	1.7
586	606	1.7
587	606	1.68
588	607	1.67
589	607	1.64
590	608	1.6
591	608	1.51
592	609	1.38
593	609	1.29
594	610	1.24
595	610	1.17
596	610	1.11
597	611	1.08
598	611	1.08
599	612	1.1
600	612	1.12
601	613	1.15
602	613	1.18
603	614	1.22
604	614	1.24
605	614	1.26
606	615	1.3
607	615	1.37
608	616	1.44
609	617	1.5
610	618	1.53
611	619	1.52
612	619	1.48
613	620	1.37
614	621	1.23
615	621	1.15
616	622	1.1
617	622	1.09
618	623	1.08

**Table C 4 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 5**

TN Scale	FS Scale	SEM
619	623	1.09
620	624	1.1
621	625	1.11
622	626	1.12
623	626	1.13
624	627	1.15
625	629	1.17
626	630	1.15
627	630	1.08
628	631	1.01
629	632	0.99
630	633	0.97
631	634	0.93
632	634	0.91
633	635	0.88
634	636	0.88
635	637	0.91
636	637	0.97
637	638	1.08
638	639	1.16
639	640	1.15
640	641	1.06
641	642	0.96
642	643	0.91
643	644	0.89
644	645	0.86
645	646	0.84
646	647	0.83
647	648	0.84
648	649	0.91
649	650	0.99
650	652	1
651	653	0.9
652	654	0.8
653	655	0.76
654	656	0.75

TN Scale	FS Scale	SEM
655	656	0.76
656	657	0.79
657	657	0.84
658	658	0.89
659	659	0.9
660	660	0.9
661	661	0.87
662	662	0.86
663	664	0.87
664	665	0.86
665	665	0.83
666	666	0.82
667	667	0.82
668	668	0.81
669	669	0.81
670	670	0.82
671	671	0.82
672	671	0.82
673	672	0.82
674	673	0.89
675	675	0.99
676	676	1.01
677	677	0.99
678	679	0.93
679	680	0.88
680	681	0.87
681	681	0.86
682	682	0.85
683	683	0.86
684	684	0.86
685	685	0.85
686	686	0.84
687	687	0.83
688	688	0.87
689	689	1.01
690	690	1.1

Table C 4 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 5

TN Scale	FS Scale	SEM
691	691	1.13
692	692	1.12
693	693	1.1
694	695	1.11
695	696	1.1
696	697	1.08
697	698	1.06
698	699	1.08
699	700	1.17
700	701	1.21
701	702	1.22
702	703	1.23
703	704	1.23
704	704	1.25
705	705	1.29
706	707	1.47
707	709	1.63
708	710	1.65
709	711	1.61
710	712	1.6
711	713	1.59
712	713	1.59
713	715	1.6
714	715	1.62
715	716	1.61
716	718	1.61
717	719	1.65
718	720	1.67
719	720	1.71
720	722	1.83
721	724	2.1
722	725	2.24
723	726	2.28
724	727	2.27
725	727	2.27
726	727	2.28

TN Scale	FS Scale	SEM
727	727	2.28
728	728	2.28
729	728	2.28
730	729	2.31
731	729	2.38
732	729	2.42
733	729	2.47
734	730	2.53
735	730	2.68
736	732	3.22
737	732	3.46
738	733	3.77
739	734	4.01
740	735	4.16
741	735	4.39
742	741	4.8
743	744	5.01
744	745	5.06
745	746	5.1
746	746	5.15
747	747	5.14
748	749	5.2
749	750	5.33
750	750	5.33
751	750	5.32
752	751	5.32
753	751	5.32
754	751	5.32
755	751	5.32
756	751	5.33
757	751	5.33
758	751	5.33
759	751	5.34
760	751	5.34
761	751	5.34
762	752	5.35

Table C 4 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 5

TN Scale	FS Scale	SEM
763	752	5.35
764	752	5.36
765	752	5.37
766	752	5.38
767	752	5.38
768	752	5.39
769	752	5.4
770	752	5.4
771	753	5.35
772	754	5.24
773	755	5.11
774	756	4.96
775	757	4.79
776	758	4.6
777	759	4.4
778	760	4.2
779	761	4.01
780	762	3.85
781	763	3.78
782	764	3.84
783	765	4.07
784	766	4.49
785	767	5.11
786	769	5.84
787	775	6.41
788	781	6.35
789	786	4.91
790	804	5.68

Table C 5
Fall SAT/9 and TN Linking Table—Reading Grade 6

TN Scale	FS Scale	SEM
486	587	2.02
487	587	2.02
488	587	2.02
489	587	2.02
490	587	2.02
491	587	2.02
492	587	2.03
493	587	2.12
494	588	2.26
495	589	2.4
496	590	2.5
497	592	2.52
498	593	2.48
499	594	2.43
500	594	2.37
501	595	2.34
502	595	2.34
503	596	2.29
504	596	2.19
505	596	2.11
506	596	2.06
507	596	2.02
508	596	1.99
509	596	1.98
510	596	1.97
511	596	1.97
512	596	1.97
513	596	1.97
514	596	1.97
515	596	1.97
516	596	1.97
517	596	1.97
518	596	1.97
519	596	1.97
520	596	1.98
521	596	1.98

TN Scale	FS Scale	SEM
522	596	1.98
523	596	1.98
524	596	1.99
525	596	2
526	596	2
527	597	2.01
528	597	2.01
529	597	2.02
530	597	2.02
531	597	2.03
532	597	2.03
533	597	2.03
534	597	2.04
535	597	2.04
536	597	2.04
537	597	2.05
538	597	2.05
539	597	2.05
540	597	2.06
541	597	2.06
542	597	2.06
543	597	2.06
544	597	2.07
545	597	2.07
546	597	2.08
547	597	2.08
548	597	2.09
549	597	2.09
550	598	2.1
551	598	2.1
552	598	2.11
553	598	2.13
554	598	2.13
555	598	2.14
556	598	2.15
557	598	2.16

**Table C 5 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 6**

TN Scale	FS Scale	SEM
558	598	2.17
559	599	2.16
560	599	2.17
561	600	2.15
562	600	2.14
563	601	2.12
564	601	2.09
565	601	2.08
566	601	2.07
567	601	2.06
568	601	2.06
569	601	2.04
570	602	2.03
571	602	2.02
572	602	2.01
573	602	1.97
574	603	1.94
575	603	1.9
576	604	1.84
577	604	1.76
578	605	1.69
579	605	1.64
580	605	1.62
581	606	1.61
582	606	1.6
583	606	1.56
584	606	1.55
585	607	1.54
586	607	1.54
587	608	1.56
588	608	1.57
589	609	1.58
590	609	1.6
591	609	1.63
592	609	1.66
593	610	1.74

TN Scale	FS Scale	SEM
594	611	1.86
595	612	1.93
596	612	1.96
597	614	1.99
598	615	1.96
599	615	1.9
600	616	1.78
601	617	1.66
602	617	1.6
603	618	1.57
604	618	1.54
605	618	1.5
606	619	1.43
607	620	1.39
608	621	1.4
609	622	1.42
610	623	1.44
611	624	1.47
612	625	1.43
613	626	1.32
614	627	1.22
615	627	1.13
616	628	1.1
617	629	1.1
618	629	1.13
619	630	1.17
620	631	1.23
621	632	1.25
622	633	1.21
623	634	1.18
624	634	1.17
625	635	1.21
626	636	1.35
627	637	1.55
628	639	1.56
629	641	1.3

**Table C 5 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 6**

TN Scale	FS Scale	SEM
630	642	1.19
631	643	1.21
632	645	1.23
633	646	1.21
634	647	1.17
635	648	1.15
636	649	1.13
637	650	1.09
638	651	1.05
639	651	1.01
640	652	0.99
641	653	0.99
642	653	1
643	654	1.01
644	655	1.02
645	656	1.02
646	657	1.01
647	658	0.99
648	658	0.97
649	659	0.97
650	660	0.98
651	661	1.04
652	663	1.08
653	664	1.06
654	665	0.96
655	666	0.88
656	667	0.85
657	668	0.85
658	669	0.91
659	670	0.97
660	671	0.97
661	673	0.89
662	674	0.83
663	675	0.83
664	676	0.82
665	677	0.82

TN Scale	FS Scale	SEM
666	678	0.81
667	679	0.82
668	680	0.86
669	681	0.91
670	682	0.93
671	683	0.93
672	684	0.92
673	685	0.9
674	686	0.88
675	687	0.87
676	688	0.88
677	689	0.89
678	690	0.9
679	691	0.91
680	692	0.92
681	693	0.93
682	694	0.92
683	695	0.9
684	697	0.9
685	698	0.88
686	699	0.88
687	699	0.9
688	700	0.95
689	701	1.02
690	702	1.08
691	704	1.08
692	705	1.07
693	707	1.07
694	708	1.05
695	709	1.04
696	710	1.02
697	711	1.02
698	712	1.06
699	712	1.18
700	713	1.29
701	714	1.35

Table C 5 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 6

TN Scale	FS Scale	SEM
702	715	1.39
703	716	1.42
704	717	1.43
705	718	1.43
706	719	1.44
707	719	1.46
708	720	1.48
709	721	1.52
710	722	1.58
711	723	1.58
712	724	1.58
713	724	1.57
714	725	1.56
715	726	1.58
716	726	1.61
717	727	1.67
718	727	1.76
719	728	1.95
720	730	2.16
721	731	2.26
722	732	2.34
723	734	2.41
724	735	2.41
725	736	2.53
726	737	2.59
727	737	2.65
728	738	2.72
729	738	2.86
730	740	3.09
731	742	3.31
732	745	3.46
733	746	3.67
734	746	3.66
735	746	3.66
736	746	3.66
737	746	3.67

TN Scale	FS Scale	SEM
738	747	3.7
739	747	3.73
740	747	3.75
741	747	3.76
742	747	3.77
743	747	3.78
744	747	3.79
745	747	3.81
746	747	3.83
747	747	3.85
748	748	3.87
749	748	3.9
750	748	3.92
751	748	3.95
752	748	3.99
753	748	4.02
754	748	4.09
755	748	4.18
756	749	4.28
757	749	4.4
758	749	4.52
759	750	4.66
760	750	4.8
761	750	4.96
762	750	5.13
763	751	5.3
764	751	5.49
765	751	5.67
766	752	5.87
767	752	6.07
768	752	6.27
769	753	6.47
770	754	6.67
771	755	6.87
772	756	7.05
773	757	7.23

Table C 5 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 6

TN Scale	FS Scale	SEM
774	758	7.4
775	759	7.56
776	760	7.7
777	761	7.84
778	762	7.96
779	762	8.08
780	763	8.18
781	765	8.23
782	767	8.16
783	769	7.98
784	771	7.77
785	773	7.51
786	776	7.25
787	778	6.98
788	780	6.69
789	783	6.39
790	785	6.03
791	787	5.62
792	790	5.15
793	792	4.63
794	794	4.09
795	797	3.57
796	799	3.1
797	801	2.62
798	804	2
799	806	1.1
800	808	0

Table C 6
Fall SAT/9 and TN Linking Table—Reading Grade 7

TN Scale	FS Scale	SEM
498	594	1.98
499	594	1.98
500	594	1.98
501	594	1.98
502	594	1.99
503	594	1.99
504	594	2
505	594	2.01
506	594	2.02
507	594	2.03
508	595	2.06
509	595	2.1
510	595	2.12
511	595	2.14
512	595	2.18
513	596	2.21
514	596	2.25
515	596	2.27
516	596	2.3
517	596	2.31
518	596	2.32
519	597	2.33
520	597	2.33
521	597	2.34
522	597	2.35
523	597	2.35
524	597	2.35
525	597	2.36
526	597	2.36
527	597	2.36
528	597	2.36
529	597	2.37
530	597	2.37
531	598	2.38
532	598	2.38
533	598	2.39

TN Scale	FS Scale	SEM
534	598	2.4
535	599	2.4
536	599	2.4
537	599	2.39
538	599	2.38
539	599	2.37
540	599	2.36
541	599	2.35
542	600	2.34
543	600	2.34
544	600	2.33
545	600	2.32
546	600	2.31
547	600	2.31
548	600	2.3
549	600	2.3
550	600	2.3
551	600	2.29
552	600	2.29
553	600	2.28
554	600	2.27
555	600	2.26
556	600	2.25
557	601	2.22
558	601	2.2
559	601	2.17
560	601	2.14
561	602	2.07
562	602	2.03
563	602	2.01
564	603	2
565	603	1.98
566	603	1.97
567	603	1.96
568	604	1.95
569	604	1.96

**Table C 6 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 7**

TN Scale	FS Scale	SEM
570	605	2
571	605	2.02
572	606	2.08
573	606	2.13
574	606	2.17
575	606	2.23
576	607	2.3
577	607	2.37
578	608	2.46
579	609	2.57
580	610	2.65
581	612	2.65
582	612	2.62
583	613	2.48
584	614	2.35
585	615	2.3
586	615	2.28
587	616	2.28
588	616	2.26
589	616	2.24
590	617	2.2
591	618	2.14
592	619	2
593	620	1.74
594	620	1.57
595	621	1.5
596	621	1.42
597	621	1.38
598	621	1.37
599	622	1.39
600	622	1.48
601	623	1.58
602	624	1.69
603	625	1.77
604	626	1.73
605	627	1.65

TN Scale	FS Scale	SEM
606	628	1.55
607	629	1.45
608	630	1.35
609	631	1.29
610	632	1.26
611	632	1.25
612	633	1.25
613	634	1.3
614	635	1.36
615	636	1.4
616	637	1.36
617	638	1.32
618	639	1.3
619	640	1.3
620	640	1.3
621	641	1.31
622	642	1.31
623	642	1.31
624	643	1.31
625	643	1.32
626	644	1.34
627	645	1.37
628	646	1.38
629	647	1.33
630	648	1.25
631	649	1.19
632	650	1.15
633	650	1.12
634	651	1.1
635	652	1.08
636	653	1.08
637	653	1.09
638	654	1.15
639	655	1.23
640	656	1.31
641	658	1.3

Table C 6 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 7

TN Scale	FS Scale	SEM
642	659	1.22
643	660	1.11
644	661	1.05
645	662	1
646	663	0.93
647	664	0.84
648	664	0.79
649	665	0.78
650	666	0.8
651	666	0.85
652	667	0.92
653	668	0.93
654	670	0.91
655	670	0.87
656	671	0.84
657	672	0.83
658	673	0.82
659	674	0.84
660	675	0.87
661	676	0.88
662	677	0.89
663	678	0.92
664	679	0.99
665	681	1.04
666	682	1.01
667	683	0.92
668	684	0.79
669	684	0.75
670	685	0.74
671	686	0.74
672	687	0.79
673	688	0.86
674	689	0.88
675	690	0.88
676	691	0.88
677	692	0.92

TN Scale	FS Scale	SEM
678	693	0.94
679	695	0.95
680	695	0.94
681	697	0.91
682	698	0.88
683	698	0.87
684	699	0.85
685	700	0.85
686	701	0.92
687	703	1.01
688	704	1.03
689	705	1.02
690	706	1.03
691	707	1.05
692	708	1.06
693	709	1.07
694	711	1.05
695	712	1.04
696	713	1.03
697	714	1.01
698	715	0.99
699	716	0.97
700	717	0.95
701	718	0.96
702	719	0.98
703	719	1.04
704	720	1.15
705	721	1.27
706	723	1.31
707	724	1.3
708	725	1.3
709	726	1.3
710	726	1.3
711	727	1.3
712	728	1.33
713	729	1.35

**Table C 6 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 7**

TN Scale	FS Scale	SEM
714	731	1.33
715	732	1.31
716	733	1.3
717	734	1.3
718	735	1.3
719	735	1.34
720	736	1.4
721	737	1.52
722	738	1.62
723	739	1.66
724	740	1.65
725	741	1.64
726	742	1.62
727	743	1.59
728	744	1.57
729	745	1.57
730	745	1.59
731	746	1.63
732	746	1.66
733	746	1.71
734	747	1.79
735	747	1.84
736	747	1.89
737	748	2.04
738	749	2.16
739	750	2.2
740	751	2.23
741	752	2.23
742	753	2.2
743	753	2.17
744	754	2.17
745	755	2.18
746	757	2.23
747	760	3.11
748	760	3.37
749	761	3.75

TN Scale	FS Scale	SEM
750	763	4.06
751	764	4.22
752	764	4.36
753	765	4.4
754	765	4.43
755	765	4.46
756	765	4.48
757	766	4.5
758	766	4.52
759	766	4.54
760	766	4.56
761	767	4.58
762	767	4.6
763	767	4.63
764	767	4.65
765	768	4.65
766	768	4.65
767	768	4.65
768	768	4.64
769	768	4.64
770	768	4.64
771	769	4.64
772	769	4.63
773	769	4.63
774	769	4.62
775	769	4.62
776	769	4.61
777	770	4.61
778	770	4.6
779	770	4.6
780	770	4.59
781	770	4.59
782	771	4.58
783	771	4.58
784	771	4.58
785	771	4.58

Table C 6 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 7

TN Scale	FS Scale	SEM
786	771	4.58
787	771	4.58
788	772	4.58
789	772	4.58
790	772	4.58
791	772	4.58
792	772	4.59
793	773	4.48
794	775	4.38
795	776	4.34
796	777	4.36
797	778	4.49
798	779	4.72
799	780	5.04
800	782	5.4
801	785	5.74
802	788	5.95
803	791	5.91
804	794	5.56
805	797	4.96
806	800	4.32
807	803	3.77
808	807	3.55
809	812	3.29
810	818	1

Table C 7
Fall SAT/9 and TN Linking Table—Reading Grade 8

TN Scale	FS Scale	SEM
507	615	1.8
508	615	1.8
509	615	1.8
510	615	1.8
511	615	1.8
512	615	1.8
513	615	1.79
514	615	1.79
515	615	1.79
516	615	1.79
517	615	1.79
518	615	1.78
519	615	1.78
520	615	1.78
521	616	1.78
522	616	1.78
523	616	1.78
524	616	1.78
525	616	1.77
526	616	1.77
527	616	1.77
528	616	1.77
529	616	1.77
530	616	1.77
531	616	1.77
532	616	1.76
533	616	1.76
534	616	1.76
535	616	1.76
536	616	1.75
537	616	1.75
538	616	1.75
539	616	1.74
540	616	1.74
541	616	1.73
542	616	1.73

TN Scale	FS Scale	SEM
543	616	1.73
544	616	1.72
545	616	1.72
546	616	1.72
547	616	1.71
548	616	1.71
549	616	1.71
550	616	1.7
551	616	1.7
552	616	1.7
553	616	1.69
554	616	1.69
555	616	1.69
556	616	1.69
557	616	1.68
558	616	1.66
559	616	1.64
560	616	1.63
561	616	1.62
562	616	1.6
563	616	1.58
564	616	1.55
565	617	1.53
566	617	1.51
567	617	1.5
568	617	1.48
569	617	1.46
570	617	1.44
571	617	1.43
572	618	1.45
573	618	1.47
574	618	1.48
575	618	1.49
576	618	1.5
577	618	1.51
578	618	1.52

**Table C 7 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 8**

TN Scale	FS Scale	SEM
579	618	1.54
580	618	1.57
581	618	1.62
582	619	1.72
583	619	1.84
584	619	1.94
585	620	2.05
586	621	2.23
587	621	2.36
588	622	2.4
589	622	2.43
590	622	2.46
591	623	2.49
592	624	2.5
593	625	2.47
594	625	2.45
595	626	2.45
596	626	2.42
597	627	2.39
598	627	2.37
599	627	2.35
600	628	2.26
601	629	2.2
602	629	2.18
603	630	2.16
604	630	2.11
605	631	2.01
606	632	1.89
607	632	1.77
608	632	1.68
609	633	1.62
610	633	1.55
611	634	1.5
612	634	1.43
613	635	1.37
614	636	1.33

TN Scale	FS Scale	SEM
615	636	1.34
616	637	1.39
617	637	1.41
618	638	1.45
619	638	1.5
620	639	1.56
621	641	1.59
622	641	1.56
623	642	1.53
624	642	1.49
625	643	1.44
626	644	1.43
627	645	1.45
628	645	1.49
629	646	1.51
630	646	1.53
631	647	1.59
632	648	1.64
633	649	1.66
634	650	1.68
635	652	1.58
636	653	1.41
637	653	1.32
638	653	1.24
639	654	1.14
640	655	1.12
641	656	1.18
642	657	1.23
643	658	1.26
644	659	1.3
645	660	1.34
646	661	1.29
647	662	1.17
648	663	1.08
649	663	0.94
650	664	0.87

**Table C 7 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 8**

TN Scale	FS Scale	SEM
651	665	0.9
652	666	0.95
653	666	1.01
654	668	1.06
655	669	1.1
656	670	1.12
657	671	1.14
658	671	1.13
659	672	1.06
660	673	0.98
661	674	0.93
662	675	0.91
663	676	0.9
664	677	0.9
665	677	0.91
666	679	0.9
667	680	0.92
668	681	0.94
669	682	0.93
670	683	0.89
671	684	0.86
672	685	0.85
673	686	0.85
674	687	0.84
675	688	0.84
676	689	0.85
677	690	0.91
678	691	1.01
679	693	1.1
680	694	1.09
681	695	1.08
682	696	1.08
683	697	1.07
684	698	1.06
685	699	1.05
686	700	1.04

TN Scale	FS Scale	SEM
687	701	1.03
688	702	1
689	703	0.94
690	704	0.87
691	705	0.85
692	706	0.84
693	707	0.83
694	707	0.82
695	708	0.82
696	709	0.82
697	710	0.83
698	711	0.86
699	711	0.9
700	712	0.97
701	713	1
702	714	1.03
703	716	1.09
704	717	1.2
705	718	1.25
706	719	1.26
707	720	1.25
708	721	1.2
709	722	1.15
710	723	1.08
711	724	1.02
712	725	1
713	726	1
714	727	1.02
715	727	1.05
716	728	1.11
717	729	1.17
718	730	1.17
719	731	1.16
720	732	1.14
721	733	1.14
722	734	1.18

**Table C 7 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 8**

TN Scale	FS Scale	SEM
723	735	1.2
724	735	1.22
725	736	1.24
726	737	1.22
727	738	1.2
728	739	1.19
729	739	1.18
730	740	1.19
731	741	1.22
732	741	1.31
733	742	1.44
734	743	1.55
735	744	1.6
736	745	1.58
737	747	1.54
738	748	1.57
739	749	1.62
740	750	1.72
741	750	1.77
742	751	1.86
743	753	1.98
744	753	2.03
745	754	2.01
746	755	2
747	756	2.02
748	757	2
749	758	2.08
750	758	2.13
751	758	2.17
752	759	2.31
753	760	2.66
754	762	2.94
755	762	3.03
756	762	3.1
757	762	3.24
758	765	3.32

TN Scale	FS Scale	SEM
759	767	3.38
760	769	3.38
761	769	3.37
762	769	3.37
763	769	3.37
764	769	3.36
765	770	3.36
766	770	3.37
767	770	3.39
768	771	3.43
769	771	3.5
770	771	3.6
771	772	3.72
772	772	3.8
773	772	3.82
774	772	3.84
775	773	3.86
776	773	3.89
777	773	3.91
778	773	3.94
779	773	3.97
780	773	4.01
781	774	4.04
782	774	4.08
783	774	4.12
784	774	4.16
785	774	4.21
786	775	4.25
787	775	4.29
788	775	4.34
789	776	4.39
790	776	4.43
791	776	4.48
792	777	4.52
793	777	4.57
794	777	4.62

Table C 7 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 8

TN Scale	FS Scale	SEM
795	778	4.66
796	778	4.71
797	779	4.73
798	780	4.72
799	781	4.69
800	783	4.64
801	784	4.55
802	785	4.44
803	786	4.33
804	787	4.25
805	788	4.2
806	789	4.22
807	791	4.35
808	792	4.64
809	793	5.16
810	794	5.85
811	796	6.64
812	801	7.34
813	805	7.74
814	809	7.7
815	813	7.12
816	817	5.99
817	821	4.65
818	824	3.6
819	827	2.48
820	830	0.81

Table C 8
Fall SAT/9 and TN Linking Table—Reading Grade 9

TN Scale	FS Scale	SEM
512	617	2.37
513	617	2.37
514	617	2.37
515	617	2.37
516	617	2.37
517	617	2.37
518	617	2.37
519	617	2.37
520	617	2.37
521	617	2.35
522	617	2.32
523	617	2.3
524	618	2.28
525	618	2.27
526	618	2.26
527	618	2.25
528	618	2.24
529	618	2.24
530	619	2.24
531	619	2.23
532	619	2.22
533	619	2.21
534	619	2.2
535	619	2.19
536	619	2.18
537	619	2.17
538	619	2.17
539	619	2.16
540	619	2.16
541	619	2.16
542	619	2.16
543	619	2.15
544	619	2.14
545	619	2.14
546	619	2.13
547	619	2.13

TN Scale	FS Scale	SEM
548	619	2.12
549	619	2.12
550	619	2.12
551	619	2.11
552	619	2.11
553	619	2.1
554	619	2.1
555	619	2.1
556	620	2.09
557	620	2.09
558	620	2.09
559	620	2.08
560	620	2.08
561	620	2.07
562	620	2.07
563	620	2.07
564	620	2.06
565	620	2.05
566	620	2.04
567	620	2.03
568	620	2.02
569	620	2.01
570	620	2
571	620	1.98
572	621	1.97
573	621	1.96
574	621	1.95
575	621	1.94
576	621	1.93
577	621	1.92
578	621	1.9
579	621	1.89
580	621	1.86
581	622	1.84
582	622	1.81
583	622	1.78

Table C 8 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 9

TN Scale	FS Scale	SEM
584	622	1.75
585	622	1.71
586	622	1.66
587	623	1.61
588	623	1.58
589	623	1.56
590	623	1.53
591	623	1.52
592	623	1.51
593	623	1.51
594	623	1.5
595	623	1.5
596	623	1.5
597	624	1.5
598	624	1.5
599	624	1.52
600	624	1.55
601	624	1.58
602	624	1.61
603	625	1.7
604	625	1.87
605	626	2.04
606	627	2.18
607	627	2.25
608	627	2.27
609	629	2.31
610	630	2.28
611	630	2.22
612	631	2.18
613	631	2.14
614	632	2.13
615	632	2.08
616	633	2.06
617	633	2.05
618	634	2.06
619	635	2.08

TN Scale	FS Scale	SEM
620	636	2.06
621	637	2.03
622	638	2.01
623	638	2.01
624	639	1.97
625	639	1.96
626	640	1.96
627	641	1.93
628	642	1.93
629	643	1.93
630	644	1.91
631	645	1.85
632	646	1.74
633	647	1.68
634	648	1.61
635	649	1.53
636	650	1.43
637	651	1.37
638	652	1.38
639	653	1.4
640	653	1.43
641	654	1.44
642	655	1.45
643	656	1.49
644	657	1.52
645	658	1.51
646	659	1.47
647	660	1.4
648	661	1.36
649	662	1.32
650	663	1.28
651	663	1.22
652	664	1.16
653	665	1.11
654	665	1.1
655	666	1.07

**Table C 8 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 9**

TN Scale	FS Scale	SEM
656	667	1.04
657	668	1.02
658	669	1.02
659	670	1.02
660	671	1.05
661	672	1.07
662	673	1.08
663	674	1.08
664	675	1.07
665	676	1.1
666	677	1.11
667	678	1.09
668	679	1.04
669	680	1.02
670	681	1.02
671	683	0.98
672	684	0.95
673	685	0.95
674	686	0.95
675	687	0.94
676	688	0.94
677	689	0.95
678	690	0.94
679	690	0.94
680	691	0.93
681	692	0.92
682	693	0.92
683	694	0.92
684	695	0.91
685	696	0.9
686	697	0.9
687	698	0.91
688	699	0.91
689	700	0.92
690	701	0.93
691	702	0.94

TN Scale	FS Scale	SEM
692	702	0.95
693	703	1.01
694	704	1.09
695	706	1.13
696	707	1.13
697	708	1.09
698	709	1.05
699	710	1.03
700	710	1.03
701	711	1.02
702	712	1.02
703	713	1.04
704	714	1.09
705	715	1.11
706	716	1.11
707	717	1.09
708	718	1.03
709	720	0.98
710	721	0.96
711	722	0.94
712	723	0.98
713	723	1.05
714	724	1.13
715	725	1.18
716	726	1.18
717	727	1.18
718	728	1.21
719	728	1.29
720	730	1.45
721	731	1.53
722	733	1.53
723	734	1.5
724	735	1.5
725	736	1.5
726	738	1.5
727	738	1.48

Table C 8 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 9

TN Scale	FS Scale	SEM
728	740	1.44
729	741	1.46
730	741	1.5
731	743	1.63
732	745	1.81
733	746	1.87
734	747	1.9
735	748	1.96
736	749	2
737	749	2.08
738	750	2.2
739	752	2.39
740	754	2.48
741	755	2.49
742	756	2.48
743	757	2.49
744	758	2.57
745	758	2.63
746	759	2.65
747	761	2.69
748	762	2.74
749	763	2.74
750	763	2.75
751	764	2.72
752	766	2.82
753	767	3.17
754	767	3.7
755	767	3.97
756	768	4.46
757	770	5.46
758	770	5.96
759	770	6.28
760	771	6.53
761	772	6.79
762	773	7.04
763	774	7.26

TN Scale	FS Scale	SEM
764	774	7.38
765	775	7.51
766	775	7.63
767	776	7.76
768	778	7.89
769	779	8.04
770	781	8.24
771	781	8.38
772	781	8.43
773	782	8.51
774	782	8.64
775	786	8.64
776	789	8.78
777	793	9.2
778	795	9.53
779	795	9.5
780	795	9.46
781	795	9.43
782	795	9.39
783	795	9.36
784	795	9.34
785	795	9.31
786	795	9.29
787	795	9.27
788	795	9.25
789	795	9.24
790	795	9.22
791	795	9.21
792	796	9.2
793	796	9.2
794	796	9.2
795	796	9.2
796	796	9.21
797	796	9.22
798	796	9.24
799	796	9.27

Table C 8 (cont.)
Fall SAT/9 and TN Linking Table—Reading Grade 9

TN Scale	FS Scale	SEM
800	796	9.3
801	796	9.34
802	796	9.39
803	796	9.44
804	796	9.51
805	796	9.51
806	797	9.52
807	797	9.5
808	798	9.45
809	798	9.4
810	799	9.36
811	800	9.34
812	801	9.32
813	801	9.32
814	802	9.32
815	803	9.35
816	803	9.38
817	804	9.42
818	805	9.48
819	807	9.53
820	809	9.6
821	811	9.67
822	813	9.71
823	815	9.71
824	817	9.66
825	819	9.53
826	821	9.3
827	824	8.98
828	826	8.44
829	828	7.84
830	830	7.18
831	834	6.51
832	838	5.92
833	842	4.96

Table C 9
Fall SAT/9 and TN Linking Table—Language Grade 2

TN Scale	FS Scale	SEM
424	525	4.22
425	525	4.22
426	525	4.22
427	525	4.22
428	525	4.22
429	525	4.22
430	525	4.22
431	525	4.22
432	525	4.22
433	525	4.22
434	525	4.22
435	525	4.22
436	525	4.22
437	525	4.22
438	525	4.22
439	525	4.22
440	525	4.22
441	525	4.22
442	525	4.22
443	525	4.22
444	525	4.22
445	525	4.22
446	525	4.22
447	525	4.21
448	525	4.19
449	525	4.17
450	525	4.15
451	525	4.12
452	525	4.1
453	525	4.07
454	525	4.05
455	525	4.02
456	525	4
457	525	3.97
458	525	3.95
459	525	3.93

TN Scale	FS Scale	SEM
460	525	3.91
461	525	3.88
462	525	3.86
463	525	3.84
464	525	3.82
465	525	3.8
466	525	3.78
467	525	3.76
468	525	3.74
469	525	3.72
470	525	3.71
471	525	3.69
472	525	3.67
473	525	3.58
474	525	3.51
475	525	3.44
476	525	3.38
477	525	3.29
478	525	3.22
479	526	3.17
480	526	3.14
481	526	3.12
482	526	3.09
483	526	3.07
484	526	3.05
485	526	3.03
486	526	3.01
487	526	2.99
488	526	2.97
489	526	2.94
490	526	2.91
491	526	2.89
492	526	2.86
493	526	2.84
494	526	2.81
495	526	2.79

Table C 9 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 2

TN Scale	FS Scale	SEM
496	526	2.77
497	526	2.76
498	526	2.74
499	526	2.72
500	526	2.65
501	526	2.58
502	526	2.5
503	526	2.43
504	526	2.37
505	526	2.31
506	527	2.24
507	527	2.14
508	527	2.07
509	527	2.03
510	527	2
511	527	1.97
512	527	1.95
513	528	1.95
514	528	1.98
515	528	2.02
516	529	2.1
517	529	2.23
518	529	2.32
519	530	2.46
520	530	2.61
521	531	2.8
522	531	2.88
523	532	2.9
524	535	2.93
525	535	2.95
526	535	2.94
527	536	2.94
528	536	2.93
529	536	2.93
530	536	2.91
531	536	2.86

TN Scale	FS Scale	SEM
532	537	2.8
533	537	2.69
534	538	2.63
535	539	2.46
536	541	2.27
537	542	2.06
538	542	1.77
539	542	1.55
540	542	1.36
541	542	1.15
542	543	0.88
543	543	0.78
544	543	0.72
545	543	0.72
546	544	0.72
547	544	0.73
548	544	0.78
549	544	0.83
550	545	0.88
551	545	0.93
552	545	0.99
553	546	1.08
554	546	1.34
555	547	1.64
556	547	1.89
557	548	2.05
558	551	1.99
559	552	1.72
560	552	1.33
561	553	1.25
562	553	1.48
563	554	1.73
564	556	1.78
565	557	1.44
566	558	1.05
567	558	0.93

Table C 9 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 2

TN Scale	FS Scale	SEM
568	559	0.99
569	559	1.12
570	560	1.48
571	561	1.69
572	563	1.49
573	564	1.18
574	565	1.43
575	565	1.87
576	569	1.72
577	569	1.18
578	569	0.82
579	570	0.72
580	570	1.13
581	571	1.54
582	574	1.43
583	574	0.88
584	575	0.55
585	575	0.5
586	576	0.55
587	577	0.71
588	578	0.86
589	579	0.92
590	579	0.97
591	580	1.29
592	581	1.96
593	585	1.16
594	585	0.64
595	586	0.56
596	586	0.86
597	587	1.29
598	590	1.54
599	591	1.25
600	591	0.94
601	592	0.88
602	592	0.98
603	593	1.46

TN Scale	FS Scale	SEM
604	596	1.55
605	597	1.13
606	597	0.86
607	598	0.88
608	598	1.33
609	598	1.79
610	602	1.5
611	602	0.95
612	603	0.79
613	603	0.84
614	603	0.96
615	603	1.25
616	604	1.59
617	604	1.73
618	608	1.45
619	608	1.07
620	608	0.85
621	609	0.76
622	609	0.75
623	609	0.84
624	609	0.89
625	610	1.39
626	610	2.68
627	614	3.28
628	618	2.07
629	618	1.12
630	618	0.92
631	618	0.86
632	619	0.89
633	619	0.91
634	619	0.96
635	619	1.11
636	619	1.34
637	620	1.66
638	620	1.89
639	624	1.81

Table C 9 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 2

TN Scale	FS Scale	SEM
640	625	1.42
641	625	0.92
642	626	0.91
643	626	0.94
644	626	1.04
645	626	1.28
646	626	1.64
647	627	2.73
648	627	3.69
649	627	3.92
650	628	4.09
651	635	4.05
652	636	3.83
653	636	3.56
654	636	3.23
655	637	2.31
656	637	1.93
657	638	1.28
658	639	1.16
659	639	1.13
660	640	1.1
661	641	1.07
662	642	1.3
663	643	1.73
664	644	1.91
665	644	1.92
666	644	1.96
667	645	1.99
668	647	2
669	648	2.02
670	648	2.01
671	648	2
672	648	1.98
673	649	1.97
674	649	1.96
675	649	1.95

TN Scale	FS Scale	SEM
676	650	1.95
677	650	1.94
678	650	1.93
679	650	1.92
680	651	1.92
681	651	1.91
682	651	1.9
683	651	1.9
684	652	1.9
685	652	1.91
686	653	1.95
687	654	2.22
688	656	2.76
689	658	3.39
690	661	3.72
691	664	3.73
692	667	3.54
693	669	3.32
694	672	3.23
695	675	3.61
696	678	4.49
697	684	5.16
698	690	5.21
699	691	5.12
700	692	5.04
701	692	4.98
702	693	4.93
703	694	4.89
704	694	4.88
705	701	3.61
706	714	0

Table C 10
Fall SAT/9 and TN Linking Table—Language Grade 3

TN Scale	FS Scale	SEM
455	540	2.63
456	540	2.63
457	540	2.63
458	540	2.63
459	540	2.63
460	540	2.63
461	540	2.63
462	540	2.63
463	540	2.63
464	540	2.63
465	540	2.63
466	540	2.63
467	540	2.63
468	540	2.63
469	540	2.63
470	540	2.63
471	540	2.63
472	540	2.63
473	540	2.63
474	540	2.63
475	540	2.63
476	540	2.63
477	540	2.63
478	540	2.63
479	540	2.63
480	540	2.63
481	540	2.63
482	540	2.63
483	540	2.62
484	540	2.62
485	540	2.62
486	540	2.62
487	540	2.62
488	540	2.62
489	540	2.62
490	540	2.62

TN Scale	FS Scale	SEM
491	540	2.62
492	540	2.62
493	540	2.62
494	540	2.62
495	540	2.62
496	540	2.62
497	540	2.62
498	540	2.62
499	540	2.62
500	540	2.62
501	540	2.62
502	540	2.62
503	540	2.61
504	540	2.62
505	540	2.62
506	540	2.62
507	541	2.62
508	541	2.61
509	541	2.61
510	541	2.61
511	541	2.6
512	541	2.6
513	541	2.59
514	541	2.58
515	541	2.57
516	541	2.57
517	541	2.56
518	542	2.54
519	542	2.52
520	542	2.51
521	542	2.49
522	543	2.47
523	543	2.45
524	543	2.42
525	543	2.39
526	544	2.37

**Table C 10 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 3**

TN Scale	FS Scale	SEM
527	544	2.34
528	544	2.31
529	544	2.27
530	544	2.24
531	545	2.21
532	545	2.18
533	545	2.14
534	545	2.1
535	545	2.02
536	545	1.95
537	545	1.84
538	546	1.72
539	546	1.66
540	546	1.62
541	546	1.57
542	547	1.52
543	547	1.48
544	547	1.5
545	547	1.52
546	547	1.52
547	547	1.53
548	548	1.55
549	548	1.59
550	548	1.64
551	548	1.7
552	548	1.78
553	549	1.85
554	549	1.92
555	549	1.95
556	549	1.97
557	549	2.04
558	550	2.13
559	552	2.13
560	553	1.82
561	554	1.5
562	554	1.31

TN Scale	FS Scale	SEM
563	554	1.17
564	554	1.07
565	554	0.84
566	555	0.77
567	555	0.78
568	555	0.82
569	555	1.06
570	556	1.5
571	556	2
572	560	2.2
573	561	1.95
574	561	1.64
575	561	1.51
576	562	1.43
577	562	1.5
578	563	1.71
579	563	1.98
580	567	1.97
581	567	1.4
582	568	0.91
583	568	0.71
584	569	1.15
585	569	1.57
586	572	1.69
587	573	1.4
588	573	0.99
589	574	1.12
590	574	1.56
591	575	1.94
592	578	1.64
593	579	0.98
594	580	0.89
595	580	1.26
596	582	1.66
597	584	1.3
598	585	0.75

**Table C 10 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 3**

TN Scale	FS Scale	SEM
599	585	0.88
600	586	1.33
601	589	1.41
602	589	1.1
603	590	0.82
604	590	0.86
605	591	1.61
606	594	1.8
607	595	1.05
608	595	0.85
609	596	1.38
610	599	1.62
611	600	1.14
612	601	0.85
613	601	1.21
614	605	1.48
615	605	1.09
616	606	0.85
617	607	1.49
618	607	1.81
619	610	1.65
620	611	1.19
621	611	0.62
622	612	0.62
623	612	1.07
624	615	1.48
625	615	1.2
626	616	0.77
627	616	0.56
628	617	0.96
629	617	1.59
630	621	1.79
631	621	1.06
632	622	0.83
633	623	1
634	623	1.41

TN Scale	FS Scale	SEM
635	627	1.58
636	627	1.2
637	627	0.82
638	628	0.69
639	628	0.84
640	629	1.36
641	632	1.73
642	633	1.12
643	633	0.63
644	633	0.58
645	634	0.62
646	634	1.36
647	635	2.2
648	640	1.85
649	640	1.25
650	641	1.08
651	642	1.02
652	643	1.01
653	644	1.05
654	645	1.1
655	646	1.14
656	647	1.16
657	648	1.15
658	649	1.14
659	650	1.12
660	651	1.11
661	652	1.13
662	653	1.2
663	654	1.36
664	656	1.44
665	657	1.43
666	657	1.42
667	658	1.4
668	659	1.4
669	660	1.44
670	660	1.45

Table C 10 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 3

TN Scale	FS Scale	SEM
671	661	1.55
672	661	1.68
673	661	1.73
674	662	1.94
675	664	2.21
676	665	2.34
677	666	2.38
678	668	2.36
679	669	2.32
680	669	2.32
681	670	2.32
682	671	2.31
683	673	2.23
684	675	2.17
685	677	2.15
686	677	2.09
687	678	2.06
688	678	2.03
689	678	2.03
690	678	2.03
691	678	2.03
692	679	2.03
693	679	1.97
694	680	1.92
695	681	1.87
696	682	1.83
697	682	1.8
698	683	1.77
699	683	1.76
700	684	1.77
701	685	1.83
702	685	1.96
703	685	1.96
704	685	1.97
705	685	1.99
706	685	2.01

TN Scale	FS Scale	SEM
707	685	2.04
708	685	2.07
709	686	2.11
710	686	2.16
711	686	2.22
712	686	2.33
713	686	2.51
714	687	2.73
715	687	2.98
716	689	3.22
717	690	3.44
718	692	3.6
719	693	3.71
720	694	3.77
721	696	3.8
722	697	3.83
723	699	3.67
724	703	3.4
725	706	3.4
726	709	3.98
727	716	4.38
728	723	3.46
729	730	2.47
730	745	0.96

Table C 11
Fall SAT/9 and TN Linking Table—Language Grade 4

TN Scale	FS Scale	SEM
465	551	1.95
466	551	1.95
467	551	1.95
468	551	1.95
469	551	1.95
470	551	1.95
471	551	1.95
472	551	1.95
473	551	1.95
474	551	1.95
475	551	1.95
476	551	1.95
477	551	1.95
478	551	1.95
479	551	1.95
480	551	1.95
481	551	1.95
482	551	1.95
483	551	1.95
484	551	1.95
485	551	1.95
486	551	1.95
487	551	1.95
488	551	1.95
489	551	1.95
490	551	1.95
491	551	1.95
492	551	1.95
493	551	1.95
494	551	1.95
495	551	1.95
496	551	1.95
497	551	1.95
498	551	1.95
499	551	1.95
500	551	1.95

TN Scale	FS Scale	SEM
501	551	1.95
502	551	1.95
503	551	1.95
504	551	1.95
505	552	1.95
506	552	1.95
507	552	1.95
508	552	1.95
509	552	1.95
510	552	1.95
511	552	1.95
512	552	1.95
513	552	1.95
514	552	1.95
515	552	1.95
516	552	1.95
517	552	1.95
518	552	1.95
519	552	1.95
520	552	1.95
521	552	1.95
522	552	1.95
523	552	1.95
524	553	1.95
525	553	1.94
526	553	1.94
527	553	1.94
528	553	1.94
529	553	1.94
530	553	1.93
531	554	1.93
532	554	1.92
533	554	1.91
534	554	1.9
535	554	1.9
536	554	1.9

**Table C 11 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 4**

TN Scale	FS Scale	SEM
537	554	1.89
538	554	1.89
539	554	1.89
540	554	1.89
541	554	1.88
542	554	1.88
543	554	1.88
544	555	1.87
545	555	1.87
546	555	1.87
547	555	1.86
548	555	1.85
549	555	1.84
550	555	1.83
551	556	1.84
552	556	1.82
553	556	1.81
554	556	1.8
555	557	1.78
556	558	1.77
557	558	1.77
558	558	1.76
559	559	1.75
560	559	1.74
561	560	1.73
562	560	1.74
563	561	1.72
564	561	1.71
565	562	1.71
566	562	1.71
567	562	1.71
568	563	1.69
569	564	1.68
570	564	1.67
571	565	1.66
572	566	1.66

TN Scale	FS Scale	SEM
573	566	1.65
574	567	1.64
575	567	1.64
576	567	1.64
577	568	1.62
578	568	1.59
579	569	1.56
580	570	1.53
581	570	1.51
582	571	1.51
583	571	1.53
584	572	1.56
585	573	1.58
586	574	1.6
587	575	1.66
588	576	1.71
589	577	1.72
590	579	1.69
591	580	1.64
592	581	1.59
593	582	1.58
594	583	1.58
595	585	1.54
596	586	1.49
597	586	1.45
598	588	1.43
599	588	1.41
600	590	1.37
601	591	1.32
602	591	1.28
603	592	1.25
604	593	1.25
605	594	1.27
606	595	1.28
607	596	1.3
608	597	1.33

Table C 11 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 4

TN Scale	FS Scale	SEM
609	598	1.34
610	599	1.33
611	600	1.33
612	602	1.33
613	603	1.33
614	605	1.3
615	606	1.18
616	607	1.06
617	608	1
618	610	0.99
619	611	1.01
620	612	1.08
621	613	1.14
622	614	1.16
623	615	1.16
624	616	1.17
625	618	1.19
626	618	1.2
627	619	1.2
628	620	1.2
629	621	1.19
630	622	1.19
631	624	1.19
632	625	1.17
633	626	1.16
634	627	1.13
635	629	1.08
636	630	1.09
637	631	1.09
638	632	1.1
639	633	1.12
640	635	1.14
641	636	1.14
642	637	1.12
643	638	1.09
644	640	1.03

TN Scale	FS Scale	SEM
645	641	1.03
646	642	1.03
647	643	1.04
648	644	1.05
649	645	1.09
650	647	1.14
651	648	1.16
652	649	1.15
653	650	1.14
654	651	1.13
655	652	1.11
656	654	1.1
657	655	1.09
658	656	1.07
659	658	1.06
660	659	1.06
661	659	1.06
662	661	1.06
663	662	1.08
664	663	1.08
665	664	1.07
666	665	1.06
667	667	1.05
668	668	1.06
669	669	1.11
670	669	1.16
671	670	1.26
672	671	1.38
673	673	1.42
674	674	1.41
675	675	1.39
676	676	1.36
677	677	1.34
678	678	1.33
679	679	1.38
680	680	1.55

Table C 11 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 4

TN Scale	FS Scale	SEM
681	682	1.81
682	683	1.97
683	685	2
684	686	1.97
685	688	1.92
686	690	1.86
687	691	1.87
688	693	1.91
689	694	2.06
690	695	2.31
691	697	2.63
692	700	2.83
693	702	2.9
694	703	2.88
695	705	2.82
696	706	2.79
697	707	2.79
698	708	2.76
699	709	2.72
700	711	2.69
701	712	2.7
702	713	2.76
703	715	2.93
704	716	3.04
705	716	3.12
706	717	3.24
707	718	3.39
708	719	3.59
709	721	3.75
710	722	3.78
711	725	3.74
712	727	3.64
713	729	3.61
714	729	3.59
715	730	3.51
716	731	3.46

TN Scale	FS Scale	SEM
717	732	3.4
718	732	3.32
719	733	3.27
720	734	3.23
721	735	3.18
722	735	3.1
723	736	3.04
724	737	3
725	738	2.97
726	739	2.9
727	740	2.82
728	741	2.81
729	741	2.76
730	741	2.72
731	741	2.69
732	741	2.68
733	741	2.66
734	741	2.63
735	742	2.59
736	742	2.56
737	742	2.53
738	742	2.51
739	743	2.48
740	743	2.46
741	743	2.43
742	743	2.41
743	743	2.4
744	744	2.38
745	744	2.37
746	744	2.36
747	744	2.35
748	745	2.16
749	746	1.97
750	747	1.74
751	748	1.5
752	749	1.25

Table C 11 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 4

TN Scale	FS Scale	SEM
753	750	1
754	751	0.75
755	752	0.5
756	753	0.25
757	754	0

Table C 12
Fall SAT/9 and TN Linking Table—Language Grade 5

TN Scale	FS Scale	SEM
480	575	2.32
481	575	2.32
482	575	2.32
483	575	2.32
484	575	2.32
485	575	2.32
486	575	2.32
487	575	2.32
488	575	2.31
489	575	2.29
490	576	2.27
491	576	2.25
492	576	2.23
493	576	2.2
494	576	2.18
495	577	2.16
496	577	2.14
497	577	2.11
498	577	2.09
499	577	2.06
500	578	2.04
501	578	2.02
502	578	1.99
503	578	1.97
504	578	1.95
505	579	1.92
506	579	1.9
507	579	1.88
508	579	1.86
509	579	1.85
510	579	1.84
511	579	1.83
512	579	1.83
513	579	1.83
514	579	1.82
515	579	1.82

TN Scale	FS Scale	SEM
516	579	1.81
517	579	1.81
518	579	1.8
519	579	1.8
520	579	1.8
521	579	1.79
522	579	1.79
523	579	1.79
524	579	1.78
525	579	1.77
526	579	1.76
527	579	1.74
528	579	1.73
529	579	1.72
530	580	1.71
531	580	1.7
532	580	1.69
533	580	1.69
534	580	1.68
535	580	1.68
536	580	1.67
537	580	1.67
538	580	1.66
539	580	1.66
540	580	1.65
541	580	1.65
542	580	1.65
543	580	1.65
544	580	1.64
545	580	1.64
546	580	1.64
547	580	1.63
548	580	1.62
549	581	1.62
550	581	1.62
551	581	1.62

**Table C 12 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 5**

TN Scale	FS Scale	SEM
552	581	1.63
553	581	1.64
554	581	1.64
555	581	1.64
556	581	1.64
557	581	1.64
558	582	1.64
559	582	1.64
560	582	1.64
561	582	1.65
562	582	1.66
563	583	1.67
564	583	1.69
565	583	1.7
566	583	1.72
567	584	1.75
568	584	1.8
569	584	1.83
570	585	1.87
571	585	1.9
572	585	1.95
573	586	2.03
574	587	2.07
575	587	2.08
576	587	2.09
577	588	2.09
578	588	2.1
579	589	2.07
580	590	1.98
581	591	1.89
582	591	1.84
583	592	1.77
584	593	1.76
585	593	1.73
586	594	1.73
587	594	1.75

TN Scale	FS Scale	SEM
588	595	1.76
589	595	1.78
590	595	1.79
591	595	1.79
592	596	1.8
593	596	1.81
594	597	1.83
595	598	1.84
596	598	1.85
597	598	1.85
598	599	1.86
599	600	1.86
600	600	1.85
601	600	1.83
602	601	1.8
603	601	1.77
604	602	1.75
605	603	1.72
606	604	1.68
607	605	1.64
608	606	1.58
609	607	1.52
610	607	1.45
611	608	1.38
612	609	1.36
613	609	1.35
614	610	1.35
615	610	1.33
616	611	1.31
617	611	1.27
618	612	1.21
619	613	1.18
620	614	1.18
621	615	1.18
622	615	1.18
623	616	1.2

Table C 12 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 5

TN Scale	FS Scale	SEM
624	616	1.21
625	617	1.24
626	618	1.29
627	619	1.33
628	620	1.34
629	621	1.29
630	622	1.22
631	623	1.19
632	624	1.17
633	625	1.15
634	626	1.07
635	627	0.96
636	627	0.88
637	628	0.85
638	629	0.86
639	630	0.86
640	630	0.87
641	631	0.9
642	632	0.94
643	633	0.96
644	634	0.96
645	635	0.97
646	636	0.99
647	637	1.05
648	638	1.11
649	639	1.14
650	640	1.16
651	641	1.17
652	642	1.15
653	643	1.1
654	644	1.08
655	645	1.06
656	647	1.06
657	648	1.08
658	649	1.09
659	651	1.09

TN Scale	FS Scale	SEM
660	652	1.09
661	653	1.08
662	655	1.09
663	656	1.09
664	657	1.1
665	659	1.11
666	660	1.1
667	661	1.09
668	662	1.09
669	664	1.07
670	665	1.05
671	666	1.02
672	667	0.99
673	668	0.95
674	669	0.9
675	670	0.87
676	671	0.88
677	672	0.87
678	673	0.88
679	674	0.93
680	675	1.09
681	676	1.23
682	677	1.3
683	678	1.33
684	679	1.31
685	681	1.27
686	682	1.28
687	683	1.29
688	684	1.36
689	686	1.41
690	687	1.42
691	688	1.4
692	689	1.38
693	690	1.36
694	691	1.34
695	691	1.34

**Table C 12 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 5**

TN Scale	FS Scale	SEM
696	692	1.33
697	692	1.34
698	693	1.37
699	694	1.5
700	695	1.67
701	696	1.79
702	697	1.84
703	698	1.85
704	700	1.83
705	700	1.81
706	701	1.79
707	702	1.8
708	702	1.78
709	703	1.77
710	704	1.76
711	705	1.76
712	706	1.88
713	707	2.07
714	708	2.37
715	709	2.61
716	711	2.82
717	713	3
718	714	2.98
719	715	2.97
720	715	2.96
721	715	2.94
722	716	2.93
723	716	2.94
724	717	2.92
725	718	2.86
726	718	2.83
727	719	2.81
728	719	2.81
729	721	2.72
730	724	2.76
731	724	2.65

TN Scale	FS Scale	SEM
732	724	2.65
733	725	2.68
734	725	2.73
735	725	2.75
736	727	2.99
737	729	3.41
738	731	3.65
739	731	3.79
740	733	3.93
741	735	4.04
742	737	4.09
743	738	4.12
744	739	4.09
745	739	4.06
746	739	4.04
747	739	4.02
748	739	3.99
749	739	3.97
750	740	3.95
751	740	3.93
752	740	3.91
753	740	3.89
754	740	3.87
755	740	3.85
756	741	3.84
757	741	3.82
758	741	3.81
759	741	3.8
760	741	3.79
761	741	3.78
762	742	3.77
763	742	3.77
764	742	3.76
765	743	3.58
766	744	3.4
767	745	3.22

Table C 12 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 5

TN Scale	FS Scale	SEM
768	746	3.05
769	747	2.89
770	748	2.75
771	749	2.61
772	750	2.5
773	751	2.41
774	753	2.36
775	754	2.35
776	755	2.35
777	757	2.28
778	759	2.09
779	760	1.72
780	762	1.18
781	763	0.59
782	765	0

Table C 13
Fall SAT/9 and TN Linking Table—Language Grade 6

TN Scale	FS Scale	SEM
495	579	3.12
496	579	3.12
497	579	3.12
498	579	3.12
499	579	3.11
500	579	3.11
501	579	3.1
502	580	3.1
503	580	3.09
504	580	3.09
505	580	3.08
506	580	3.08
507	580	3.08
508	580	3.08
509	580	3.08
510	580	3.08
511	580	3.08
512	581	3.08
513	581	3.08
514	581	3.08
515	581	3.08
516	581	3.09
517	581	3.09
518	581	3.09
519	581	3.09
520	581	3.08
521	581	3.08
522	581	3.08
523	581	3.08
524	581	3.08
525	581	3.08
526	581	3.08
527	581	3.08
528	581	3.08
529	581	3.08
530	581	3.08

TN Scale	FS Scale	SEM
531	581	3.08
532	581	3.08
533	581	3.08
534	582	3.08
535	582	3.08
536	582	3.08
537	582	3.08
538	582	3.08
539	582	3.08
540	582	3.07
541	582	3.07
542	582	3.06
543	582	3.06
544	582	3.06
545	582	3.05
546	582	3.05
547	582	3.05
548	582	3.04
549	582	3.04
550	582	3.03
551	582	3.02
552	582	3.01
553	583	3
554	583	2.99
555	583	2.98
556	583	2.97
557	583	2.96
558	583	2.94
559	583	2.93
560	583	2.92
561	583	2.91
562	584	2.89
563	584	2.87
564	584	2.85
565	584	2.84
566	584	2.82

**Table C 13 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 6**

TN Scale	FS Scale	SEM
567	584	2.81
568	584	2.79
569	584	2.78
570	585	2.77
571	585	2.75
572	585	2.72
573	585	2.67
574	586	2.6
575	586	2.52
576	587	2.38
577	587	2.16
578	588	1.98
579	588	1.82
580	588	1.71
581	589	1.66
582	589	1.61
583	589	1.56
584	590	1.53
585	590	1.52
586	590	1.52
587	590	1.54
588	591	1.56
589	591	1.58
590	592	1.59
591	592	1.61
592	592	1.62
593	593	1.66
594	594	1.73
595	594	1.77
596	595	1.8
597	595	1.84
598	595	1.86
599	596	1.87
600	597	1.87
601	598	1.84
602	598	1.8

TN Scale	FS Scale	SEM
603	599	1.69
604	600	1.57
605	601	1.43
606	601	1.34
607	602	1.32
608	602	1.32
609	603	1.33
610	603	1.37
611	604	1.5
612	605	1.63
613	605	1.72
614	606	1.84
615	607	1.92
616	608	1.97
617	609	1.96
618	610	1.87
619	612	1.73
620	613	1.65
621	614	1.58
622	615	1.47
623	617	1.37
624	617	1.29
625	618	1.21
626	619	1.2
627	619	1.19
628	620	1.21
629	621	1.23
630	623	1.28
631	624	1.31
632	625	1.31
633	626	1.28
634	627	1.25
635	628	1.22
636	629	1.23
637	630	1.23
638	631	1.22

**Table C 13 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 6**

TN Scale	FS Scale	SEM
639	633	1.16
640	634	1.15
641	635	1.15
642	635	1.15
643	637	1.14
644	638	1.11
645	639	1.09
646	640	1.09
647	642	1.06
648	642	1.03
649	643	1.01
650	644	0.99
651	645	0.99
652	646	1
653	647	1.02
654	648	1.03
655	649	1.04
656	650	1.05
657	651	1.06
658	652	1.08
659	654	1.12
660	655	1.14
661	656	1.14
662	658	1.12
663	659	1.09
664	660	0.96
665	661	0.79
666	662	0.76
667	663	0.75
668	664	0.76
669	665	0.78
670	666	0.84
671	667	0.92
672	668	0.96
673	669	0.96
674	670	0.97

TN Scale	FS Scale	SEM
675	671	0.97
676	672	0.96
677	673	0.93
678	674	0.91
679	675	0.89
680	676	0.87
681	677	0.86
682	678	0.87
683	679	0.92
684	680	1.04
685	682	1.1
686	683	1.09
687	684	1.08
688	685	1.08
689	686	1.07
690	686	1.07
691	687	1.05
692	688	1.04
693	689	1.04
694	690	1.01
695	691	0.99
696	692	0.97
697	693	0.96
698	694	0.96
699	695	0.97
700	695	1.01
701	696	1.21
702	697	1.48
703	699	1.68
704	700	1.77
705	702	1.74
706	702	1.71
707	703	1.7
708	704	1.69
709	705	1.66
710	706	1.73

**Table C 13 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 6**

TN Scale	FS Scale	SEM
711	707	1.89
712	708	2.02
713	709	2.15
714	710	2.21
715	711	2.28
716	711	2.34
717	712	2.34
718	713	2.31
719	714	2.29
720	715	2.22
721	717	2.14
722	719	2.1
723	719	2.13
724	719	2.11
725	720	2.14
726	720	2.19
727	720	2.23
728	720	2.27
729	720	2.31
730	721	2.36
731	721	2.45
732	721	2.58
733	722	2.87
734	724	3.39
735	726	3.71
736	728	3.81
737	728	3.82
738	729	3.83
739	729	3.84
740	729	3.83
741	730	3.83
742	731	3.83
743	731	3.85
744	731	3.83
745	731	3.81
746	732	3.79

TN Scale	FS Scale	SEM
747	732	3.76
748	732	3.74
749	732	3.72
750	732	3.69
751	732	3.67
752	733	3.65
753	733	3.62
754	733	3.6
755	733	3.58
756	733	3.56
757	733	3.53
758	734	3.51
759	734	3.49
760	734	3.47
761	734	3.45
762	734	3.43
763	734	3.41
764	734	3.4
765	735	3.38
766	735	3.36
767	735	3.34
768	735	3.33
769	735	3.32
770	735	3.3
771	736	3.29
772	736	3.28
773	736	3.27
774	736	3.26
775	736	3.25
776	736	3.24
777	737	3.2
778	737	3.13
779	738	3.07
780	738	3.03
781	739	3
782	739	2.99

Table C 13 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 6

TN Scale	FS Scale	SEM
783	740	3
784	740	3.03
785	741	3.1
786	741	3.2
787	741	3.35
788	742	3.56
789	742	3.82
790	743	4.13
791	743	4.47
792	744	4.84
793	746	5.21
794	748	5.57
795	750	5.87
796	752	6.08
797	754	6.21
798	756	6.24
799	758	6.12
800	760	5.91
801	762	5.59
802	764	5.17
803	766	4.7
804	768	4.32
805	770	4.09
806	774	3.91
807	777	3.44
808	781	1.87

Table C 14
Fall SAT/9 and TN Linking Table—Language Grade 7

TN Scale	FS Scale	SEM
502	592	2.36
503	592	2.36
504	592	2.36
505	592	2.36
506	592	2.36
507	592	2.36
508	592	2.36
509	592	2.36
510	592	2.36
511	592	2.36
512	592	2.36
513	592	2.35
514	593	2.33
515	593	2.31
516	593	2.29
517	593	2.28
518	594	2.27
519	594	2.26
520	594	2.25
521	595	2.24
522	595	2.23
523	595	2.22
524	595	2.21
525	596	2.2
526	596	2.19
527	596	2.18
528	596	2.17
529	597	2.17
530	597	2.16
531	597	2.16
532	597	2.16
533	598	2.16
534	598	2.16
535	598	2.16
536	598	2.17
537	598	2.18

TN Scale	FS Scale	SEM
538	599	2.18
539	599	2.19
540	599	2.19
541	599	2.2
542	599	2.2
543	599	2.2
544	599	2.2
545	599	2.2
546	599	2.2
547	599	2.2
548	599	2.19
549	599	2.19
550	599	2.19
551	599	2.19
552	599	2.19
553	599	2.19
554	599	2.19
555	599	2.19
556	599	2.19
557	599	2.19
558	599	2.19
559	599	2.19
560	599	2.19
561	600	2.19
562	600	2.19
563	600	2.19
564	600	2.19
565	600	2.19
566	600	2.19
567	601	2.19
568	601	2.18
569	601	2.18
570	602	2.13
571	602	2.11
572	603	2.09
573	603	2.06

**Table C 14 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 7**

TN Scale	FS Scale	SEM
574	603	2.03
575	604	1.99
576	604	1.96
577	604	1.93
578	605	1.93
579	605	1.92
580	605	1.9
581	605	1.89
582	605	1.88
583	606	1.87
584	606	1.86
585	606	1.85
586	607	1.83
587	607	1.81
588	608	1.79
589	608	1.76
590	609	1.72
591	609	1.68
592	610	1.65
593	610	1.62
594	611	1.59
595	611	1.61
596	612	1.62
597	613	1.65
598	613	1.68
599	614	1.71
600	614	1.75
601	614	1.81
602	615	1.87
603	615	1.95
604	616	2.01
605	617	2.07
606	618	2.11
607	618	2.1
608	619	2.05
609	620	2.01

TN Scale	FS Scale	SEM
610	620	1.91
611	621	1.77
612	622	1.67
613	622	1.6
614	623	1.56
615	623	1.53
616	624	1.5
617	624	1.46
618	625	1.44
619	626	1.4
620	626	1.36
621	627	1.31
622	628	1.29
623	628	1.29
624	629	1.29
625	630	1.29
626	630	1.29
627	631	1.25
628	632	1.21
629	632	1.17
630	633	1.15
631	634	1.17
632	635	1.18
633	636	1.19
634	637	1.2
635	638	1.21
636	639	1.22
637	639	1.23
638	640	1.22
639	640	1.22
640	641	1.24
641	642	1.28
642	643	1.31
643	645	1.31
644	646	1.26
645	647	1.2

**Table C 14 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 7**

TN Scale	FS Scale	SEM
646	647	1.12
647	648	1.04
648	649	1.02
649	650	1.03
650	651	1.03
651	652	1.01
652	653	0.96
653	654	0.92
654	655	0.91
655	656	0.91
656	657	0.91
657	658	0.92
658	659	0.93
659	660	0.94
660	661	0.94
661	662	0.94
662	663	0.94
663	664	0.94
664	665	0.95
665	666	0.96
666	667	0.96
667	668	0.92
668	669	0.82
669	670	0.75
670	671	0.72
671	672	0.73
672	672	0.72
673	673	0.73
674	674	0.74
675	674	0.74
676	675	0.76
677	676	0.79
678	677	0.8
679	678	0.8
680	679	0.78
681	680	0.78

TN Scale	FS Scale	SEM
682	681	0.78
683	682	0.79
684	683	0.82
685	683	0.83
686	684	0.82
687	686	0.81
688	686	0.82
689	688	0.84
690	689	0.97
691	690	1.1
692	691	1.16
693	692	1.16
694	694	1.15
695	695	1.16
696	695	1.16
697	696	1.16
698	698	1.19
699	698	1.21
700	699	1.21
701	700	1.19
702	702	1.15
703	703	1.15
704	704	1.14
705	704	1.14
706	705	1.16
707	706	1.22
708	707	1.43
709	709	1.56
710	709	1.62
711	710	1.67
712	711	1.68
713	713	1.63
714	715	1.66
715	716	1.73
716	717	1.81
717	717	1.84

**Table C 14 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 7**

TN Scale	FS Scale	SEM
718	717	1.89
719	717	1.92
720	718	2
721	719	2.14
722	720	2.25
723	722	2.29
724	723	2.26
725	725	2.18
726	727	2.17
727	728	2.11
728	728	2.12
729	728	2.12
730	728	2.15
731	729	2.17
732	729	2.23
733	729	2.29
734	731	2.58
735	735	3.5
736	736	3.63
737	738	3.69
738	738	3.71
739	739	3.7
740	739	3.7
741	739	3.7
742	739	3.7
743	739	3.7
744	739	3.7
745	739	3.7
746	739	3.7
747	739	3.7
748	739	3.7
749	739	3.7
750	739	3.7
751	739	3.7
752	739	3.7
753	739	3.7

TN Scale	FS Scale	SEM
754	739	3.7
755	739	3.7
756	739	3.7
757	739	3.7
758	739	3.7
759	739	3.7
760	739	3.7
761	739	3.7
762	739	3.7
763	739	3.7
764	739	3.7
765	739	3.7
766	739	3.7
767	739	3.7
768	739	3.7
769	739	3.7
770	739	3.7
771	739	3.7
772	739	3.7
773	740	3.7
774	740	3.7
775	740	3.7
776	740	3.7
777	740	3.7
778	740	3.64
779	741	3.56
780	741	3.48
781	742	3.4
782	743	3.32
783	743	3.23
784	744	3.15
785	745	3.07
786	745	2.99
787	746	2.91
788	746	2.83
789	747	2.77

Table C 14 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 7

TN Scale	FS Scale	SEM
790	748	2.71
791	748	2.67
792	749	2.66
793	749	2.67
794	750	2.73
795	751	2.84
796	751	3
797	752	3.22
798	753	3.48
799	753	3.78
800	754	4.08
801	756	4.34
802	758	4.53
803	760	4.62
804	762	4.58
805	764	4.4
806	766	4.09
807	768	3.71
808	770	3.3
809	772	2.91
810	774	2.56
811	776	2.38
812	778	2.67
813	783	3.61
814	791	3.68

Table C 15
Fall SAT/9 and TN Linking Table—Language Grade 8

TN Scale	FS Scale	SEM
523	595	2.47
524	595	2.47
525	595	2.47
526	595	2.47
527	595	2.46
528	595	2.46
529	595	2.45
530	595	2.44
531	595	2.44
532	595	2.43
533	595	2.43
534	595	2.42
535	595	2.41
536	595	2.41
537	595	2.4
538	595	2.4
539	595	2.39
540	595	2.39
541	595	2.39
542	595	2.38
543	595	2.38
544	595	2.38
545	595	2.37
546	595	2.37
547	595	2.36
548	595	2.36
549	595	2.35
550	595	2.35
551	595	2.34
552	595	2.34
553	595	2.34
554	595	2.33
555	595	2.33
556	595	2.33
557	595	2.32
558	595	2.32

TN Scale	FS Scale	SEM
559	595	2.32
560	595	2.32
561	595	2.31
562	595	2.31
563	595	2.31
564	595	2.31
565	595	2.3
566	595	2.29
567	596	2.28
568	596	2.27
569	596	2.26
570	596	2.25
571	596	2.25
572	596	2.24
573	596	2.24
574	596	2.23
575	596	2.23
576	596	2.22
577	596	2.21
578	596	2.2
579	596	2.2
580	596	2.19
581	596	2.18
582	597	2.17
583	597	2.17
584	597	2.16
585	597	2.15
586	597	2.14
587	597	2.12
588	598	2.12
589	598	2.12
590	599	2.09
591	599	2.09
592	599	2.09
593	600	2.08
594	600	2.08

**Table C 15 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 8**

TN Scale	FS Scale	SEM
595	600	2.07
596	600	2.07
597	601	2.06
598	601	2.06
599	602	2.07
600	603	2.09
601	604	2.13
602	604	2.12
603	605	2.12
604	606	2.1
605	606	2.04
606	607	1.99
607	607	1.92
608	608	1.83
609	608	1.67
610	609	1.52
611	609	1.46
612	610	1.41
613	610	1.37
614	611	1.33
615	611	1.31
616	611	1.3
617	612	1.34
618	613	1.37
619	613	1.42
620	614	1.49
621	615	1.57
622	616	1.65
623	617	1.68
624	618	1.69
625	620	1.64
626	621	1.56
627	621	1.53
628	622	1.52
629	623	1.48
630	624	1.46

TN Scale	FS Scale	SEM
631	625	1.44
632	626	1.42
633	627	1.42
634	628	1.45
635	628	1.46
636	629	1.45
637	631	1.45
638	632	1.46
639	633	1.47
640	635	1.44
641	636	1.38
642	637	1.32
643	638	1.26
644	639	1.26
645	640	1.24
646	641	1.18
647	643	1.12
648	644	1.1
649	644	1.11
650	645	1.14
651	647	1.2
652	648	1.29
653	649	1.3
654	651	1.19
655	652	1.07
656	654	1.04
657	655	1.04
658	656	1.04
659	657	1.02
660	658	0.99
661	659	0.98
662	660	0.98
663	661	0.99
664	662	0.99
665	663	1.03
666	664	1.06

Table C 15 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 8

TN Scale	FS Scale	SEM
667	665	1.07
668	666	1.07
669	668	1.07
670	669	1.04
671	670	1.03
672	671	1.03
673	672	1.03
674	673	1.01
675	674	0.94
676	675	0.91
677	676	0.88
678	677	0.88
679	678	0.9
680	679	0.9
681	680	0.88
682	681	0.87
683	681	0.87
684	683	0.86
685	684	0.84
686	685	0.84
687	685	0.85
688	686	0.86
689	687	0.9
690	688	0.93
691	690	0.91
692	691	0.92
693	692	0.92
694	693	0.94
695	694	0.98
696	695	1.01
697	696	1.03
698	697	1.04
699	698	1.01
700	699	1
701	700	1
702	701	1

TN Scale	FS Scale	SEM
703	702	1.04
704	703	1.12
705	704	1.16
706	705	1.18
707	706	1.18
708	707	1.17
709	708	1.14
710	710	1.14
711	712	1.37
712	714	1.59
713	714	1.6
714	715	1.58
715	716	1.57
716	717	1.57
717	718	1.55
718	719	1.56
719	721	1.61
720	722	1.8
721	724	2.01
722	726	2.16
723	727	2.18
724	728	2.17
725	728	2.15
726	729	2.11
727	730	2.06
728	730	2.05
729	731	2.03
730	731	2.02
731	731	2
732	732	1.99
733	732	2.03
734	735	2.14
735	736	2.76
736	737	3.16
737	740	3.6
738	742	3.87

Table C 15 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 8

TN Scale	FS Scale	SEM
739	744	3.95
740	746	3.97
741	746	3.92
742	747	3.87
743	748	3.83
744	749	3.81
745	749	3.8
746	749	3.8
747	749	3.79
748	749	3.78
749	749	3.77
750	749	3.76
751	750	3.71
752	750	3.68
753	751	3.67
754	751	3.68
755	751	3.68
756	751	3.68
757	751	3.68
758	751	3.67
759	751	3.67
760	751	3.67
761	752	3.67
762	752	3.67
763	752	3.67
764	752	3.67
765	752	3.67
766	752	3.67
767	752	3.67
768	752	3.67
769	752	3.67
770	752	3.67
771	752	3.67
772	752	3.67
773	752	3.67
774	752	3.68

TN Scale	FS Scale	SEM
775	752	3.68
776	752	3.68
777	752	3.68
778	752	3.68
779	752	3.69
780	752	3.69
781	752	3.69
782	752	3.7
783	752	3.7
784	752	3.7
785	752	3.71
786	752	3.71
787	752	3.72
788	753	3.73
789	753	3.74
790	754	3.77
791	754	3.82
792	755	3.89
793	755	4
794	756	4.13
795	756	4.29
796	757	4.46
797	758	4.65
798	758	4.84
799	760	5.02
800	761	5.18
801	763	5.29
802	764	5.37
803	766	5.39
804	767	5.33
805	769	5.22
806	770	5.05
807	772	4.83
808	773	4.57
809	775	4.32
810	776	4.06

Table C 15 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 8

TN Scale	FS Scale	SEM
811	778	3.82
812	779	3.61
813	780	3.46
814	782	3.39
815	784	3.41
816	787	3.45
817	789	3.32
818	792	2.55
819	795	1.07

Table C 16
Fall SAT/9 and TN Linking Table—Language Grade 9

TN Scale	FS Scale	SEM
530	606	2.4
531	606	2.4
532	606	2.4
533	606	2.39
534	606	2.38
535	607	2.36
536	608	2.36
537	608	2.34
538	608	2.34
539	608	2.33
540	608	2.33
541	608	2.33
542	608	2.32
543	608	2.32
544	608	2.32
545	608	2.32
546	608	2.32
547	608	2.32
548	608	2.32
549	608	2.32
550	608	2.32
551	609	2.32
552	609	2.32
553	609	2.32
554	609	2.33
555	609	2.33
556	609	2.33
557	609	2.33
558	609	2.33
559	609	2.33
560	609	2.33
561	609	2.33
562	609	2.33
563	609	2.33
564	609	2.33
565	609	2.33

TN Scale	FS Scale	SEM
566	609	2.33
567	609	2.32
568	610	2.32
569	610	2.32
570	610	2.32
571	610	2.31
572	610	2.31
573	610	2.31
574	611	2.31
575	611	2.3
576	611	2.3
577	611	2.3
578	611	2.3
579	611	2.3
580	611	2.3
581	611	2.3
582	611	2.3
583	611	2.3
584	611	2.3
585	611	2.29
586	612	2.29
587	612	2.29
588	612	2.28
589	612	2.28
590	612	2.27
591	612	2.26
592	612	2.24
593	613	2.23
594	613	2.2
595	614	2.14
596	614	2.07
597	615	2.01
598	615	1.96
599	615	1.89
600	616	1.83
601	616	1.79

Table C 16 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 9

TN Scale	FS Scale	SEM
602	616	1.76
603	616	1.71
604	617	1.69
605	618	1.69
606	618	1.71
607	618	1.71
608	619	1.73
609	619	1.75
610	620	1.75
611	620	1.74
612	620	1.73
613	621	1.71
614	621	1.68
615	622	1.66
616	622	1.64
617	623	1.63
618	624	1.63
619	624	1.63
620	625	1.62
621	625	1.61
622	626	1.6
623	626	1.58
624	627	1.54
625	627	1.5
626	628	1.46
627	628	1.4
628	629	1.34
629	629	1.26
630	630	1.23
631	631	1.23
632	631	1.24
633	632	1.26
634	633	1.27
635	633	1.3
636	634	1.34
637	635	1.38

TN Scale	FS Scale	SEM
638	636	1.4
639	637	1.4
640	637	1.38
641	639	1.28
642	640	1.14
643	641	1.11
644	642	1.11
645	643	1.08
646	644	1.02
647	645	0.95
648	646	0.92
649	647	0.91
650	647	0.91
651	648	0.9
652	649	0.93
653	650	0.99
654	651	1.05
655	652	1.08
656	653	1.09
657	654	1.06
658	655	0.98
659	656	0.91
660	657	0.9
661	658	0.91
662	659	0.93
663	660	0.95
664	661	0.97
665	662	0.97
666	664	0.97
667	664	0.95
668	665	0.91
669	666	0.86
670	667	0.83
671	668	0.82
672	669	0.82
673	670	0.82

Table C 16 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 9

TN Scale	FS Scale	SEM
674	671	0.84
675	671	0.88
676	673	0.91
677	674	0.9
678	675	0.89
679	676	0.85
680	677	0.82
681	678	0.8
682	680	0.79
683	681	0.79
684	681	0.82
685	682	0.9
686	683	0.96
687	685	0.96
688	686	0.97
689	687	0.99
690	688	1.01
691	690	1.04
692	691	1.04
693	692	1.03
694	693	1.05
695	694	1.07
696	695	1.1
697	696	1.09
698	697	1.08
699	698	1.07
700	699	1.08
701	700	1.12
702	701	1.16
703	701	1.2
704	703	1.24
705	704	1.27
706	705	1.25
707	706	1.26
708	707	1.31
709	707	1.39

TN Scale	FS Scale	SEM
710	708	1.49
711	710	1.58
712	711	1.63
713	712	1.59
714	713	1.56
715	714	1.56
716	715	1.57
717	716	1.56
718	717	1.55
719	719	1.53
720	719	1.52
721	720	1.5
722	721	1.49
723	721	1.5
724	722	1.51
725	722	1.52
726	722	1.54
727	723	1.58
728	724	1.72
729	724	1.85
730	725	2.04
731	726	2.21
732	727	2.36
733	727	2.44
734	728	2.52
735	729	2.57
736	730	2.55
737	731	2.54
738	731	2.53
739	732	2.54
740	732	2.54
741	733	2.55
742	734	2.66
743	736	2.94
744	738	3.15
745	738	3.17

Table C 16 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 9

TN Scale	FS Scale	SEM
746	739	3.21
747	739	3.21
748	740	3.21
749	740	3.23
750	741	3.19
751	742	3.16
752	743	3.16
753	744	3.21
754	744	3.28
755	744	3.28
756	744	3.29
757	745	3.3
758	745	3.33
759	745	3.36
760	745	3.4
761	745	3.46
762	745	3.5
763	745	3.52
764	746	3.54
765	746	3.56
766	746	3.59
767	746	3.62
768	746	3.66
769	746	3.7
770	746	3.74
771	747	3.79
772	747	3.84
773	747	3.9
774	747	3.97
775	747	4.03
776	747	4.11
777	747	4.19
778	748	4.28
779	748	4.38
780	748	4.48
781	748	4.59

TN Scale	FS Scale	SEM
782	748	4.7
783	748	4.82
784	748	4.95
785	749	5.08
786	749	5.22
787	749	5.36
788	749	5.51
789	749	5.66
790	749	5.81
791	749	5.97
792	750	6.13
793	751	6.29
794	751	6.45
795	752	6.62
796	753	6.78
797	753	6.95
798	754	7.13
799	755	7.27
800	756	7.42
801	757	7.55
802	758	7.68
803	759	7.8
804	760	7.89
805	762	7.99
806	763	8.07
807	764	8.14
808	765	8.2
809	766	8.27
810	767	8.36
811	768	8.5
812	769	8.63
813	770	8.79
814	772	8.98
815	775	9.18
816	777	9.34
817	780	9.41

Table C 16 (cont.)
Fall SAT/9 and TN Linking Table—Language Grade 9

TN Scale	FS Scale	SEM
818	782	9.36
819	785	9.18
820	787	8.91
821	790	8.51
822	792	7.89
823	795	7.06
824	797	6.13
825	799	5.27
826	801	4.52
827	803	3.81
828	805	2.86
829	807	1.86

Table C 17
Fall SAT/9 and TN Linking Table—Mathematics Grade 2

TN Scale	FS Scale	SEM
347	478	32.59
348	478	32.59
349	478	32.59
350	478	32.59
351	478	32.59
352	478	32.59
353	478	32.59
354	478	32.59
355	478	32.59
356	478	32.59
357	478	32.59
358	478	32.59
359	478	32.59
360	478	32.59
361	478	32.59
362	478	32.59
363	478	32.59
364	478	32.59
365	478	32.59
366	478	32.59
367	478	32.59
368	478	32.59
369	478	32.59
370	478	32.59
371	478	32.59
372	478	32.59
373	478	32.59
374	478	32.59
375	478	32.59
376	478	24.31
377	478	24.13
378	478	23.96
379	478	23.8
380	478	23.64
381	478	23.49
382	478	23.35

TN Scale	FS Scale	SEM
383	478	23.22
384	478	23.09
385	479	22.98
386	479	22.87
387	479	22.76
388	479	22.67
389	479	22.58
390	479	22.49
391	479	22.41
392	479	22.34
393	479	18.51
394	480	18.34
395	480	18.18
396	480	18.03
397	480	17.88
398	480	17.73
399	480	16.42
400	480	15.7
401	480	15.49
402	480	15.27
403	481	14.66
404	481	14.44
405	481	14.22
406	481	14
407	481	13.79
408	481	13.58
409	481	13.37
410	481	13.17
411	481	12.97
412	482	12.78
413	482	12.59
414	482	12.41
415	482	12.23
416	482	12.05
417	482	11.89
418	482	11.72

**Table C 17 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 2**

TN Scale	FS Scale	SEM
419	482	11.57
420	482	11.42
421	483	11.24
422	483	11.05
423	483	10.86
424	483	10.68
425	483	10.5
426	484	10.33
427	484	10.15
428	484	9.98
429	484	9.81
430	484	9.64
431	485	9.48
432	485	9.33
433	485	9.18
434	485	9.04
435	485	8.91
436	485	8.78
437	486	8.66
438	486	8.54
439	486	8.43
440	486	8.32
441	486	8.22
442	487	8.12
443	487	8.03
444	487	7.94
445	487	7.75
446	488	7.55
447	488	7.36
448	488	7.21
449	489	7.02
450	489	6.85
451	489	6.71
452	490	6.46
453	490	6.28
454	491	6.15

TN Scale	FS Scale	SEM
455	492	5.95
456	492	5.65
457	493	5.45
458	493	5.3
459	494	5.21
460	494	5.11
461	494	4.98
462	495	4.9
463	495	4.77
464	496	4.68
465	496	4.57
466	497	4.4
467	499	4.34
468	500	4.29
469	500	4.16
470	501	3.95
471	502	3.69
472	502	3.5
473	503	3.25
474	504	3.09
475	505	2.92
476	506	2.81
477	506	2.71
478	507	2.62
479	508	2.59
480	508	2.52
481	508	2.48
482	509	2.42
483	509	2.4
484	509	2.36
485	510	2.26
486	511	2.23
487	511	2.22
488	512	2.2
489	513	2.18
490	513	2.14

**Table C 17 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 2**

TN Scale	FS Scale	SEM
491	514	2.09
492	514	2.03
493	515	1.93
494	515	1.84
495	516	1.78
496	516	1.75
497	516	1.77
498	516	1.77
499	517	1.82
500	517	1.85
501	518	1.88
502	520	1.87
503	520	1.84
504	520	1.71
505	521	1.63
506	521	1.56
507	522	1.59
508	523	1.6
509	523	1.61
510	524	1.61
511	524	1.61
512	525	1.61
513	525	1.6
514	526	1.6
515	527	1.58
516	527	1.54
517	528	1.49
518	529	1.48
519	529	1.5
520	529	1.56
521	530	1.76
522	532	1.99
523	533	2.12
524	535	2.03
525	537	1.56
526	537	1.34

TN Scale	FS Scale	SEM
527	538	1.3
528	539	1.29
529	540	1.13
530	541	1.12
531	541	1.23
532	543	1.35
533	544	1.54
534	544	1.7
535	547	1.69
536	548	1.55
537	551	1.27
538	551	1.14
539	553	1.25
540	554	1.44
541	555	1.48
542	557	1.26
543	557	1
544	558	1.03
545	559	1.24
546	560	1.11
547	561	1.23
548	561	1.46
549	564	1.39
550	564	1.2
551	565	1.26
552	567	1.19
553	568	0.79
554	568	0.75
555	568	1.06
556	570	1.06
557	571	0.89
558	572	1.2
559	574	1.14
560	575	0.98
561	575	1.2
562	578	1.39

**Table C 17 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 2**

TN Scale	FS Scale	SEM
563	579	1.13
564	580	1.48
565	584	1.49
566	584	1.14
567	584	0.97
568	585	1.14
569	587	1.24
570	587	1.08
571	588	1.36
572	591	1.78
573	593	1.1
574	595	1.09
575	596	1.17
576	597	1.23
577	598	1.24
578	598	1.24
579	600	1.19
580	602	1.11
581	604	1.09
582	606	1.06
583	607	0.98
584	608	0.96
585	609	0.97
586	609	0.99
587	609	1
588	609	1.05
589	610	1.39
590	615	1.92
591	615	1.12
592	616	1.04
593	616	1.74
594	616	2.61
595	623	2.86
596	623	2.26
597	623	1.94
598	623	1.85

TN Scale	FS Scale	SEM
599	624	1.72
600	624	1.59
601	624	1.27
602	624	1.14
603	624	1.13
604	624	1.15
605	625	1.4
606	625	2.3
607	632	2.36
608	633	1.94
609	635	1.68
610	636	1.65
611	636	1.65
612	637	1.67
613	638	1.76
614	638	1.77
615	638	1.78
616	639	1.79
617	639	1.8
618	639	1.81
619	639	1.83
620	639	1.86
621	640	1.89
622	640	1.98
623	642	2.11
624	645	2.05
625	645	1.96
626	646	1.94
627	646	1.93
628	648	1.86
629	650	1.85
630	651	1.94
631	651	2.04
632	652	2.24
633	655	2.72
634	658	2.9

**Table C 17 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 2**

TN Scale	FS Scale	SEM
635	660	2.82
636	662	2.79
637	664	2.81
638	664	2.8
639	664	2.79
640	664	2.78
641	664	2.77
642	664	2.76
643	664	2.75
644	664	2.75
645	664	2.74
646	664	2.73
647	664	2.72
648	664	2.72
649	664	2.71
650	664	2.7
651	664	2.7
652	664	2.69
653	664	2.69
654	664	2.68
655	664	2.67
656	664	2.67
657	664	2.66
658	664	2.66
659	664	2.65
660	664	2.65
661	664	2.65
662	664	2.64
663	664	2.64
664	664	2.63
665	664	2.63
666	664	2.63
667	664	2.62
668	664	2.62
669	664	2.62
670	664	2.62

TN Scale	FS Scale	SEM
671	664	2.61
672	664	2.61
673	664	2.61
674	665	2.61
675	665	2.61
676	665	2.61
677	665	2.61
678	665	2.61
679	665	2.61
680	665	2.59
681	666	2.54
682	666	2.49
683	667	2.45
684	667	2.41
685	668	2.37
686	668	2.35
687	669	2.33
688	669	2.33
689	670	2.36
690	671	2.42
691	671	2.51
692	672	2.64
693	672	2.8
694	673	2.98
695	674	3.15
696	675	3.31
697	677	3.44
698	678	3.52
699	679	3.55
700	680	3.51
701	682	3.42
702	683	3.3
703	684	3.16
704	685	3.01
705	687	2.87
706	688	2.72

Table C 17 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 2

TN Scale	FS Scale	SEM
707	689	2.59
708	690	2.47
709	692	2.36
710	693	2.26
711	694	2.18
712	695	2.11
713	697	2.09
714	698	2.12
715	700	2.15
716	702	2.05
717	703	1.75
718	705	1.25
719	707	0.64
720	709	0

Table C 18
Fall SAT/9 and TN Linking Table—Mathematics Grade 3

TN Scale	FS Scale	SEM
385	505	14.88
386	505	14.88
387	505	14.88
388	505	14.88
389	505	14.88
390	505	14.88
391	505	14.88
392	505	14.88
393	505	14.88
394	505	13.12
395	505	12.93
396	505	12.76
397	505	12.61
398	505	12.47
399	505	12.35
400	505	12.24
401	505	11.8
402	505	11.66
403	505	11.52
404	505	11.39
405	505	11.26
406	505	11.14
407	505	11.03
408	505	10.93
409	506	10.83
410	506	10.73
411	506	10.63
412	506	10.54
413	506	10.44
414	506	10.35
415	506	10.27
416	506	10.18
417	506	10.1
418	506	10.03
419	506	9.95
420	506	9.06

TN Scale	FS Scale	SEM
421	506	8.94
422	506	8.82
423	506	8.71
424	506	8.6
425	506	8.49
426	506	8.38
427	506	8.27
428	506	8.17
429	506	8.07
430	506	7.97
431	506	7.87
432	506	7.78
433	506	7.69
434	506	7.61
435	507	7.53
436	507	7.43
437	507	7.34
438	507	7.24
439	507	7.15
440	507	7.07
441	507	6.98
442	507	6.9
443	507	6.82
444	507	6.75
445	507	6.68
446	507	6.61
447	507	6.54
448	507	6.47
449	507	6.41
450	507	6.35
451	507	6.29
452	507	6.23
453	507	6.18
454	507	6.12
455	507	6.07
456	507	6.02

**Table C 18 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 3**

TN Scale	FS Scale	SEM
457	507	5.97
458	507	5.92
459	508	5.84
460	508	5.74
461	508	5.65
462	508	5.58
463	508	5.5
464	508	5.43
465	508	5.37
466	508	5.3
467	509	5.24
468	509	5.16
469	509	5.09
470	509	5.03
471	509	4.98
472	509	4.94
473	509	4.92
474	510	4.88
475	510	4.79
476	510	4.74
477	511	4.72
478	512	4.7
479	512	4.66
480	512	4.63
481	512	4.61
482	513	4.56
483	513	4.52
484	513	4.49
485	514	4.46
486	514	4.41
487	514	4.35
488	515	4.29
489	515	4.24
490	515	4.19
491	515	4.16
492	515	4.12

TN Scale	FS Scale	SEM
493	516	4.09
494	516	4.05
495	516	4
496	517	3.97
497	517	3.94
498	517	3.91
499	517	3.89
500	517	3.86
501	517	3.85
502	518	3.84
503	518	3.83
504	518	3.81
505	519	3.81
506	519	3.81
507	520	3.81
508	522	3.78
509	523	3.75
510	523	3.69
511	523	3.59
512	524	3.47
513	525	3.38
514	525	3.3
515	525	3.23
516	526	3.17
517	526	3.08
518	526	3.01
519	527	2.92
520	527	2.86
521	527	2.81
522	528	2.77
523	528	2.73
524	528	2.68
525	529	2.67
526	529	2.64
527	530	2.64
528	530	2.64

**Table C 18 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 3**

TN Scale	FS Scale	SEM
529	530	2.65
530	531	2.65
531	531	2.63
532	532	2.6
533	533	2.55
534	535	2.41
535	535	2.21
536	536	2
537	537	1.89
538	537	1.83
539	537	1.77
540	538	1.66
541	539	1.62
542	540	1.59
543	541	1.59
544	541	1.66
545	542	1.81
546	543	1.94
547	545	1.94
548	546	1.75
549	547	1.53
550	548	1.44
551	548	1.39
552	549	1.38
553	549	1.38
554	550	1.37
555	550	1.35
556	551	1.32
557	552	1.27
558	553	1.22
559	554	1.18
560	555	1.13
561	555	1.18
562	556	1.29
563	556	1.35
564	558	1.4

TN Scale	FS Scale	SEM
565	559	1.39
566	559	1.44
567	560	1.54
568	562	1.52
569	563	1.4
570	563	1.3
571	564	1.27
572	566	1.21
573	566	1.06
574	567	1.17
575	567	1.45
576	569	1.66
577	570	1.76
578	573	1.51
579	574	1.18
580	576	1.17
581	576	0.99
582	577	0.89
583	578	0.88
584	578	0.93
585	579	0.99
586	579	1.22
587	580	1.47
588	583	1.41
589	583	0.97
590	584	0.95
591	584	1.12
592	586	1.09
593	586	1.01
594	587	1.22
595	589	1.16
596	590	1.4
597	593	1.51
598	594	1.52
599	596	1.59
600	597	1.17

**Table C 18 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 3**

TN Scale	FS Scale	SEM
601	598	0.87
602	599	0.65
603	600	0.76
604	600	1.22
605	602	1.67
606	604	1.59
607	605	1.85
608	609	1.81
609	609	1.49
610	609	1.24
611	610	1.39
612	612	1.06
613	613	0.74
614	613	0.92
615	613	1.43
616	617	1.53
617	618	1.27
618	620	1.04
619	621	0.97
620	622	1.29
621	623	1.79
622	626	1.45
623	627	1.29
624	627	1.81
625	631	1.7
626	632	1.19
627	634	1.08
628	635	1.06
629	636	1.05
630	636	1.14
631	638	2.14
632	638	2.8
633	645	2.13
634	645	1.28
635	646	1.61
636	648	2.06

TN Scale	FS Scale	SEM
637	651	1.79
638	652	1.39
639	653	1.17
640	654	1.14
641	656	1.21
642	657	1.37
643	658	1.45
644	659	1.47
645	660	1.44
646	662	1.42
647	663	1.45
648	664	1.5
649	665	1.58
650	667	1.69
651	668	1.71
652	670	1.69
653	672	1.69
654	674	1.71
655	675	1.79
656	676	1.84
657	677	1.93
658	678	1.99
659	678	2
660	679	2.02
661	679	2.01
662	683	1.9
663	686	1.86
664	687	1.87
665	687	1.9
666	688	1.96
667	688	2
668	689	2.09
669	689	2.22
670	689	2.31
671	690	2.43
672	690	2.69

**Table C 18 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 3**

TN Scale	FS Scale	SEM
673	691	2.92
674	693	3.09
675	693	3.19
676	694	3.22
677	694	3.27
678	695	3.34
679	697	3.38
680	699	3.3
681	702	3.2
682	704	3.15
683	705	3.12
684	705	3.09
685	706	3.08
686	706	3.08
687	706	3.07
688	706	3.07
689	707	3.06
690	707	3.05
691	707	3.06
692	708	3.08
693	708	3.1
694	708	3.09
695	708	3.09
696	708	3.1
697	708	3.1
698	708	3.1
699	708	3.1
700	708	3.1
701	709	3.11
702	709	3.11
703	709	3.12
704	709	3.13
705	709	3.13
706	709	3.14
707	709	3.15
708	709	3.16

TN Scale	FS Scale	SEM
709	709	3.17
710	709	3.18
711	709	3.2
712	709	3.21
713	710	3.22
714	710	3.24
715	710	3.26
716	710	3.27
717	710	3.29
718	710	3.31
719	711	3.43
720	712	3.57
721	713	3.71
722	715	3.81
723	717	3.86
724	718	3.82
725	720	3.71
726	722	3.54
727	723	3.35
728	725	3.16
729	727	2.96
730	728	2.78
731	730	2.61
732	732	2.45
733	733	2.33
734	735	2.24
735	737	2.23
736	739	2.25
737	742	2.08
738	744	1.55
739	747	0.79
740	749	0

Table C 19
Fall SAT/9 and TN Linking Table—Mathematics Grade 4

TN Scale	FS Scale	SEM
403	554	1.78
404	554	1.78
405	554	1.78
406	554	1.78
407	554	1.78
408	554	1.78
409	554	1.78
410	554	1.78
411	554	1.77
412	554	1.77
413	554	1.76
414	554	1.75
415	554	1.75
416	554	1.74
417	554	1.74
418	554	1.74
419	554	1.74
420	554	1.74
421	554	1.75
422	554	1.76
423	554	1.78
424	554	1.79
425	555	1.78
426	555	1.78
427	555	1.8
428	556	1.84
429	556	1.9
430	556	1.96
431	557	2.03
432	557	2.07
433	557	2.06
434	557	2.05
435	557	2.04
436	557	2.03
437	557	2.03
438	557	2.02

TN Scale	FS Scale	SEM
439	557	2.02
440	557	2.02
441	557	2.01
442	557	2.01
443	557	2.01
444	557	2.01
445	557	2.01
446	557	2.01
447	557	2.01
448	557	2.02
449	557	2.02
450	557	2.02
451	557	2.02
452	557	2.02
453	557	2.02
454	557	2.02
455	557	2.03
456	557	2.03
457	557	2.03
458	557	2.03
459	557	2.03
460	557	2.03
461	557	2.03
462	557	2.04
463	557	2.04
464	557	2.04
465	557	2.04
466	557	2.04
467	557	2.04
468	557	2.04
469	557	2.04
470	557	2.04
471	557	2.05
472	557	2.05
473	557	2.05
474	557	2.05

Table C 19 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 4

TN Scale	FS Scale	SEM
475	557	2.05
476	557	2.05
477	557	2.05
478	557	2.06
479	557	2.06
480	557	2.06
481	557	2.06
482	557	2.07
483	557	2.07
484	557	2.07
485	558	2.08
486	558	2.08
487	558	2.1
488	558	2.11
489	558	2.11
490	558	2.12
491	558	2.13
492	558	2.13
493	558	2.14
494	558	2.15
495	558	2.15
496	558	2.16
497	558	2.17
498	558	2.17
499	558	2.18
500	558	2.19
501	559	2.21
502	559	2.22
503	559	2.24
504	559	2.25
505	559	2.27
506	559	2.3
507	559	2.33
508	560	2.41
509	561	2.49
510	563	2.52

TN Scale	FS Scale	SEM
511	566	2.44
512	567	2.3
513	567	2.24
514	567	2.23
515	568	2.21
516	568	2.2
517	568	2.18
518	568	2.14
519	569	2.12
520	569	2.11
521	569	2.11
522	570	2.11
523	570	2.12
524	570	2.13
525	571	2.14
526	571	2.16
527	571	2.16
528	572	2.15
529	572	2.15
530	572	2.14
531	573	2.12
532	573	2.09
533	574	2.07
534	574	2.04
535	574	1.99
536	575	1.94
537	575	1.88
538	575	1.86
539	576	1.82
540	576	1.81
541	577	1.79
542	577	1.78
543	577	1.77
544	577	1.75
545	578	1.73
546	578	1.73

Table C 19 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 4

TN Scale	FS Scale	SEM
547	579	1.72
548	579	1.7
549	579	1.69
550	580	1.68
551	580	1.66
552	580	1.65
553	581	1.63
554	581	1.62
555	581	1.6
556	581	1.59
557	582	1.56
558	582	1.56
559	582	1.55
560	583	1.54
561	583	1.54
562	583	1.54
563	584	1.55
564	584	1.56
565	585	1.59
566	585	1.61
567	585	1.61
568	586	1.6
569	586	1.59
570	587	1.58
571	587	1.58
572	588	1.56
573	588	1.56
574	588	1.56
575	589	1.55
576	590	1.51
577	591	1.46
578	591	1.44
579	592	1.39
580	593	1.32
581	594	1.24
582	594	1.19

TN Scale	FS Scale	SEM
583	595	1.15
584	595	1.14
585	596	1.18
586	597	1.23
587	598	1.26
588	598	1.25
589	599	1.19
590	600	1.07
591	601	1
592	601	0.99
593	602	1
594	603	1.03
595	603	1.06
596	604	1.09
597	605	1.18
598	606	1.28
599	607	1.34
600	608	1.38
601	609	1.23
602	610	0.99
603	611	0.92
604	612	0.94
605	613	0.97
606	614	0.98
607	615	0.98
608	616	0.96
609	617	0.95
610	618	0.96
611	618	0.99
612	619	1.02
613	620	1.04
614	621	1.06
615	622	1.09
616	623	1.13
617	624	1.17
618	625	1.13

**Table C 19 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 4**

TN Scale	FS Scale	SEM
619	627	1.02
620	627	0.96
621	628	0.94
622	629	0.92
623	630	0.92
624	631	0.95
625	632	1.02
626	633	1.1
627	634	1.19
628	636	1.19
629	637	1.1
630	638	1
631	638	0.94
632	639	0.93
633	640	0.96
634	641	1.04
635	642	1.13
636	644	1.15
637	645	1.09
638	646	0.98
639	647	0.91
640	648	0.9
641	649	0.91
642	650	0.92
643	651	0.94
644	652	0.96
645	653	0.95
646	654	0.96
647	655	1
648	656	1.02
649	657	1.02
650	658	1.01
651	659	1
652	660	0.99
653	661	0.96
654	662	0.95

TN Scale	FS Scale	SEM
655	663	0.95
656	664	0.96
657	665	1.01
658	666	1.06
659	667	1.08
660	668	1.07
661	669	1.05
662	670	1.05
663	671	1.07
664	672	1.1
665	673	1.1
666	674	1.09
667	675	1.07
668	676	1.06
669	676	1.05
670	677	1.05
671	678	1.09
672	679	1.15
673	679	1.22
674	680	1.33
675	682	1.38
676	683	1.37
677	684	1.36
678	686	1.4
679	687	1.47
680	687	1.54
681	688	1.64
682	690	1.71
683	691	1.72
684	692	1.7
685	692	1.7
686	693	1.69
687	693	1.68
688	695	1.68
689	697	1.92
690	698	2.16

**Table C 19 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 4**

TN Scale	FS Scale	SEM
691	700	2.3
692	701	2.33
693	702	2.35
694	702	2.34
695	703	2.32
696	703	2.3
697	703	2.29
698	704	2.29
699	705	2.24
700	706	2.22
701	706	2.23
702	707	2.21
703	708	2.23
704	708	2.32
705	709	2.39
706	709	2.46
707	709	2.51
708	709	2.56
709	710	2.61
710	710	2.68
711	710	2.76
712	710	2.9
713	712	3.06
714	713	3.22
715	713	3.34
716	714	3.36
717	714	3.38
718	714	3.4
719	714	3.41
720	715	3.42
721	715	3.43
722	715	3.44
723	716	3.45
724	716	3.44
725	716	3.44
726	716	3.44

TN Scale	FS Scale	SEM
727	716	3.43
728	716	3.43
729	717	3.42
730	717	3.42
731	717	3.41
732	717	3.4
733	717	3.4
734	718	3.39
735	718	3.38
736	718	3.37
737	718	3.37
738	718	3.36
739	719	3.35
740	719	3.35
741	719	3.34
742	719	3.34
743	719	3.34
744	719	3.33
745	720	3.33
746	720	3.33
747	720	3.33
748	720	3.33
749	721	3.27
750	722	3.15
751	723	3.03
752	724	2.91
753	725	2.82
754	726	2.76
755	727	2.79
756	728	2.94
757	730	3.23
758	731	3.63
759	733	4.06
760	736	4.39
761	739	4.5
762	741	4.35

Table C 19 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 4

TN Scale	FS Scale	SEM
763	744	4.04
764	747	3.66
765	750	3.28
766	753	2.97
767	756	2.76
768	759	2.6
769	763	1.79
770	767	0

Table C 20
Fall SAT/9 and TN Linking Table—Mathematics Grade 5

TN Scale	FS Scale	SEM
430	558	7.06
431	558	7.06
432	558	7.06
433	558	7.06
434	558	7.06
435	558	7.06
436	558	7.06
437	558	7.06
438	558	7.06
439	558	7.06
440	558	7.06
441	558	6.96
442	558	6.84
443	558	6.73
444	558	6.63
445	559	6.55
446	559	6.47
447	559	6.4
448	559	6.34
449	559	6.29
450	559	6.25
451	559	6.21
452	559	6.17
453	560	6.13
454	560	6.06
455	560	5.95
456	560	5.86
457	560	5.81
458	560	5.76
459	560	5.71
460	561	5.67
461	561	5.64
462	561	5.62
463	561	5.6
464	561	5.57
465	561	5.5

TN Scale	FS Scale	SEM
466	561	5.44
467	561	5.43
468	561	5.46
469	561	5.51
470	563	5.32
471	564	5.2
472	567	5.09
473	569	5
474	570	4.9
475	571	4.8
476	572	4.68
477	573	4.55
478	574	4.41
479	574	4.26
480	574	4.13
481	574	4.03
482	574	3.94
483	574	3.86
484	574	3.8
485	574	3.74
486	574	3.69
487	574	3.64
488	574	3.6
489	575	3.56
490	575	3.53
491	575	3.49
492	575	3.46
493	575	3.43
494	575	3.4
495	575	3.37
496	575	3.34
497	575	3.31
498	575	3.29
499	575	3.25
500	575	3.22
501	575	3.19

Table C 20 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 5

TN Scale	FS Scale	SEM
502	575	3.16
503	575	3.12
504	575	3.07
505	576	3.03
506	576	2.99
507	576	2.95
508	576	2.91
509	576	2.88
510	576	2.84
511	576	2.8
512	577	2.76
513	577	2.72
514	577	2.68
515	577	2.63
516	577	2.58
517	577	2.53
518	578	2.47
519	578	2.42
520	578	2.37
521	578	2.33
522	578	2.29
523	578	2.25
524	579	2.21
525	579	2.14
526	580	2.09
527	580	2.07
528	580	2.05
529	580	2.03
530	580	2.01
531	581	2
532	581	1.99
533	581	1.98
534	581	1.96
535	582	1.95
536	582	1.92
537	583	1.89

TN Scale	FS Scale	SEM
538	583	1.85
539	584	1.82
540	584	1.79
541	584	1.72
542	585	1.65
543	586	1.51
544	586	1.41
545	586	1.35
546	586	1.3
547	587	1.27
548	587	1.23
549	587	1.2
550	587	1.2
551	588	1.21
552	588	1.25
553	589	1.33
554	589	1.4
555	589	1.44
556	590	1.56
557	592	1.64
558	592	1.63
559	594	1.59
560	595	1.56
561	595	1.53
562	596	1.5
563	596	1.48
564	597	1.44
565	598	1.44
566	598	1.44
567	599	1.46
568	600	1.5
569	600	1.54
570	602	1.53
571	603	1.45
572	603	1.4
573	603	1.31

**Table C 20 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 5**

TN Scale	FS Scale	SEM
574	604	1.22
575	604	1.15
576	605	1.12
577	605	1.11
578	606	1.12
579	606	1.14
580	606	1.15
581	607	1.18
582	607	1.2
583	608	1.24
584	608	1.28
585	609	1.3
586	609	1.36
587	610	1.41
588	611	1.41
589	612	1.36
590	613	1.27
591	613	1.2
592	614	1.14
593	614	1.08
594	615	1.05
595	615	1.02
596	616	0.98
597	617	0.95
598	617	0.95
599	618	1.02
600	619	1.08
601	620	1.13
602	620	1.16
603	621	1.18
604	622	1.19
605	622	1.2
606	623	1.19
607	624	1.15
608	625	1.11
609	625	1.1

TN Scale	FS Scale	SEM
610	626	1.1
611	626	1.1
612	627	1.12
613	628	1.17
614	628	1.21
615	629	1.22
616	630	1.22
617	630	1.19
618	631	1.15
619	632	1.12
620	633	1.1
621	634	1.09
622	635	1.09
623	636	1.07
624	637	1.04
625	638	1
626	639	1.01
627	639	1.04
628	640	1.08
629	641	1.12
630	642	1.14
631	643	1.11
632	645	1.07
633	646	1.03
634	647	1.02
635	648	1.01
636	649	1
637	650	0.97
638	651	0.93
639	652	0.92
640	653	0.9
641	654	0.88
642	655	0.88
643	655	0.88
644	656	0.88
645	657	0.89

Table C 20 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 5

TN Scale	FS Scale	SEM
646	658	0.91
647	659	0.91
648	660	0.88
649	661	0.82
650	661	0.79
651	662	0.78
652	663	0.79
653	664	0.82
654	665	0.84
655	666	0.84
656	667	0.86
657	668	0.89
658	669	0.94
659	670	0.99
660	671	1.01
661	672	1
662	673	0.96
663	674	0.91
664	675	0.89
665	676	0.88
666	676	0.89
667	677	0.97
668	679	1.05
669	680	1.07
670	681	1.05
671	682	1.02
672	683	0.96
673	684	0.94
674	685	0.93
675	686	0.92
676	687	0.92
677	687	0.92
678	688	0.94
679	689	0.96
680	690	0.96
681	691	0.95

TN Scale	FS Scale	SEM
682	692	0.96
683	692	0.98
684	693	1.02
685	694	1.12
686	695	1.2
687	696	1.22
688	697	1.22
689	698	1.22
690	699	1.22
691	699	1.23
692	700	1.29
693	702	1.41
694	703	1.47
695	704	1.47
696	705	1.46
697	706	1.46
698	707	1.46
699	708	1.47
700	709	1.51
701	711	1.56
702	712	1.58
703	713	1.56
704	714	1.51
705	715	1.48
706	716	1.47
707	717	1.54
708	717	1.66
709	718	1.79
710	718	1.94
711	719	2.09
712	720	2.21
713	721	2.31
714	722	2.37
715	723	2.37
716	723	2.37
717	723	2.38

Table C 20 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 5

TN Scale	FS Scale	SEM
718	724	2.35
719	726	2.33
720	727	2.31
721	728	2.36
722	729	2.46
723	730	2.57
724	731	2.69
725	731	2.76
726	731	2.83
727	731	2.91
728	732	3.01
729	733	3.12
730	734	3.26
731	734	3.39
732	735	3.47
733	735	3.56
734	737	3.66
735	737	3.7
736	737	3.71
737	737	3.73
738	738	3.72
739	738	3.72
740	738	3.73
741	739	3.74
742	739	3.75
743	739	3.74
744	739	3.73
745	740	3.73
746	740	3.73
747	740	3.72
748	740	3.73
749	740	3.7
750	741	3.64
751	742	3.59
752	742	3.55
753	743	3.52

TN Scale	FS Scale	SEM
754	743	3.5
755	744	3.49
756	744	3.48
757	744	3.47
758	744	3.47
759	744	3.46
760	744	3.45
761	744	3.45
762	744	3.44
763	744	3.43
764	744	3.43
765	744	3.43
766	744	3.42
767	744	3.42
768	745	3.42
769	745	3.41
770	745	3.41
771	745	3.41
772	745	3.41
773	745	3.41
774	745	3.41
775	745	3.41
776	745	3.41
777	746	3.36
778	747	3.29
779	748	3.25
780	749	3.26
781	750	3.35
782	751	3.54
783	752	3.81
784	753	4.12
785	755	4.43
786	758	4.62
787	760	4.66
788	763	4.51
789	765	4.26

Table C 20 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 5

TN Scale	FS Scale	SEM
790	767	3.94
791	770	3.62
792	772	3.32
793	775	3.09
794	777	2.97
795	781	2.84
796	784	2.16
797	788	0.36

Table C 21
Fall SAT/9 and TN Linking Table—Mathematics Grade 6

TN Scale	FS Scale	SEM
477	580	2.99
478	580	2.97
479	580	2.92
480	580	2.89
481	580	2.86
482	580	2.83
483	580	2.81
484	580	2.8
485	581	2.79
486	581	2.78
487	581	2.77
488	581	2.76
489	581	2.75
490	581	2.75
491	581	2.74
492	581	2.73
493	581	2.73
494	581	2.72
495	581	2.71
496	581	2.7
497	581	2.7
498	581	2.69
499	581	2.68
500	581	2.67
501	581	2.66
502	581	2.65
503	581	2.64
504	582	2.63
505	582	2.63
506	582	2.62
507	582	2.61
508	582	2.6
509	582	2.6
510	582	2.59
511	582	2.59
512	582	2.59

TN Scale	FS Scale	SEM
513	582	2.59
514	583	2.59
515	583	2.59
516	583	2.58
517	583	2.57
518	583	2.57
519	583	2.57
520	583	2.56
521	583	2.56
522	583	2.55
523	583	2.55
524	583	2.54
525	583	2.54
526	583	2.53
527	583	2.53
528	583	2.52
529	583	2.52
530	583	2.51
531	583	2.51
532	584	2.5
533	584	2.49
534	584	2.48
535	584	2.48
536	584	2.47
537	584	2.47
538	584	2.47
539	584	2.47
540	585	2.47
541	585	2.47
542	585	2.47
543	585	2.47
544	585	2.47
545	585	2.46
546	585	2.46
547	585	2.45
548	585	2.44

Table C 21 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 6

TN Scale	FS Scale	SEM
549	586	2.42
550	586	2.4
551	586	2.4
552	587	2.4
553	587	2.39
554	588	2.43
555	588	2.44
556	588	2.45
557	588	2.46
558	589	2.47
559	589	2.49
560	589	2.53
561	590	2.56
562	590	2.6
563	591	2.67
564	592	2.77
565	593	2.79
566	594	2.8
567	595	2.81
568	596	2.81
569	597	2.76
570	598	2.68
571	598	2.6
572	599	2.53
573	600	2.41
574	600	2.26
575	601	2.15
576	601	2.01
577	602	1.91
578	602	1.85
579	603	1.7
580	604	1.51
581	605	1.35
582	605	1.29
583	606	1.23
584	607	1.24

TN Scale	FS Scale	SEM
585	607	1.29
586	607	1.32
587	608	1.34
588	608	1.37
589	609	1.38
590	610	1.35
591	611	1.29
592	611	1.24
593	611	1.21
594	612	1.18
595	612	1.15
596	612	1.15
597	613	1.14
598	613	1.14
599	614	1.16
600	614	1.22
601	615	1.33
602	615	1.42
603	616	1.47
604	616	1.51
605	617	1.53
606	617	1.54
607	618	1.57
608	618	1.58
609	619	1.57
610	620	1.54
611	620	1.49
612	621	1.41
613	622	1.31
614	622	1.2
615	622	1.14
616	623	1.08
617	624	1.06
618	624	1.11
619	625	1.18
620	626	1.22

**Table C 21 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 6**

TN Scale	FS Scale	SEM
621	626	1.23
622	626	1.24
623	627	1.22
624	628	1.19
625	629	1.16
626	629	1.14
627	630	1.15
628	631	1.2
629	632	1.23
630	632	1.28
631	633	1.32
632	634	1.41
633	636	1.48
634	637	1.45
635	638	1.32
636	639	1.21
637	640	1.14
638	640	1.08
639	641	1.03
640	641	1.01
641	642	1.09
642	643	1.41
643	645	1.68
644	647	1.67
645	648	1.57
646	650	1.38
647	651	1.09
648	652	0.9
649	653	0.87
650	653	0.86
651	654	0.86
652	655	0.86
653	656	0.9
654	657	0.98
655	658	1.05
656	659	1.07

TN Scale	FS Scale	SEM
657	660	1.04
658	662	1.03
659	663	1.01
660	664	0.96
661	665	0.92
662	666	0.92
663	667	0.93
664	668	0.93
665	669	0.92
666	670	0.92
667	671	0.91
668	672	0.91
669	673	0.92
670	674	0.93
671	675	0.98
672	676	1
673	677	1.02
674	679	1.07
675	680	1.09
676	681	1.05
677	683	0.99
678	684	0.98
679	685	0.96
680	686	0.91
681	687	0.87
682	689	0.88
683	690	1
684	691	1.28
685	693	1.39
686	694	1.36
687	696	1.27
688	697	1.17
689	698	1.16
690	700	1.18
691	701	1.24
692	702	1.28

**Table C 21 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 6**

TN Scale	FS Scale	SEM
693	703	1.28
694	704	1.29
695	706	1.29
696	707	1.3
697	709	1.28
698	711	1.27
699	712	1.27
700	714	1.31
701	715	1.32
702	716	1.31
703	718	1.29
704	718	1.29
705	719	1.26
706	721	1.25
707	722	1.24
708	723	1.24
709	724	1.24
710	725	1.26
711	727	1.34
712	728	1.49
713	730	1.58
714	732	1.58
715	733	1.56
716	735	1.56
717	737	1.66
718	739	1.84
719	740	1.95
720	741	2
721	741	2
722	742	1.99
723	743	1.94
724	745	1.9
725	747	1.85
726	749	2.12
727	750	2.3
728	751	2.45

TN Scale	FS Scale	SEM
729	751	2.66
730	752	2.85
731	753	2.99
732	754	3.1
733	756	3.2
734	758	3.22
735	763	3.01
736	766	2.99
737	767	3.05
738	768	3.08
739	768	3.15
740	769	3.21
741	770	3.33
742	770	3.4
743	771	3.43
744	771	3.46
745	771	3.49
746	771	3.54
747	772	3.68
748	774	3.88
749	776	4.05
750	779	4.19
751	779	4.18
752	780	4.28
753	785	3.86
754	788	3.71
755	790	3.61
756	791	3.53
757	791	3.48
758	792	3.42
759	792	3.37
760	792	3.32
761	793	3.28
762	793	3.24
763	793	3.23
764	793	3.21

**Table C 21 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 6**

TN Scale	FS Scale	SEM
765	793	3.19
766	793	3.17
767	793	3.15
768	794	3.14
769	794	3.12
770	794	3.1
771	794	3.09
772	794	3.07
773	794	3.05
774	794	3.04
775	794	3.02
776	794	3.01
777	794	2.99
778	795	2.98
779	795	2.96
780	795	2.95
781	795	2.94
782	795	2.92
783	795	2.91
784	795	2.9
785	795	2.89
786	795	2.87
787	795	2.86
788	796	2.85
789	796	2.84
790	796	2.83
791	796	2.82
792	796	2.81
793	796	2.8
794	796	2.68
795	797	2.56
796	797	2.45
797	798	2.34
798	798	2.23
799	798	2.13
800	799	2.03

TN Scale	FS Scale	SEM
801	799	1.94
802	800	1.84
803	800	1.75
804	800	1.65
805	801	1.55
806	801	1.45
807	802	1.35
808	802	1.24
809	802	1.14
810	803	1.04
811	803	0.93
812	804	0.83
813	804	0.73
814	805	0.62
815	805	0.52
816	805	0.41
817	806	0.31
818	806	0.21
819	807	0.1
820	807	0

Table C 22
Fall SAT/9 and TN Linking Table—Mathematics Grade 7

TN Scale	FS Scale	SEM
487	612	1.64
488	612	1.64
489	612	1.64
490	612	1.64
491	612	1.64
492	612	1.64
493	612	1.64
494	612	1.64
495	612	1.64
496	612	1.65
497	612	1.66
498	612	1.67
499	612	1.68
500	612	1.69
501	612	1.7
502	612	1.71
503	612	1.72
504	613	1.73
505	613	1.75
506	613	1.76
507	613	1.77
508	613	1.79
509	613	1.8
510	613	1.81
511	613	1.83
512	613	1.84
513	613	1.85
514	614	1.86
515	614	1.87
516	614	1.87
517	614	1.87
518	614	1.87
519	614	1.87
520	614	1.87
521	614	1.87
522	614	1.87

TN Scale	FS Scale	SEM
523	614	1.87
524	614	1.88
525	614	1.88
526	614	1.88
527	614	1.88
528	614	1.88
529	614	1.88
530	614	1.88
531	614	1.88
532	614	1.88
533	614	1.88
534	614	1.89
535	614	1.89
536	614	1.89
537	614	1.89
538	614	1.89
539	614	1.89
540	614	1.89
541	614	1.9
542	614	1.9
543	614	1.9
544	614	1.9
545	614	1.91
546	614	1.91
547	614	1.91
548	614	1.91
549	614	1.91
550	614	1.92
551	615	1.92
552	615	1.92
553	615	1.91
554	615	1.91
555	615	1.9
556	615	1.89
557	616	1.89
558	616	1.88

Table C 22 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 7

TN Scale	FS Scale	SEM
559	616	1.86
560	616	1.85
561	616	1.83
562	616	1.8
563	617	1.77
564	617	1.73
565	617	1.7
566	617	1.6
567	618	1.53
568	618	1.49
569	618	1.44
570	619	1.41
571	619	1.4
572	619	1.38
573	619	1.36
574	620	1.35
575	620	1.34
576	620	1.34
577	620	1.34
578	620	1.35
579	621	1.36
580	621	1.36
581	621	1.37
582	622	1.37
583	622	1.36
584	622	1.36
585	622	1.36
586	623	1.34
587	623	1.33
588	623	1.31
589	624	1.28
590	624	1.27
591	624	1.21
592	625	1.1
593	626	1.01
594	626	0.97

TN Scale	FS Scale	SEM
595	626	0.94
596	627	0.93
597	627	0.92
598	627	0.93
599	628	0.94
600	628	0.96
601	628	0.99
602	629	1.01
603	629	1.07
604	630	1.14
605	630	1.18
606	631	1.19
607	632	1.17
608	632	1.16
609	632	1.12
610	633	1.08
611	633	1.04
612	634	1.01
613	634	0.97
614	635	0.94
615	635	0.94
616	635	0.94
617	636	0.93
618	637	0.93
619	637	0.94
620	638	0.93
621	638	0.93
622	639	0.93
623	639	0.94
624	640	0.95
625	640	0.96
626	640	0.98
627	641	1
628	641	1.01
629	642	1.01
630	643	1

Table C 22 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 7

TN Scale	FS Scale	SEM
631	643	0.97
632	644	0.94
633	644	0.93
634	645	0.92
635	645	0.91
636	646	0.9
637	646	0.89
638	647	0.89
639	648	0.89
640	648	0.88
641	649	0.87
642	650	0.89
643	650	0.92
644	651	0.92
645	651	0.93
646	651	0.93
647	652	0.91
648	652	0.88
649	653	0.86
650	654	0.84
651	654	0.86
652	655	0.87
653	656	0.9
654	657	0.93
655	657	0.96
656	658	1
657	659	1.04
658	660	1.06
659	661	1.08
660	662	1.11
661	663	1.09
662	665	1.01
663	666	0.96
664	666	0.97
665	667	0.99
666	669	1.02

TN Scale	FS Scale	SEM
667	670	0.97
668	671	0.89
669	671	0.82
670	672	0.81
671	673	0.83
672	674	0.88
673	675	0.92
674	676	0.94
675	677	0.98
676	678	1.03
677	679	1.05
678	680	1.05
679	682	1.05
680	683	0.96
681	684	0.78
682	685	0.73
683	686	0.79
684	687	0.93
685	688	1.05
686	689	1.06
687	690	1.05
688	691	1.06
689	692	1.05
690	693	1.01
691	694	1.01
692	696	0.99
693	697	0.98
694	698	0.98
695	699	0.99
696	700	1.03
697	701	1.08
698	702	1.08
699	704	1.03
700	705	0.96
701	706	0.94
702	707	1.03

Table C 22 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 7

TN Scale	FS Scale	SEM
703	709	1.2
704	711	1.24
705	712	1.21
706	713	1.18
707	715	1.16
708	716	1.18
709	717	1.22
710	719	1.24
711	720	1.3
712	722	1.42
713	723	1.46
714	724	1.42
715	726	1.38
716	727	1.36
717	728	1.35
718	729	1.37
719	730	1.4
720	731	1.46
721	732	1.52
722	733	1.57
723	735	1.59
724	737	1.73
725	739	1.84
726	740	1.87
727	741	1.87
728	742	1.88
729	743	1.86
730	744	1.84
731	745	1.85
732	746	1.85
733	747	1.81
734	748	1.76
735	750	1.75
736	751	1.78
737	752	1.87
738	753	1.93

TN Scale	FS Scale	SEM
739	755	1.96
740	756	2
741	756	1.98
742	757	2
743	758	2.01
744	758	2.04
745	758	2.05
746	759	2.08
747	759	2.13
748	760	2.17
749	761	2.33
750	764	2.67
751	765	2.72
752	766	2.74
753	767	2.75
754	768	2.73
755	768	2.72
756	769	2.7
757	770	2.69
758	771	2.77
759	772	2.82
760	773	2.98
761	774	3.19
762	775	3.34
763	777	3.5
764	778	3.66
765	780	3.79
766	781	3.89
767	782	3.97
768	783	4
769	783	4
770	783	3.99
771	783	3.98
772	783	3.97
773	783	3.97
774	783	3.96

**Table C 22 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 7**

TN Scale	FS Scale	SEM
775	784	3.95
776	784	3.95
777	784	3.94
778	784	3.93
779	784	3.93
780	784	3.92
781	784	3.92
782	784	3.91
783	784	3.9
784	784	3.9
785	784	3.89
786	784	3.89
787	784	3.88
788	784	3.88
789	784	3.87
790	784	3.87
791	784	3.86
792	784	3.86
793	784	3.85
794	785	3.85
795	785	3.85
796	785	3.84
797	785	3.84
798	785	3.84
799	785	3.83
800	785	3.83
801	785	3.83
802	785	3.83
803	785	3.83
804	785	3.82
805	785	3.82
806	785	3.82
807	785	3.82
808	785	3.82
809	785	3.82
810	785	3.83

TN Scale	FS Scale	SEM
811	785	3.83
812	786	3.8
813	786	3.74
814	787	3.67
815	788	3.62
816	788	3.57
817	789	3.52
818	790	3.48
819	790	3.46
820	791	3.46
821	791	3.48
822	792	3.52
823	793	3.59
824	793	3.71
825	794	3.85
826	795	4.03
827	795	4.24
828	796	4.46
829	798	4.67
830	800	4.85
831	801	5
832	803	5.09
833	804	5.1
834	806	5.05
835	807	4.95
836	809	4.79
837	810	4.59
838	812	4.37
839	813	4.14
840	815	3.89
841	816	3.64
842	818	3.4
843	819	3.18
844	821	2.99
845	823	2.81
846	824	2.57

Table C 22 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 7

TN Scale	FS Scale	SEM
847	826	2.2
848	828	1.7
849	829	1.01
850	831	0

Table C 23
Fall SAT/9 and TN Linking Table—Mathematics Grade 8

TN Scale	FS Scale	SEM
502	615	4.37
503	615	4.37
504	615	4.33
505	615	4.25
506	615	4.19
507	615	4.12
508	615	4.06
509	615	4.01
510	615	3.97
511	615	3.9
512	615	3.82
513	615	3.75
514	615	3.68
515	616	3.61
516	616	3.55
517	616	3.48
518	616	3.43
519	616	3.38
520	616	3.33
521	616	3.28
522	616	3.24
523	616	3.2
524	616	3.15
525	616	3.1
526	616	3.06
527	616	3.01
528	616	2.96
529	616	2.92
530	616	2.88
531	616	2.83
532	616	2.78
533	616	2.73
534	617	2.68
535	617	2.63
536	617	2.57
537	617	2.49

TN Scale	FS Scale	SEM
538	617	2.43
539	617	2.35
540	618	2.28
541	618	2.23
542	618	2.2
543	618	2.17
544	618	2.15
545	619	2.12
546	619	2.1
547	619	2.07
548	619	2.04
549	619	1.97
550	619	1.92
551	620	1.89
552	620	1.86
553	620	1.85
554	620	1.84
555	620	1.82
556	620	1.81
557	620	1.8
558	620	1.79
559	620	1.78
560	621	1.77
561	621	1.76
562	621	1.75
563	621	1.74
564	621	1.73
565	621	1.72
566	621	1.71
567	621	1.7
568	621	1.69
569	621	1.68
570	621	1.67
571	621	1.65
572	621	1.63
573	621	1.62

**Table C 23 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 8**

TN Scale	FS Scale	SEM
574	621	1.6
575	622	1.6
576	622	1.59
577	622	1.59
578	622	1.58
579	622	1.58
580	622	1.58
581	622	1.57
582	622	1.57
583	622	1.57
584	623	1.57
585	623	1.58
586	623	1.58
587	623	1.58
588	623	1.59
589	623	1.6
590	623	1.6
591	624	1.61
592	624	1.62
593	624	1.62
594	624	1.62
595	624	1.62
596	624	1.63
597	624	1.64
598	624	1.66
599	625	1.69
600	626	1.77
601	626	1.79
602	626	1.82
603	627	1.85
604	627	1.88
605	627	1.91
606	628	1.91
607	628	1.91
608	629	1.88
609	629	1.84

TN Scale	FS Scale	SEM
610	629	1.81
611	629	1.79
612	630	1.75
613	630	1.69
614	630	1.64
615	631	1.6
616	631	1.53
617	631	1.49
618	631	1.42
619	632	1.37
620	632	1.33
621	632	1.3
622	632	1.24
623	633	1.24
624	633	1.22
625	634	1.22
626	634	1.24
627	635	1.25
628	635	1.25
629	636	1.26
630	636	1.26
631	636	1.27
632	637	1.27
633	638	1.25
634	638	1.22
635	639	1.19
636	639	1.14
637	640	1.11
638	640	1.07
639	641	1.06
640	641	1.07
641	642	1.09
642	642	1.12
643	643	1.17
644	643	1.21
645	644	1.25

Table C 23 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 8

TN Scale	FS Scale	SEM
646	644	1.28
647	645	1.29
648	646	1.24
649	647	1.1
650	648	1
651	648	0.95
652	649	0.91
653	649	0.9
654	650	0.9
655	650	0.94
656	651	1
657	652	1.03
658	653	1.03
659	654	0.99
660	655	0.96
661	655	0.96
662	656	0.94
663	657	0.89
664	658	0.82
665	658	0.77
666	658	0.74
667	659	0.72
668	660	0.72
669	660	0.74
670	660	0.76
671	661	0.83
672	662	0.91
673	662	0.94
674	663	0.97
675	664	0.97
676	665	0.96
677	665	0.97
678	666	0.95
679	667	0.88
680	668	0.79
681	669	0.75

TN Scale	FS Scale	SEM
682	670	0.8
683	670	0.9
684	671	1.02
685	672	1.13
686	673	1.16
687	674	1.15
688	675	1.14
689	676	1.18
690	677	1.28
691	678	1.33
692	680	1.25
693	681	1.08
694	682	0.97
695	683	1
696	684	1.08
697	685	1.1
698	687	1.09
699	687	1.09
700	688	1.11
701	689	1.21
702	690	1.34
703	692	1.41
704	693	1.43
705	694	1.41
706	695	1.32
707	696	1.16
708	697	1.04
709	698	0.99
710	699	0.95
711	700	0.93
712	701	0.93
713	702	1.01
714	703	1.15
715	704	1.25
716	705	1.27
717	706	1.17

**Table C 23 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 8**

TN Scale	FS Scale	SEM
718	707	1.1
719	708	1.05
720	709	1.06
721	710	1.11
722	711	1.12
723	712	1.11
724	713	1.09
725	714	1.09
726	716	1.1
727	717	1.1
728	718	1.12
729	719	1.12
730	720	1.1
731	721	1.06
732	722	1.07
733	723	1.16
734	723	1.32
735	724	1.54
736	725	1.75
737	727	1.83
738	728	1.65
739	729	1.41
740	730	1.24
741	731	1.21
742	732	1.26
743	733	1.35
744	734	1.42
745	735	1.45
746	737	1.42
747	738	1.37
748	739	1.31
749	740	1.29
750	741	1.4
751	742	1.64
752	742	1.79
753	743	1.98

TN Scale	FS Scale	SEM
754	745	2.17
755	746	2.25
756	748	2.26
757	750	2.23
758	751	2.24
759	752	2.26
760	753	2.28
761	753	2.28
762	754	2.3
763	756	2.39
764	758	2.48
765	760	2.6
766	761	2.79
767	762	2.92
768	763	3.08
769	766	3.28
770	767	3.43
771	769	3.52
772	770	3.7
773	772	3.84
774	772	3.87
775	772	3.89
776	772	3.92
777	773	3.97
778	774	4.03
779	774	4.05
780	775	4.09
781	776	4.12
782	777	4.21
783	778	4.21
784	780	4.23
785	785	4.31
786	789	4.63
787	791	5.2
788	793	5.95
789	793	6.25

Table C 23 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 8

TN Scale	FS Scale	SEM
790	797	6.71
791	800	7.18
792	801	7.31
793	801	7.4
794	802	7.45
795	802	7.5
796	804	7.47
797	806	7.48
798	807	7.49
799	807	7.48
800	808	7.47
801	808	7.43
802	809	7.39
803	809	7.33
804	810	7.27
805	811	7.24
806	811	7.23
807	811	7.22
808	812	7.22
809	812	7.21
810	812	7.21
811	812	7.2
812	812	7.2
813	812	7.19
814	812	7.19
815	812	7.18
816	812	7.18
817	812	7.18
818	812	7.17
819	812	7.17
820	812	7.17
821	812	7.16
822	812	7.16
823	812	7.16
824	812	7.16
825	812	7.16

TN Scale	FS Scale	SEM
826	812	7.15
827	812	7.15
828	812	7.15
829	812	7.15
830	812	7.15
831	812	7.15
832	812	7.15
833	812	7.15
834	813	7.15
835	813	7.15
836	813	7.15
837	813	7.15
838	813	7.15
839	813	7.12
840	813	7.05
841	814	6.92
842	815	6.8
843	816	6.69
844	817	6.57
845	819	6.46
846	820	6.35
847	821	6.23
848	822	6.11
849	823	5.98
850	824	5.83
851	825	5.67
852	826	5.52
853	827	5.34
854	829	5.14
855	830	4.93
856	831	4.71
857	832	4.49
858	833	4.26
859	834	4.04
860	835	3.83
861	836	3.62

Table C 23 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 8

TN Scale	FS Scale	SEM
862	837	3.43
863	839	3.25
864	840	3.08
865	841	2.92
866	842	2.74
867	843	2.52
868	844	2.21
869	846	1.82
870	847	1.33
871	848	0.71
872	849	0

Table C 24
Fall SAT/9 and TN Linking Table—Mathematics Grade 9

TN Scale	FS Scale	SEM
513	626	5.18
514	626	5.16
515	627	5.12
516	627	5.08
517	627	5.05
518	627	5.02
519	627	5
520	627	4.97
521	627	4.93
522	627	4.88
523	628	4.75
524	628	4.65
525	628	4.58
526	628	4.54
527	628	4.52
528	628	4.51
529	630	4.09
530	631	3.77
531	632	3.52
532	633	3.36
533	633	3.26
534	634	3.2
535	634	3.17
536	634	3.15
537	634	3.12
538	634	3.1
539	634	3.09
540	635	3.07
541	635	3.06
542	635	3.04
543	635	3.03
544	635	3.02
545	635	3
546	635	2.99
547	635	2.97
548	635	2.96

TN Scale	FS Scale	SEM
549	635	2.94
550	636	2.92
551	636	2.9
552	636	2.86
553	637	2.83
554	637	2.8
555	637	2.76
556	637	2.73
557	638	2.71
558	638	2.69
559	638	2.67
560	638	2.66
561	638	2.64
562	638	2.62
563	638	2.6
564	638	2.58
565	638	2.57
566	638	2.55
567	638	2.53
568	639	2.52
569	639	2.5
570	639	2.48
571	639	2.47
572	639	2.45
573	639	2.44
574	639	2.42
575	639	2.4
576	639	2.38
577	639	2.37
578	639	2.34
579	639	2.32
580	639	2.29
581	639	2.25
582	640	2.21
583	640	2.18
584	640	2.14

Table C 24 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 9

TN Scale	FS Scale	SEM
585	640	2.11
586	640	2.08
587	640	2.05
588	640	2
589	640	1.93
590	641	1.88
591	641	1.84
592	641	1.81
593	641	1.78
594	642	1.76
595	642	1.75
596	642	1.74
597	642	1.74
598	643	1.74
599	643	1.74
600	643	1.75
601	643	1.73
602	644	1.74
603	644	1.75
604	644	1.74
605	645	1.73
606	645	1.72
607	645	1.71
608	646	1.7
609	646	1.69
610	646	1.67
611	647	1.63
612	647	1.6
613	647	1.58
614	648	1.55
615	648	1.53
616	648	1.52
617	648	1.52
618	649	1.53
619	649	1.54
620	649	1.55

TN Scale	FS Scale	SEM
621	650	1.56
622	650	1.55
623	651	1.55
624	651	1.56
625	651	1.55
626	652	1.54
627	652	1.54
628	652	1.52
629	653	1.47
630	653	1.43
631	654	1.37
632	654	1.3
633	655	1.26
634	656	1.25
635	656	1.26
636	657	1.27
637	657	1.28
638	657	1.28
639	658	1.28
640	659	1.27
641	659	1.23
642	660	1.2
643	660	1.19
644	660	1.16
645	661	1.13
646	661	1.12
647	662	1.12
648	662	1.13
649	663	1.13
650	663	1.12
651	664	1.13
652	664	1.14
653	665	1.16
654	666	1.19
655	667	1.22
656	668	1.25

Table C 24 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 9

TN Scale	FS Scale	SEM
657	668	1.25
658	669	1.26
659	670	1.27
660	670	1.27
661	671	1.23
662	672	1.13
663	673	1.04
664	673	1
665	674	0.98
666	674	0.97
667	675	0.97
668	676	0.97
669	676	0.97
670	677	0.95
671	678	0.92
672	678	0.89
673	679	0.87
674	680	0.87
675	680	0.87
676	681	0.87
677	681	0.88
678	682	0.88
679	683	0.85
680	684	0.84
681	684	0.83
682	685	0.83
683	685	0.83
684	686	0.85
685	687	0.9
686	688	0.98
687	689	1.07
688	690	1.1
689	690	1.09
690	691	1.07
691	692	1.03
692	693	0.99

TN Scale	FS Scale	SEM
693	694	0.96
694	694	0.94
695	695	0.94
696	696	0.94
697	696	0.96
698	697	1
699	698	1.04
700	699	1.08
701	700	1.09
702	701	1.09
703	702	1.11
704	704	1.17
705	705	1.22
706	706	1.23
707	707	1.2
708	708	1.1
709	709	1
710	710	0.95
711	711	0.93
712	712	0.91
713	713	0.92
714	714	0.97
715	715	1.02
716	716	1.04
717	717	1.06
718	717	1.08
719	718	1.13
720	720	1.28
721	721	1.37
722	722	1.37
723	723	1.35
724	724	1.32
725	725	1.28
726	725	1.24
727	726	1.19
728	727	1.17

**Table C 24 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 9**

TN Scale	FS Scale	SEM
729	728	1.17
730	729	1.18
731	730	1.2
732	731	1.29
733	732	1.43
734	733	1.51
735	734	1.51
736	735	1.51
737	736	1.52
738	737	1.55
739	738	1.6
740	738	1.63
741	739	1.64
742	740	1.67
743	741	1.64
744	743	1.64
745	744	1.7
746	745	1.8
747	746	1.91
748	747	1.97
749	748	1.99
750	749	2.03
751	750	2.07
752	751	2.19
753	752	2.3
754	753	2.42
755	754	2.56
756	756	2.72
757	757	2.8
758	759	2.83
759	761	2.84
760	762	2.81
761	764	2.76
762	765	2.76
763	766	2.76
764	767	2.77

TN Scale	FS Scale	SEM
765	767	2.76
766	768	2.74
767	768	2.72
768	769	2.71
769	770	2.73
770	770	2.75
771	771	2.78
772	772	2.87
773	773	3.03
774	774	3.09
775	775	3.09
776	776	3.14
777	777	3.25
778	778	3.2
779	779	3.22
780	779	3.24
781	779	3.26
782	780	3.33
783	781	3.39
784	781	3.45
785	781	3.56
786	782	3.84
787	783	4.6
788	784	5.03
789	785	5.49
790	785	5.86
791	785	6.2
792	786	6.6
793	787	7.04
794	789	7.5
795	794	8.05
796	798	8.63
797	799	8.83
798	800	8.95
799	801	8.99
800	802	9.02

Table C 24 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 9

TN Scale	FS Scale	SEM
801	803	8.97
802	805	9
803	806	8.99
804	806	8.98
805	806	8.99
806	807	8.98
807	808	8.89
808	809	8.76
809	810	8.66
810	811	8.59
811	812	8.55
812	813	8.47
813	813	8.33
814	814	8.22
815	815	8.13
816	816	8.06
817	817	7.97
818	818	7.89
819	819	7.85
820	821	7.83
821	821	7.82
822	822	7.78
823	822	7.75
824	822	7.72
825	822	7.69
826	822	7.65
827	823	7.62
828	823	7.59
829	823	7.56
830	823	7.54
831	823	7.51
832	823	7.48
833	824	7.45
834	824	7.43
835	824	7.41
836	824	7.38

TN Scale	FS Scale	SEM
837	824	7.36
838	825	7.34
839	825	7.32
840	825	7.3
841	825	7.29
842	825	7.27
843	826	7.26
844	826	7.24
845	826	7.23
846	826	7.21
847	826	7.2
848	826	7.19
849	827	7.17
850	827	6.91
851	828	6.65
852	829	6.38
853	830	6.1
854	831	5.83
855	832	5.55
856	832	5.27
857	833	5
858	833	4.73
859	834	4.47
860	835	4.22
861	835	3.97
862	836	3.74
863	836	3.52
864	837	3.3
865	837	3.1
866	838	2.89
867	838	2.69
868	839	2.48
869	840	2.26
870	840	2.03
871	841	1.79
872	841	1.53

Table C 24 (cont.)
Fall SAT/9 and TN Linking Table—Mathematics Grade 9

TN Scale	FS Scale	SEM
873	842	1.26
874	842	0.99
875	843	0.7
876	843	0.35
877	844	0

Table C 25
Fall SAT/9 Observed
percentile ranks--Reading

Scale Score	P Rank
579	1
585	1
591	1
596	1
601	1
606	1
611	1
615	1
620	1
624	2
628	2
632	3
635	3
639	4
643	6
647	7
651	9
654	10
658	12
662	14
665	16
669	18
673	21
677	24
681	27
685	30
689	34
693	38
697	42
701	46
706	52
711	58
716	63
721	68
726	73
732	77
739	83
746	87
754	91
764	95
776	97
792	99
818	99
842	99

Table C 26
Fall SAT/9 Observed
percentile ranks--Language

Scale Score	P Rank
558	1
574	1
586	1
596	1
604	2
611	3
618	5
625	7
631	9
636	12
642	16
647	20
652	23
658	28
663	33
668	38
674	44
679	49
685	56
691	62
697	68
704	75
711	80
720	86
730	91
741	95
758	98
784	99
807	99

Table C 27
Fall SAT/9 Observed
percentile ranks--Mathematics

Scale Score	P Rank
598	1
613	1
625	2
635	3
643	5
650	8
657	12
663	17
669	23
675	29
680	35
685	44
690	53
695	59
700	64
706	70
711	74
716	78
722	82
728	85
734	88
741	91
748	94
756	96
766	98
778	99
794	99
820	99
844	99

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**Table D 1 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 2**

FS Scale	SS Scale	SEM
370	359	0
371	359	0
372	359	0
373	359	0
374	359	0
375	359	0
376	359	0
377	359	0
378	359	0
379	359	0
380	359	0
381	359	0
382	359	0
383	359	0
384	359	0
385	359	0
386	359	0
387	359	0
388	359	0
389	359	0
390	359	0
391	359	0
392	359	0
393	359	0
394	359	0
395	359	0
396	359	0
397	359	0
398	359	0
399	359	0
400	359	0
401	359	0
402	359	0
403	359	0
404	359	0
405	359	0

FS Scale	SS Scale	SEM
406	359	0
407	359	0
408	359	0
409	359	0
410	359	0
411	359	0
412	359	0
413	359	0
414	359	0
415	359	0
416	359	0
417	359	0
418	359	0
419	359	0
420	359	0
421	359	0
422	359	0
423	359	0
424	359	0
425	359	0
426	359	0
427	359	0
428	430	34.15
429	431	34.75
430	432	35.37
431	433	36.01
432	435	36.66
433	436	37.32
434	437	6.85
435	438	7.28
436	439	7.56
437	440	9.2
438	441	11.08
439	442	13.06
440	444	14.98
441	445	16.69

**Table D 1 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 2**

FS Scale	SS Scale	SEM
442	446	18.06
443	447	19.21
444	448	20.07
445	449	20.77
446	450	21.36
447	451	21.88
448	452	22.26
449	454	22.5
450	455	22.72
451	456	22.79
452	457	22.9
453	458	22.98
454	459	23.05
455	460	23.16
456	461	23.21
457	463	23.23
458	464	23.27
459	465	23.25
460	466	23.05
461	467	22.84
462	468	22.63
463	469	22.44
464	470	22.25
465	471	22.07
466	473	21.91
467	474	21.71
468	475	21.51
469	476	21.32
470	477	21.12
471	478	20.93
472	479	20.74
473	480	20.56
474	482	20.38
475	483	20.2
476	484	20.03
477	485	19.88

FS Scale	SS Scale	SEM
478	486	19.71
479	487	19.55
480	488	19.4
481	489	19.26
482	490	19.13
483	492	19
484	493	18.89
485	494	18.78
486	495	18.68
487	496	18.59
488	497	18.51
489	498	18.44
490	499	18.38
491	500	14.71
492	501	9.83
493	502	7.16
494	502	5.56
495	503	4.62
496	503	4.1
497	504	3.79
498	505	3.55
499	506	3.36
500	506	2.67
501	507	2.32
502	507	2.13
503	507	2.02
504	508	1.59
505	508	1.39
506	508	1.44
507	509	1.54
508	510	1.66
509	510	1.84
510	511	2.04
511	511	2.08
512	511	2.09
513	513	2.02

**Table D 1 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 2**

FS Scale	SS Scale	SEM
514	514	1.9
515	515	1.73
516	515	1.56
517	516	1.47
518	516	1.47
519	517	1.45
520	517	1.45
521	518	1.42
522	519	1.25
523	520	1
524	521	1.06
525	521	1.21
526	522	1.32
527	523	1.4
528	524	1.38
529	525	1.31
530	526	1.27
531	526	1.24
532	527	1.19
533	527	1.17
534	528	1.14
535	528	1.1
536	529	1.09
537	529	1.07
538	529	1.03
539	530	0.99
540	531	0.97
541	531	0.99
542	532	1.01
543	532	1.03
544	533	1.05
545	533	1.08
546	534	1.09
547	535	1.1
548	535	1.16
549	536	1.28

FS Scale	SS Scale	SEM
550	538	1.43
551	539	1.44
552	540	1.36
553	542	1.28
554	542	1.26
555	542	1.19
556	543	1.13
557	544	1.12
558	544	1.1
559	545	1.11
560	546	1.11
561	547	1.07
562	547	1.02
563	548	0.95
564	549	0.96
565	549	0.96
566	549	0.99
567	550	1.06
568	550	1.2
569	552	1.31
570	553	1.32
571	554	1.27
572	556	1.29
573	556	1.28
574	557	1.31
575	559	1.58
576	562	1.48
577	562	1.3
578	562	1.26
579	564	1.3
580	565	1.39
581	565	1.43
582	567	1.51
583	569	1.41
584	570	1.23
585	571	1.14

**Table D 1 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 2**

FS Scale	SS Scale	SEM
586	572	1.17
587	573	1.23
588	574	1.23
589	574	1.24
590	576	1.11
591	576	1.06
592	576	1.06
593	578	1.04
594	580	1
595	580	0.98
596	580	1.02
597	582	1.22
598	584	1.41
599	585	1.44
600	587	1.2
601	588	1.04
602	590	1.3
603	590	1.35
604	591	1.43
605	592	1.46
606	593	1.45
607	595	1.35
608	596	1.08
609	597	0.81
610	597	0.71
611	598	0.72
612	598	0.81
613	599	0.96
614	599	1.12
615	600	1.25
616	602	1.27
617	603	1.15
618	604	1.02
619	604	0.97
620	605	0.96
621	607	1.07

FS Scale	SS Scale	SEM
622	608	1.21
623	608	1.23
624	609	1.22
625	610	1.12
626	611	1.11
627	612	1.13
628	614	1.2
629	615	1.24
630	616	1.31
631	617	1.35
632	618	1.44
633	619	1.51
634	620	1.52
635	620	1.51
636	620	1.64
637	621	1.62
638	623	1.44
639	624	1.42
640	626	1.43
641	627	1.31
642	628	1.24
643	629	1.33
644	630	1.54
645	632	1.67
646	633	1.65
647	635	1.55
648	636	1.41
649	637	1.33
650	638	1.33
651	639	1.31
652	640	1.29
653	641	1.23
654	642	1.19
655	643	1.24
656	644	1.36
657	644	1.5

**Table D 1 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 2**

FS Scale	SS Scale	SEM
658	645	1.69
659	646	1.88
660	647	1.99
661	648	2.02
662	649	1.97
663	650	1.88
664	651	1.76
665	652	1.71
666	653	1.73
667	654	1.81
668	656	1.92
669	657	2.05
670	657	1.98
671	657	1.99
672	657	2.05
673	657	2.17
674	657	2.25
675	659	2.27
676	660	2.31
677	661	2.37
678	662	2.49
679	664	2.69
680	665	2.93
681	666	3.07
682	667	3.1
683	668	3.12
684	668	3.14
685	669	3.17
686	670	3.19
687	671	3.21
688	672	3.25
689	672	3.3
690	673	3.37
691	674	3.47
692	675	3.61
693	676	3.78

FS Scale	SS Scale	SEM
694	677	3.87
695	677	3.87
696	678	3.87
697	679	3.86
698	679	3.85
699	680	3.84
700	680	3.83
701	681	3.82
702	681	3.8
703	682	3.8
704	683	3.82
705	684	3.84
706	684	3.87
707	685	3.92
708	686	3.99
709	687	4.08
710	688	4.22
711	689	4.44
712	689	4.79
713	690	5.31
714	691	5.68
715	691	5.77
716	691	5.88
717	692	5.99
718	693	6.11
719	693	6.22
720	694	6.35
721	695	6.47
722	696	6.6
723	696	6.72
724	697	6.83
725	698	6.96
726	698	7.08
727	699	7.21
728	700	7.35
729	700	7.5

**Table D 1 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 2**

FS Scale	SS Scale	SEM
730	701	7.65
731	702	7.84
732	703	8.06
733	703	8.32
734	704	8.49
735	706	8.14
736	718	5.68
737	730	2.68
738	736	10.84
739	741	10.72
740	741	10.49
741	741	10.4
742	747	10.18
743	747	10.18
744	747	10.19
745	753	9.85
746	753	9.75
747	753	9.63
748	759	8.27
749	759	8.22

**Table D 2 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 3**

FS Scale	SS Scale	SEM
427	406	0
428	406	0
429	406	0
430	406	0
431	406	0
432	406	0
433	406	0
434	406	0
435	406	0
436	406	0
437	406	0
438	406	0
439	406	0
440	406	0
441	406	0
442	406	0
443	406	0
444	406	0
445	406	0
446	406	0
447	406	0
448	406	0
449	406	0
450	406	0
451	406	0
452	406	0
453	406	0
454	406	0
455	406	0
456	406	0
457	406	0
458	406	0
459	406	0
460	406	0
461	406	0
462	406	0

FS Scale	SS Scale	SEM
463	406	0
464	406	0
465	406	0
466	406	0
467	463	11.36
468	465	12.08
469	467	12.96
470	469	6.82
471	471	8.25
472	473	9.73
473	475	10.77
474	477	12
475	479	13.06
476	481	14
477	483	14.76
478	485	15.36
479	487	16
480	490	16.69
481	492	16.79
482	494	16.89
483	496	17.01
484	498	17.07
485	500	17.12
486	502	17.22
487	504	17.37
488	506	17.15
489	508	16.95
490	510	16.78
491	512	16.63
492	514	16.47
493	516	16.31
494	519	16.19
495	519	15.94
496	519	15.72
497	519	15.5
498	519	15.27

**Table D 2 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 3**

FS Scale	SS Scale	SEM
499	519	15.04
500	520	14.81
501	520	14.59
502	520	14.38
503	520	14.17
504	520	13.99
505	520	13.81
506	521	13.66
507	521	13.53
508	521	13.41
509	522	10.99
510	524	9.53
511	524	8.59
512	524	7.66
513	524	6.95
514	524	6.43
515	524	5.44
516	525	4.8
517	525	4.3
518	525	3.92
519	525	3.63
520	525	3.45
521	526	3.09
522	526	2.86
523	526	2.74
524	526	2.68
525	526	2.68
526	527	2.67
527	529	2.68
528	530	2.69
529	530	2.7
530	531	2.73
531	531	2.6
532	532	2.52
533	532	2.48
534	533	2.46

FS Scale	SS Scale	SEM
535	534	2.42
536	535	2.34
537	536	2.27
538	536	2.18
539	537	2.09
540	537	1.92
541	538	1.72
542	538	1.57
543	539	1.51
544	539	1.53
545	540	1.65
546	541	1.87
547	543	1.89
548	544	1.79
549	544	1.73
550	545	1.49
551	546	1.27
552	547	1.3
553	547	1.32
554	547	1.39
555	548	1.56
556	550	1.68
557	551	1.59
558	551	1.43
559	552	1.28
560	552	1.17
561	553	1.03
562	554	1.02
563	555	1.07
564	555	1.13
565	557	1.21
566	557	1.24
567	557	1.22
568	558	1.2
569	558	1.2
570	559	1.22

**Table D 2 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 3**

FS Scale	SS Scale	SEM
571	559	1.29
572	560	1.4
573	561	1.52
574	562	1.6
575	564	1.61
576	565	1.52
577	565	1.41
578	566	1.32
579	567	1.2
580	567	1.09
581	568	1.05
582	568	1.06
583	569	1.09
584	570	1.12
585	571	1.13
586	572	1.14
587	572	1.23
588	573	1.31
589	574	1.31
590	576	1.19
591	577	1.02
592	578	0.95
593	578	0.96
594	578	1
595	579	1.07
596	581	1.13
597	582	1.17
598	582	1.31
599	583	1.36
600	585	1.18
601	586	1.04
602	587	0.98
603	588	0.98
604	589	1.02
605	590	1.14
606	591	1.29

FS Scale	SS Scale	SEM
607	593	1.36
608	594	1.17
609	596	1.09
610	597	1.2
611	599	1.12
612	599	1.03
613	599	1.09
614	601	1.02
615	602	1.11
616	602	0.95
617	602	1
618	604	0.98
619	605	0.93
620	606	0.99
621	607	1
622	607	1.07
623	608	1.09
624	609	1.1
625	611	1.37
626	613	1.32
627	614	1.23
628	615	1.23
629	617	1.21
630	618	1.14
631	619	1.17
632	620	1.31
633	621	1.41
634	623	1.39
635	625	1.07
636	626	1.07
637	628	1.28
638	628	1.2
639	628	1.25
640	630	1.35
641	633	1.5
642	635	1.39

**Table D 2 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 3**

FS Scale	SS Scale	SEM
643	635	1.16
644	635	1.08
645	635	1.11
646	635	1.38
647	636	1.43
648	638	1.25
649	640	1.13
650	642	1.15
651	643	1.19
652	645	1.23
653	647	1.31
654	648	1.48
655	648	1.43
656	648	1.64
657	648	2.09
658	651	1.94
659	655	1.96
660	656	1.83
661	656	1.53
662	656	1.52
663	656	1.77
664	658	1.68
665	660	1.66
666	662	1.54
667	663	1.32
668	665	1.24
669	666	1.34
670	667	1.52
671	668	1.77
672	669	1.99
673	671	2.04
674	673	1.91
675	674	1.72
676	675	1.58
677	675	1.53
678	676	1.55

FS Scale	SS Scale	SEM
679	677	1.65
680	677	1.81
681	678	1.98
682	679	2.13
683	680	2.21
684	682	2.2
685	683	2.14
686	684	1.98
687	684	1.82
688	685	1.7
689	686	1.62
690	687	1.58
691	687	1.59
692	688	1.68
693	689	1.88
694	690	2.14
695	692	2.4
696	693	2.65
697	694	2.7
698	695	2.75
699	695	2.82
700	696	2.92
701	696	3.06
702	697	3.23
703	698	3.42
704	699	3.62
705	701	3.81
706	702	4.01
707	703	4.21
708	704	4.45
709	706	4.76
710	707	5.16
711	708	5.23
712	709	5.31
713	710	5.39
714	711	5.5

**Table D 2 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 3**

FS Scale	SS Scale	SEM
715	712	5.61
716	713	5.74
717	714	5.88
718	715	6.04
719	716	6.24
720	717	6.5
721	718	6.81
722	719	7.17
723	720	7.59
724	721	8.09
725	723	8.61
726	726	9.13
727	729	9.58
728	732	10.01
729	735	10.46
730	738	10.96
731	741	11.54
732	741	11.48
733	742	11.43
734	743	11.38
735	744	11.34
736	745	11.3
737	746	11.24
738	747	11.18
739	748	11.11
740	749	11.04
741	750	10.97
742	751	10.89
743	752	10.82
744	753	10.73
745	754	10.64
746	755	10.55
747	756	10.46
748	757	10.37
749	758	10.26
750	759	10.14

FS Scale	SS Scale	SEM
751	760	10.04
752	761	9.94
753	762	9.83
754	763	9.76
755	764	9.74
756	764	9.48
757	765	8.9
758	766	8.36
759	767	7.84
760	768	7.28
761	769	6.77
762	770	6.21
763	771	5.66
764	772	5.09
765	773	4.51
766	774	4.06
767	775	3.24

**Table D 3 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 4**

FS Scale	SS Scale	SEM
445	437	0
446	437	0
447	437	0
448	437	0
449	437	0
450	437	0
451	437	0
452	437	0
453	437	0
454	437	0
455	437	0
456	437	0
457	437	0
458	437	0
459	437	0
460	437	0
461	437	0
462	437	0
463	437	0
464	437	0
465	437	0
466	437	0
467	437	0
468	437	0
469	437	0
470	437	0
471	437	0
472	437	0
473	437	0
474	437	0
475	437	0
476	437	0
477	437	0
478	437	0
479	437	0
480	437	0

FS Scale	SS Scale	SEM
481	489	25.08
482	489	25.73
483	490	26.4
484	491	11.62
485	491	12.16
486	492	12.8
487	493	10.02
488	493	10.89
489	494	11.81
490	495	9.99
491	496	10.9
492	496	11.79
493	497	12.61
494	498	13.22
495	498	13.72
496	499	14.21
497	500	14.72
498	500	15.19
499	501	15.6
500	502	15.8
501	502	15.94
502	503	16.06
503	504	16.18
504	504	16.31
505	505	16.42
506	506	16.48
507	506	16.47
508	507	16.47
509	508	16.48
510	508	16.49
511	509	16.51
512	510	16.53
513	511	16.56
514	511	16.59
515	512	16.62
516	513	16.67

**Table D 3 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 4**

FS Scale	SS Scale	SEM
517	513	16.73
518	514	16.79
519	518	16.24
520	526	15.45
521	534	14.98
522	541	14.6
523	542	14.19
524	543	13.83
525	544	13.5
526	544	12.57
527	544	11.8
528	545	11.19
529	545	9.96
530	545	9.08
531	545	8.43
532	546	6.17
533	547	4.84
534	548	4.05
535	549	3.52
536	550	3.18
537	551	2.54
538	551	2.05
539	552	1.81
540	553	1.69
541	553	1.65
542	554	1.53
543	555	1.53
544	556	1.75
545	557	2.03
546	558	2.3
547	559	2.39
548	560	2.37
549	560	2.35
550	561	2.32
551	562	2.28
552	563	1.87

FS Scale	SS Scale	SEM
553	564	1.66
554	566	1.59
555	567	1.64
556	568	1.67
557	568	1.66
558	569	1.65
559	570	1.65
560	570	1.66
561	571	1.6
562	571	1.56
563	572	1.53
564	573	1.53
565	574	1.47
566	574	1.44
567	575	1.42
568	576	1.39
569	576	1.33
570	577	1.28
571	577	1.24
572	578	1.12
573	579	1.09
574	580	1.14
575	581	1.27
576	582	1.33
577	582	1.4
578	583	1.48
579	584	1.51
580	585	1.45
581	586	1.38
582	587	1.3
583	587	1.21
584	588	1.14
585	588	1.12
586	589	1.14
587	590	1.24
588	591	1.39

**Table D 3 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 4**

FS Scale	SS Scale	SEM
589	592	1.44
590	593	1.33
591	594	1.2
592	594	1.12
593	595	1.1
594	596	1.13
595	597	1.17
596	598	1.2
597	599	1.18
598	599	1.22
599	600	1.29
600	601	1.28
601	602	1.17
602	603	1.09
603	604	1.05
604	604	1.03
605	605	1.05
606	605	1.07
607	606	1.08
608	607	1.06
609	608	1.02
610	608	1
611	609	0.97
612	610	1.06
613	611	1.12
614	613	1.05
615	614	0.96
616	614	0.96
617	615	1.08
618	616	1.25
619	618	1.29
620	619	1.18
621	620	1.01
622	621	0.89
623	622	0.88
624	623	0.91

FS Scale	SS Scale	SEM
625	624	0.93
626	624	0.96
627	625	0.97
628	626	0.98
629	627	0.95
630	628	0.96
631	629	1.01
632	630	1.08
633	631	1.04
634	632	0.91
635	633	0.82
636	634	0.87
637	635	0.92
638	636	0.98
639	636	1.06
640	637	1.14
641	639	1.2
642	640	1.15
643	641	1.04
644	643	0.97
645	643	0.89
646	644	0.88
647	645	0.96
648	646	1.08
649	647	1.13
650	648	1.11
651	649	1.09
652	650	1.05
653	651	1.01
654	652	0.97
655	652	0.94
656	653	0.94
657	654	0.96
658	655	1.01
659	656	1.05
660	657	1.09

**Table D 3 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 4**

FS Scale	SS Scale	SEM
661	658	1.15
662	659	1.14
663	660	1
664	661	0.84
665	661	0.73
666	662	0.74
667	663	0.81
668	664	0.89
669	664	0.95
670	665	1.05
671	667	1.12
672	668	1.07
673	669	0.94
674	670	0.87
675	671	0.91
676	672	1.07
677	673	1.19
678	674	1.24
679	675	1.28
680	676	1.33
681	678	1.29
682	679	1.19
683	680	1.12
684	681	1.1
685	682	1.07
686	682	1.05
687	683	1.05
688	684	1.06
689	685	1.09
690	686	1.15
691	686	1.26
692	687	1.38
693	688	1.45
694	689	1.47
695	690	1.53
696	691	1.63

FS Scale	SS Scale	SEM
697	692	1.73
698	693	1.81
699	694	1.82
700	695	1.76
701	696	1.68
702	697	1.62
703	697	1.58
704	698	1.54
705	699	1.54
706	699	1.58
707	700	1.65
708	700	1.75
709	701	1.88
710	702	2.01
711	703	2.14
712	704	2.27
713	705	2.44
714	706	2.62
715	708	2.8
716	709	2.94
717	710	2.92
718	711	2.88
719	712	2.81
720	712	2.73
721	713	2.63
722	714	2.53
723	715	2.44
724	715	2.37
725	716	2.32
726	717	2.29
727	718	2.28
728	718	2.3
729	719	2.35
730	720	2.44
731	720	2.57
732	721	2.73

**Table D 3 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 4**

FS Scale	SS Scale	SEM
733	722	2.9
734	724	3.06
735	725	3.22
736	726	3.39
737	727	3.59
738	728	3.6
739	728	3.62
740	729	3.64
741	729	3.68
742	730	3.72
743	730	3.77
744	730	3.82
745	731	3.88
746	732	3.95
747	733	4.02
748	734	4.09
749	735	4.16
750	735	4.23
751	736	4.3
752	737	4.4
753	738	4.57
754	739	4.8
755	740	5.11
756	741	5.53
757	741	6.1
758	742	6.86
759	743	7.75
760	745	8.77
761	749	9.98
762	751	10.78
763	754	11.06
764	756	11.31
765	758	11.47
766	761	11.57
767	763	11.66
768	768	11.72

FS Scale	SS Scale	SEM
769	773	11.49
770	779	10.85
771	784	9.66
772	791	7.83
773	799	5.22

**Table D 4 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 5**

FS Scale	SS Scale	SEM
470	457	0
471	457	0
472	457	0
473	457	0
474	457	0
475	457	0
476	457	0
477	457	0
478	457	0
479	457	0
480	457	0
481	457	0
482	457	0
483	457	0
484	457	0
485	457	0
486	457	0
487	457	0
488	457	0
489	457	0
490	457	0
491	457	0
492	457	0
493	457	0
494	457	0
495	457	0
496	457	0
497	457	0
498	457	0
499	457	0
500	457	0
501	457	0
502	457	0
503	457	0
504	457	0
505	457	0

FS Scale	SS Scale	SEM
506	457	0
507	457	0
508	457	0
509	502	22.56
510	503	23.23
511	504	23.93
512	506	24.64
513	507	17.16
514	508	17.75
515	509	6.09
516	510	6.71
517	511	7.64
518	512	8.75
519	514	9.96
520	515	10.92
521	516	11.79
522	517	12.62
523	518	13.29
524	519	13.74
525	521	14.09
526	522	14.45
527	523	14.75
528	524	15
529	525	15.23
530	526	15.38
531	527	15.4
532	529	15.36
533	530	15.34
534	531	15.33
535	532	15.25
536	533	15.15
537	534	15.06
538	536	14.96
539	537	14.86
540	538	14.76
541	539	14.67

**Table D 4 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 5**

FS Scale	SS Scale	SEM
542	540	14.59
543	541	14.5
544	542	14.42
545	544	14.35
546	545	14.3
547	546	14.24
548	547	14.2
549	548	14.17
550	549	14.16
551	550	13.77
552	551	13.22
553	552	12.88
554	553	11.36
555	554	10.7
556	555	10.36
557	556	8.04
558	558	5.87
559	560	5.18
560	562	4.94
561	564	4.86
562	566	4.87
563	566	4.16
564	567	3.89
565	568	3.78
566	569	3.72
567	570	3.69
568	571	3.57
569	573	3.38
570	575	3.22
571	575	3.09
572	575	2.98
573	576	2.61
574	577	2.44
575	578	2.27
576	579	2.21
577	580	2.09

FS Scale	SS Scale	SEM
578	581	1.94
579	582	1.8
580	583	1.68
581	583	1.6
582	584	1.5
583	584	1.47
584	585	1.48
585	586	1.51
586	586	1.46
587	587	1.43
588	587	1.41
589	588	1.39
590	588	1.32
591	589	1.27
592	590	1.23
593	590	1.23
594	591	1.23
595	591	1.36
596	592	1.59
597	592	1.83
598	594	1.97
599	595	2
600	596	1.94
601	597	1.81
602	598	1.5
603	598	1.26
604	599	1.11
605	599	1.06
606	600	1.04
607	601	1.12
608	601	1.25
609	602	1.4
610	603	1.53
611	605	1.5
612	606	1.35
613	607	1.16

**Table D 4 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 5**

FS Scale	SS Scale	SEM
614	608	1.04
615	609	1.09
616	610	1.26
617	611	1.35
618	612	1.36
619	613	1.29
620	614	1.2
621	615	1.05
622	616	1
623	617	0.93
624	618	0.88
625	619	0.84
626	620	0.87
627	621	0.97
628	622	1.04
629	623	1.06
630	624	1.07
631	625	1.09
632	626	1.09
633	627	1.03
634	628	1
635	630	0.99
636	631	1.06
637	632	1.13
638	633	1.12
639	634	1.05
640	635	1
641	636	0.97
642	637	0.94
643	638	0.91
644	639	0.91
645	640	0.95
646	641	0.99
647	643	0.9
648	644	0.78
649	645	0.81

FS Scale	SS Scale	SEM
650	646	0.86
651	647	0.89
652	647	0.91
653	648	1.02
654	650	1.09
655	651	0.87
656	652	0.72
657	653	0.94
658	654	1.1
659	656	1.08
660	657	1.01
661	658	0.96
662	659	0.86
663	660	0.82
664	661	0.81
665	661	0.89
666	663	1
667	664	1.03
668	666	0.99
669	667	0.89
670	668	0.75
671	669	0.71
672	670	0.7
673	671	0.72
674	671	0.74
675	672	0.78
676	673	0.81
677	674	0.82
678	675	0.82
679	676	0.81
680	676	0.8
681	677	0.86
682	679	0.94
683	680	0.94
684	681	0.88
685	682	0.87

**Table D 4 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 5**

FS Scale	SS Scale	SEM
686	683	0.96
687	684	1.06
688	685	1.08
689	687	1.09
690	687	1.06
691	688	1.05
692	689	1.05
693	690	1.07
694	691	1.08
695	692	1.03
696	693	1
697	694	0.99
698	695	1
699	696	1.02
700	697	1.07
701	698	1.05
702	698	1.03
703	699	1.03
704	700	1.06
705	701	1.1
706	702	1.14
707	702	1.19
708	703	1.25
709	704	1.36
710	705	1.48
711	706	1.56
712	707	1.61
713	708	1.66
714	709	1.74
715	710	1.74
716	711	1.74
717	712	1.74
718	713	1.76
719	714	1.8
720	715	1.81
721	716	1.79

FS Scale	SS Scale	SEM
722	717	1.77
723	718	1.74
724	719	1.69
725	720	1.66
726	721	1.64
727	721	1.68
728	722	1.84
729	723	2.13
730	724	2.49
731	726	2.85
732	727	3.19
733	729	3.51
734	730	3.54
735	730	3.58
736	731	3.61
737	732	3.64
738	733	3.65
739	733	3.65
740	734	3.64
741	735	3.63
742	736	3.62
743	737	3.61
744	737	3.6
745	738	3.6
746	739	3.61
747	740	3.62
748	740	3.55
749	741	3.47
750	741	3.42
751	742	3.38
752	742	3.37
753	743	3.38
754	743	3.45
755	744	3.58
756	744	3.77
757	745	4.1

**Table D 4 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 5**

FS Scale	SS Scale	SEM
758	746	4.59
759	746	5.06
760	747	5.79
761	747	6.67
762	748	7.74
763	750	8.89
764	752	10.34
765	754	12.03
766	755	14.21
767	757	16.48
768	759	17.98
769	759	17.95
770	759	17.97
771	760	18.04
772	760	18.1
773	760	18.15
774	762	18.17
775	768	18.11
776	773	18.07
777	778	17.97
778	783	17.86
779	788	17.81
780	792	17.7
781	794	17.29
782	796	16.87
783	798	16.39
784	800	15.85
785	802	15.17
786	804	14.45
787	806	13.63
788	808	12.66
789	810	11.67
790	812	10.65
791	814	9.92
792	816	8.54
793	816	8.54

FS Scale	SS Scale	SEM
794	816	8.54
795	816	8.54
796	816	8.38
797	816	8.38
798	816	7.97
799	816	7.97
800	816	7.97
801	816	7.7
802	816	7.7
803	816	7.7
804	816	7.7

**Table D 5 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 6**

FS Scale	SS Scale	SEM
483	473	0
484	473	0
485	473	0
486	473	0
487	473	0
488	473	0
489	473	0
490	473	0
491	473	0
492	473	0
493	473	0
494	473	0
495	473	0
496	473	0
497	473	0
498	473	0
499	473	0
500	473	0
501	473	0
502	473	0
503	473	0
504	473	0
505	473	0
506	473	0
507	473	0
508	473	0
509	473	0
510	473	0
511	473	0
512	473	0
513	473	0
514	473	0
515	473	0
516	473	0
517	473	0
518	473	0

FS Scale	SS Scale	SEM
519	524	25.3
520	525	26.04
521	527	26.8
522	528	27.58
523	529	28.37
524	530	29.18
525	532	20.49
526	533	21.15
527	534	21.83
528	535	15.57
529	537	16.17
530	538	16.73
531	539	11.22
532	540	11.7
533	542	11.85
534	543	12.2
535	544	12.57
536	545	12.98
537	547	13.41
538	548	13.87
539	549	14.27
540	550	14.48
541	552	14.56
542	553	14.63
543	554	14.68
544	555	14.72
545	557	14.76
546	558	14.82
547	559	14.86
548	560	14.85
549	561	14.81
550	563	14.77
551	564	14.75
552	565	14.72
553	566	14.7
554	568	14.7

Table D 5 (cont.) Fall SAT/9 and Spring SAT/9 Linking Table—Reading Grade 6

FS Scale	SS Scale	SEM
555	569	14.7
556	570	14.71
557	571	14.73
558	573	14.76
559	574	14.81
560	575	14.68
561	575	14.42
562	575	14.23
563	576	14.02
564	576	13.78
565	577	13.58
566	577	13.25
567	577	12.98
568	578	12.77
569	578	12.6
570	579	11.86
571	580	11.34
572	581	10.59
573	582	9.75
574	583	9.16
575	583	7.79
576	584	6.41
577	585	5.64
578	586	5.11
579	587	4.79
580	588	4.27
581	589	3.82
582	590	3.71
583	590	3.74
584	591	3.8
585	593	3.55
586	595	3.29
587	598	2.97
588	599	2.58
589	599	2.22
590	600	1.91

FS Scale	SS Scale	SEM
591	600	1.68
592	601	1.54
593	601	1.48
594	602	1.36
595	602	1.34
596	603	1.35
597	604	1.36
598	604	1.3
599	604	1.26
600	605	1.23
601	605	1.22
602	606	1.18
603	607	1.21
604	607	1.38
605	608	1.65
606	609	1.9
607	612	1.96
608	613	1.76
609	614	1.44
610	615	1.22
611	615	1.15
612	616	1.2
613	617	1.27
614	617	1.36
615	618	1.46
616	619	1.55
617	620	1.48
618	621	1.31
619	622	1.13
620	622	1.02
621	623	0.94
622	623	0.92
623	624	0.98
624	625	1.08
625	625	1.28
626	626	1.48

**Table D 5 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 6**

FS Scale	SS Scale	SEM
627	628	1.54
628	629	1.34
629	630	1.42
630	632	1.55
631	633	1.56
632	634	1.53
633	636	1.44
634	637	1.26
635	638	1.08
636	639	0.92
637	639	0.86
638	639	0.86
639	640	0.89
640	641	0.95
641	641	0.97
642	642	0.99
643	643	1.01
644	644	1.03
645	645	1.04
646	646	1.06
647	647	1.09
648	648	1.06
649	649	1.01
650	650	0.98
651	651	0.93
652	652	0.87
653	653	0.84
654	654	0.83
655	654	0.8
656	655	0.79
657	656	0.81
658	657	0.82
659	658	0.82
660	659	0.79
661	660	0.78
662	660	0.77

FS Scale	SS Scale	SEM
663	661	0.79
664	662	0.83
665	663	0.83
666	663	0.77
667	664	0.76
668	665	0.8
669	666	0.82
670	667	0.8
671	667	0.78
672	668	0.8
673	669	0.89
674	670	0.98
675	671	1.01
676	672	1
677	673	0.94
678	675	0.75
679	675	0.64
680	676	0.58
681	677	0.57
682	678	0.59
683	678	0.67
684	679	0.74
685	680	0.81
686	681	0.88
687	682	0.88
688	683	0.8
689	684	0.77
690	685	0.81
691	686	0.86
692	687	0.88
693	688	0.82
694	689	0.78
695	690	0.78
696	690	0.79
697	692	0.83
698	693	0.83

**Table D 5 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 6**

FS Scale	SS Scale	SEM
699	694	0.82
700	695	0.84
701	696	0.84
702	696	0.82
703	697	0.81
704	698	0.82
705	699	0.83
706	700	0.89
707	701	0.91
708	702	0.88
709	703	0.8
710	703	0.75
711	704	0.74
712	705	0.81
713	706	0.89
714	707	0.91
715	707	0.93
716	708	0.97
717	709	1.11
718	710	1.3
719	711	1.43
720	712	1.45
721	713	1.37
722	714	1.28
723	715	1.22
724	716	1.19
725	717	1.19
726	717	1.22
727	718	1.26
728	719	1.29
729	720	1.29
730	721	1.27
731	721	1.25
732	722	1.24
733	722	1.23
734	723	1.22

FS Scale	SS Scale	SEM
735	724	1.21
736	724	1.22
737	725	1.26
738	726	1.33
739	726	1.38
740	727	1.4
741	727	1.41
742	728	1.41
743	728	1.42
744	729	1.45
745	729	1.5
746	730	1.59
747	731	1.71
748	731	1.84
749	732	1.95
750	733	2.04
751	734	2.12
752	735	2.2
753	735	2.2
754	735	2.2
755	736	2.2
756	736	2.21
757	736	2.21
758	736	2.22
759	737	2.23
760	737	2.25
761	737	2.26
762	738	2.28
763	738	2.31
764	738	2.34
765	739	2.37
766	739	2.41
767	739	2.44
768	739	2.48
769	740	2.53
770	740	2.6

**Table D 5 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 6**

FS Scale	SS Scale	SEM
771	740	2.67
772	741	2.76
773	741	2.83
774	741	2.87
775	742	2.93
776	742	2.99
777	742	3.07
778	742	3.15
779	743	3.25
780	743	3.35
781	743	3.47
782	744	3.6
783	745	3.73
784	745	3.87
785	746	4.02
786	747	4.16
787	748	4.3
788	748	4.44
789	749	4.59
790	750	4.75
791	751	4.93
792	752	5.13
793	753	5.34
794	754	5.65
795	755	6.06
796	756	6.62
797	757	7.07
798	758	7.29
799	759	7.65
800	761	8.11
801	763	8.64
802	766	9.23
803	769	9.88
804	772	10.56
805	777	11.03
806	786	11.09

FS Scale	SS Scale	SEM
807	797	10.19
808	817	6.64

**Table D 6 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 7**

FS Scale	SS Scale	SEM
485	471	0
486	471	0
487	471	0
488	471	0
489	471	0
490	471	0
491	471	0
492	471	0
493	471	0
494	471	0
495	471	0
496	471	0
497	471	0
498	471	0
499	471	0
500	471	0
501	471	0
502	471	0
503	471	0
504	471	0
505	471	0
506	471	0
507	471	0
508	471	0
509	471	0
510	471	0
511	471	0
512	471	0
513	471	0
514	471	0
515	471	0
516	471	0
517	471	0
518	471	0
519	471	0
520	471	0

FS Scale	SS Scale	SEM
521	471	0
522	471	0
523	471	0
524	521	24.69
525	522	25.41
526	523	26.15
527	524	20.19
528	526	20.84
529	527	21.52
530	528	6.98
531	529	7.62
532	530	8.44
533	532	8.92
534	533	9.92
535	534	10.91
536	535	11.91
537	537	12.92
538	538	13.7
539	539	14.29
540	540	14.76
541	542	15.27
542	543	15.65
543	544	16.01
544	545	16.37
545	546	16.62
546	548	16.74
547	549	16.76
548	550	16.8
549	551	16.82
550	553	16.75
551	554	16.69
552	555	16.63
553	556	16.58
554	557	16.47
555	559	16.37
556	560	16.27

**Table D 6 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 7**

FS Scale	SS Scale	SEM
557	561	16.18
558	562	16.1
559	564	16.03
560	565	15.96
561	566	15.91
562	567	15.85
563	569	15.8
564	570	15.77
565	571	15.74
566	572	14.96
567	573	14.48
568	574	14.21
569	575	13.03
570	576	12.4
571	577	12.07
572	579	9.73
573	582	8.71
574	585	8.17
575	586	7.81
576	588	7.56
577	589	6.72
578	591	5.68
579	591	4.92
580	592	4.29
581	592	3.79
582	594	2.93
583	594	2.17
584	595	1.87
585	595	1.8
586	596	1.85
587	596	1.9
588	597	1.96
589	598	2
590	599	2
591	600	1.99
592	600	1.92

FS Scale	SS Scale	SEM
593	601	1.75
594	602	1.65
595	603	1.57
596	603	1.54
597	604	1.49
598	604	1.48
599	604	1.5
600	605	1.54
601	606	1.56
602	606	1.61
603	607	1.7
604	608	1.8
605	609	1.82
606	610	1.8
607	611	1.72
608	612	1.58
609	612	1.44
610	612	1.32
611	613	1.21
612	613	1.16
613	613	1.1
614	614	1.15
615	614	1.24
616	615	1.33
617	615	1.38
618	616	1.42
619	616	1.48
620	617	1.56
621	619	1.76
622	620	1.94
623	622	1.93
624	623	1.74
625	624	1.52
626	625	1.34
627	625	1.23
628	626	1.15

**Table D 6 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 7**

FS Scale	SS Scale	SEM
629	627	1.23
630	628	1.39
631	629	1.5
632	630	1.51
633	632	1.55
634	633	1.54
635	635	1.42
636	636	1.37
637	636	1.55
638	638	1.79
639	640	1.79
640	641	1.56
641	642	1.34
642	643	1.13
643	644	1.04
644	645	1.09
645	646	1.25
646	647	1.39
647	648	1.47
648	650	1.52
649	651	1.49
650	653	1.45
651	654	1.2
652	655	0.87
653	656	0.77
654	657	0.83
655	658	0.93
656	658	0.98
657	659	1.03
658	660	1.07
659	661	1.1
660	662	1.04
661	663	0.98
662	664	0.98
663	665	1.08
664	667	1.2

FS Scale	SS Scale	SEM
665	669	1.14
666	670	0.99
667	671	0.81
668	672	0.68
669	673	0.69
670	674	0.74
671	675	0.7
672	675	0.61
673	676	0.6
674	677	0.72
675	678	0.84
676	679	0.87
677	680	0.86
678	681	0.89
679	682	0.92
680	683	0.93
681	684	0.92
682	685	0.9
683	686	0.88
684	687	0.78
685	688	0.74
686	690	0.76
687	691	0.8
688	692	0.75
689	692	0.7
690	693	0.69
691	694	0.72
692	695	0.76
693	696	0.77
694	697	0.77
695	698	0.76
696	698	0.78
697	699	0.78
698	700	0.75
699	701	0.74
700	702	0.75

**Table D 6 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 7**

FS Scale	SS Scale	SEM
701	703	0.79
702	704	0.84
703	705	0.85
704	705	0.84
705	706	0.82
706	707	0.81
707	708	0.81
708	709	0.77
709	709	0.7
710	710	0.62
711	711	0.59
712	711	0.59
713	712	0.64
714	712	0.72
715	713	0.85
716	714	0.92
717	715	0.92
718	716	0.91
719	717	0.92
720	718	0.94
721	719	0.92
722	719	0.93
723	720	0.97
724	721	1.01
725	722	1.03
726	723	1.02
727	723	0.98
728	724	0.93
729	725	0.84
730	725	0.79
731	726	0.76
732	727	0.74
733	727	0.77
734	728	0.91
735	729	1.16
736	730	1.41

FS Scale	SS Scale	SEM
737	731	1.51
738	732	1.49
739	733	1.44
740	734	1.37
741	734	1.32
742	735	1.29
743	736	1.28
744	737	1.3
745	738	1.36
746	738	1.47
747	739	1.59
748	740	1.61
749	741	1.61
750	741	1.61
751	742	1.6
752	742	1.6
753	743	1.63
754	744	1.69
755	744	1.77
756	745	1.85
757	746	1.91
758	747	1.97
759	748	2.06
760	749	2.26
761	750	2.46
762	750	2.55
763	751	2.64
764	751	2.75
765	752	2.86
766	752	2.97
767	753	3.06
768	754	3.14
769	755	3.2
770	756	3.22
771	757	3.22
772	757	3.21

**Table D 6 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 7**

FS Scale	SS Scale	SEM
773	758	3.2
774	759	3.17
775	760	3.14
776	761	3.13
777	762	3.13
778	763	3.14
779	764	3.2
780	765	3.33
781	766	3.57
782	766	3.58
783	766	3.6
784	767	3.64
785	767	3.69
786	767	3.76
787	768	3.84
788	768	3.95
789	768	4.07
790	769	4.2
791	770	4.34
792	771	4.49
793	772	4.66
794	773	4.84
795	774	5.06
796	775	5.3
797	776	5.63
798	777	6.11
799	778	6.68
800	779	7.37
801	780	8.18
802	781	9.19
803	783	10.49
804	787	11.97
805	791	13.47
806	795	15.4
807	797	15.17
808	799	15.04

FS Scale	SS Scale	SEM
809	802	14.85
810	805	14.51
811	809	13.96
812	813	13.38
813	817	12.55
814	821	11.66
815	825	10.43
816	829	9.07
817	833	7.73
818	837	5.87

**Table D 7 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 8**

FS Scale	SS Scale	SEM
507	493	0
508	493	0
509	493	0
510	493	0
511	493	0
512	493	0
513	493	0
514	493	0
515	493	0
516	493	0
517	493	0
518	493	0
519	493	0
520	493	0
521	493	0
522	493	0
523	493	0
524	493	0
525	493	0
526	493	0
527	493	0
528	493	0
529	493	0
530	493	0
531	493	0
532	493	0
533	493	0
534	493	0
535	493	0
536	493	0
537	493	0
538	493	0
539	493	0
540	493	0
541	493	0
542	493	0

FS Scale	SS Scale	SEM
543	493	0
544	493	0
545	493	0
546	493	0
547	493	0
548	493	0
549	538	23.22
550	539	23.92
551	540	24.63
552	541	9.35
553	542	9.97
554	543	10.78
555	544	8.22
556	545	9.45
557	547	10.39
558	548	11.59
559	549	12.7
560	550	13.56
561	551	14.29
562	552	14.95
563	553	15.6
564	554	15.94
565	556	16.28
566	557	16.64
567	558	16.96
568	559	17.16
569	560	17.37
570	561	17.61
571	562	17.7
572	563	17.66
573	565	17.63
574	566	17.61
575	567	17.55
576	568	17.43
577	569	17.32
578	570	17.21

**Table D 7 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 8**

FS Scale	SS Scale	SEM
579	571	17.09
580	572	16.97
581	574	16.85
582	575	16.73
583	576	16.61
584	577	16.48
585	578	16.36
586	579	16.25
587	580	16.14
588	581	16.04
589	583	15.94
590	584	15.85
591	585	15.77
592	586	15.7
593	589	14.3
594	595	12.6
595	599	11.71
596	603	11.16
597	604	10.7
598	605	10.35
599	605	8.95
600	606	7.98
601	606	7.14
602	607	6.52
603	607	6.01
604	607	5.24
605	608	4.77
606	608	4.38
607	609	3.99
608	609	3.69
609	610	3.47
610	610	3.34
611	611	3.27
612	611	3.25
613	613	2.93
614	614	2.8

FS Scale	SS Scale	SEM
615	615	2.96
616	616	3.27
617	617	3.63
618	621	3.96
619	623	4.02
620	625	3.87
621	626	3.67
622	627	3.48
623	627	3.31
624	628	3.16
625	629	2.61
626	630	2.27
627	631	2.09
628	632	2.01
629	632	1.91
630	633	1.84
631	634	1.78
632	634	1.65
633	635	1.49
634	636	1.45
635	637	1.48
636	638	1.42
637	639	1.41
638	641	1.43
639	641	1.45
640	642	1.46
641	643	1.51
642	644	1.58
643	645	1.59
644	645	1.61
645	646	1.64
646	647	1.71
647	648	1.76
648	650	1.69
649	651	1.51
650	652	1.35

**Table D 7 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 8**

FS Scale	SS Scale	SEM
651	652	1.23
652	652	1.18
653	653	1.14
654	654	1.28
655	656	1.38
656	657	1.32
657	658	1.19
658	659	1.09
659	659	1.03
660	660	0.99
661	661	0.99
662	661	1.05
663	662	1.13
664	663	1.14
665	664	1.11
666	665	1.08
667	666	1.09
668	667	1.12
669	668	1.14
670	669	1.06
671	670	0.92
672	671	0.81
673	672	0.74
674	673	0.89
675	674	1.22
676	675	1.36
677	677	1.25
678	678	1.19
679	679	1.15
680	680	1.05
681	681	0.93
682	682	0.82
683	683	0.79
684	684	0.86
685	685	0.99
686	686	1.03

FS Scale	SS Scale	SEM
687	687	1.02
688	688	0.93
689	689	0.86
690	690	0.84
691	691	0.85
692	692	0.84
693	692	0.85
694	693	0.87
695	694	0.84
696	695	0.72
697	695	0.59
698	696	0.56
699	697	0.62
700	697	0.75
701	698	0.87
702	699	0.88
703	700	0.88
704	701	0.85
705	702	0.87
706	703	0.89
707	704	0.84
708	705	0.71
709	706	0.68
710	707	0.71
711	708	0.77
712	709	0.79
713	710	0.79
714	710	0.81
715	711	0.81
716	712	0.79
717	713	0.77
718	713	0.74
719	714	0.73
720	715	0.75
721	715	0.81
722	716	0.92

**Table D 7 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 8**

FS Scale	SS Scale	SEM
723	717	0.97
724	718	0.9
725	719	0.77
726	720	0.7
727	720	0.69
728	721	0.78
729	722	0.87
730	723	0.94
731	724	0.98
732	725	1.04
733	726	1.12
734	727	1.17
735	728	1.11
736	729	0.99
737	730	0.91
738	730	0.88
739	731	0.91
740	732	1.03
741	733	1.16
742	734	1.23
743	735	1.2
744	736	1.18
745	737	1.17
746	737	1.17
747	738	1.17
748	739	1.22
749	740	1.36
750	740	1.62
751	741	1.82
752	742	1.9
753	743	1.91
754	744	1.85
755	745	1.74
756	746	1.6
757	747	1.5
758	748	1.46

FS Scale	SS Scale	SEM
759	748	1.53
760	749	1.73
761	750	1.96
762	750	2.1
763	750	2.27
764	751	2.44
765	752	2.6
766	753	2.76
767	754	2.88
768	755	2.98
769	756	3.05
770	757	3.13
771	758	3.2
772	760	3.23
773	761	3.21
774	762	3.16
775	763	3.07
776	764	2.96
777	764	2.86
778	765	2.76
779	765	2.67
780	765	2.58
781	766	2.5
782	766	2.43
783	767	2.37
784	767	2.33
785	768	2.31
786	768	2.31
787	769	2.34
788	769	2.4
789	770	2.51
790	770	2.66
791	771	2.84
792	771	3.08
793	772	3.35
794	773	3.68

**Table D 7 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 8**

FS Scale	SS Scale	SEM
795	774	3.9
796	774	3.94
797	775	3.97
798	775	4
799	775	4.05
800	776	4.09
801	776	4.14
802	776	4.2
803	777	4.26
804	777	4.33
805	777	4.42
806	777	4.51
807	778	4.62
808	778	4.75
809	778	4.89
810	779	5.06
811	779	5.27
812	779	5.52
813	780	5.84
814	780	6.22
815	780	6.66
816	781	7.21
817	782	7.86
818	783	8.61
819	784	9.25
820	786	9.54
821	787	9.83
822	789	10.12
823	790	10.4
824	792	10.67
825	793	10.81
826	798	10.81
827	804	10.47
828	811	9.51
829	818	6.05
830	825	12.07

**Table D 8 Fall SAT/9 and Spring SAT/9 Linking Table—
Reading Grade 9**

FS Scale	SS Scale	SEM
501	503	0
502	503	0
503	503	0
504	503	0
505	503	0
506	503	0
507	503	0
508	503	0
509	503	0
510	503	0
511	503	0
512	503	0
513	503	0
514	503	0
515	503	0
516	503	0
517	503	0
518	503	0
519	503	0
520	503	0
521	503	0
522	503	0
523	503	0
524	503	0
525	503	0
526	503	0
527	503	0
528	503	0
529	503	0
530	503	0
531	503	0
532	503	0
533	503	0
534	503	0
535	503	0
536	503	0

FS Scale	SS Scale	SEM
537	503	0
538	503	0
539	503	0
540	503	0
541	551	24.47
542	552	25.07
543	554	25.69
544	555	7.49
545	556	8
546	557	8.7
547	559	6.61
548	560	7.7
549	561	8.58
550	562	9.7
551	564	10.73
552	565	11.69
553	566	12.43
554	567	13.18
555	569	13.59
556	570	13.97
557	571	14.38
558	572	14.82
559	574	15.08
560	575	15.35
561	576	15.65
562	577	15.69
563	578	15.72
564	580	15.77
565	581	15.84
566	582	15.87
567	583	15.85
568	585	15.82
569	586	15.78
570	587	15.75
571	588	15.72
572	590	15.7

**Table D 8 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 9**

FS Scale	SS Scale	SEM
573	591	15.69
574	592	15.66
575	593	15.63
576	595	15.62
577	596	15.62
578	597	15.62
579	598	15.64
580	600	15.66
581	601	15.68
582	602	15.72
583	603	13.98
584	604	13.08
585	604	12.49
586	605	12.01
587	606	11.71
588	607	11.57
589	607	10.62
590	608	10.03
591	609	9.47
592	610	8.92
593	611	8.47
594	612	7.84
595	613	7.21
596	615	6.79
597	616	6.38
598	617	6.08
599	618	5.3
600	618	4.46
601	619	4.01
602	619	3.69
603	620	3.5
604	621	3.24
605	622	2.9
606	623	2.66
607	623	2.5
608	623	2.38

FS Scale	SS Scale	SEM
609	623	2.22
610	624	2.03
611	624	1.89
612	624	1.76
613	625	1.66
614	625	1.41
615	626	1.24
616	626	1.17
617	626	1.15
618	627	1.13
619	627	1.13
620	628	1.17
621	628	1.25
622	629	1.37
623	630	1.46
624	631	1.57
625	632	1.59
626	634	1.49
627	634	1.41
628	635	1.38
629	635	1.43
630	635	1.56
631	636	1.7
632	637	1.83
633	638	1.9
634	639	1.88
635	640	1.76
636	640	1.64
637	641	1.52
638	642	1.33
639	642	1.22
640	643	1.2
641	643	1.22
642	644	1.21
643	645	1.22
644	645	1.23

**Table D 8 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 9**

FS Scale	SS Scale	SEM
645	646	1.24
646	647	1.22
647	647	1.23
648	648	1.24
649	649	1.28
650	649	1.28
651	650	1.25
652	651	1.2
653	652	1.15
654	653	1.13
655	654	1.15
656	654	1.18
657	655	1.17
658	656	1.13
659	656	1.07
660	657	1
661	658	0.88
662	658	0.85
663	659	0.9
664	660	0.94
665	660	0.93
666	661	0.9
667	662	0.84
668	663	0.74
669	663	0.73
670	664	0.8
671	665	0.87
672	666	0.84
673	667	0.83
674	668	0.89
675	669	0.98
676	669	0.95
677	670	0.87
678	671	0.82
679	672	0.8
680	672	0.77

FS Scale	SS Scale	SEM
681	673	0.79
682	674	0.85
683	675	0.92
684	676	0.89
685	677	0.8
686	678	0.68
687	678	0.69
688	679	0.87
689	680	0.95
690	681	0.82
691	682	0.76
692	683	0.76
693	684	0.77
694	685	0.74
695	686	0.72
696	687	0.7
697	688	0.72
698	689	0.75
699	690	0.79
700	690	0.77
701	691	0.75
702	692	0.76
703	693	0.8
704	694	0.85
705	695	0.87
706	696	0.9
707	697	0.93
708	698	0.97
709	699	0.97
710	700	0.84
711	701	0.68
712	701	0.63
713	702	0.7
714	703	0.77
715	704	0.78
716	704	0.77

**Table D 8 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 9**

FS Scale	SS Scale	SEM
717	705	0.77
718	706	0.79
719	707	0.81
720	708	0.8
721	709	0.79
722	710	0.81
723	711	0.84
724	712	0.86
725	713	0.92
726	713	1.11
727	715	1.26
728	716	1.19
729	717	1.05
730	718	0.93
731	718	0.87
732	719	0.85
733	720	0.85
734	720	0.88
735	721	0.97
736	721	1.09
737	722	1.21
738	723	1.27
739	724	1.27
740	725	1.29
741	726	1.37
742	727	1.54
743	729	1.66
744	730	1.66
745	731	1.6
746	732	1.54
747	733	1.52
748	734	1.56
749	735	1.68
750	736	1.84
751	737	1.86
752	737	1.88

FS Scale	SS Scale	SEM
753	738	1.92
754	739	1.95
755	740	2
756	741	2.07
757	742	2.17
758	743	2.33
759	744	2.5
760	745	2.51
761	746	2.51
762	746	2.51
763	747	2.5
764	748	2.45
765	749	2.38
766	750	2.26
767	751	2.16
768	752	2.09
769	753	2.13
770	754	2.33
771	754	2.38
772	754	2.43
773	755	2.49
774	755	2.58
775	755	2.66
776	755	2.75
777	756	2.84
778	757	2.93
779	757	3.03
780	758	3.14
781	758	3.24
782	759	3.36
783	759	3.49
784	760	3.65
785	761	3.68
786	761	3.73
787	761	3.78
788	762	3.84

**Table D 8 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Reading Grade 9**

FS Scale	SS Scale	SEM
789	762	3.92
790	763	4.04
791	764	4.19
792	764	4.39
793	765	4.66
794	765	4.98
795	766	5.41
796	766	6.02
797	767	6.73
798	767	7.62
799	768	8.83
800	770	10.08
801	772	11.39
802	774	12.88
803	776	14.47
804	778	16.09
805	781	17.93
806	781	18
807	782	18.1
808	783	18.23
809	784	18.39
810	785	18.55
811	785	18.67
812	787	18.74
813	789	18.82
814	791	18.87
815	793	18.94
816	795	18.97
817	797	19.05
818	800	18.94
819	803	18.76
820	806	18.56
821	809	18.27
822	812	17.97
823	815	17.63
824	818	17.28

FS Scale	SS Scale	SEM
825	820	16.93
826	822	16.59
827	824	16.29
828	826	16.14
829	828	16.2
830	830	18.2
831	831	17.3
832	832	16.43
833	833	15.58
834	834	14.77
835	835	13.84
836	836	13.43
837	837	12.29
838	838	11.19
839	839	10.15
840	840	9.01
841	841	7.98
842	853	7.93

**Table D 9 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 2**

FS Scale	SS Scale	SEM
437	392	0
438	392	0
439	392	0
440	392	0
441	392	0
442	392	0
443	392	0
444	392	0
445	392	0
446	392	0
447	392	0
448	392	0
449	392	0
450	392	0
451	392	0
452	392	0
453	392	0
454	440	23.18
455	440	23.7
456	441	24.25
457	441	24.82
458	442	25.4
459	443	26
460	443	26.62
461	444	27.25
462	444	27.84
463	445	28.46
464	445	29.07
465	446	29.67
466	447	30.26
467	447	22.68
468	448	23.21
469	448	23.65
470	449	15.24
471	449	15.45
472	450	15.69

FS Scale	SS Scale	SEM
473	451	15.98
474	451	12.9
475	452	13.11
476	452	13.35
477	453	13.64
478	453	13.89
479	454	14.17
480	454	14.43
481	455	14.7
482	456	14.97
483	456	15.23
484	457	15.24
485	458	15.28
486	459	15.29
487	460	15.26
488	462	15.22
489	463	15.19
490	464	15.16
491	465	15.11
492	466	15.02
493	467	14.93
494	468	14.84
495	469	14.77
496	470	14.71
497	471	14.65
498	472	14.61
499	475	14.12
500	481	13.42
501	486	12.97
502	490	12.64
503	490	12.13
504	490	11.58
505	490	11.24
506	491	8.7
507	491	6.94
508	492	5.64

**Table D 9 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 2**

FS Scale	SS Scale	SEM
509	492	4.72
510	493	4.1
511	494	3.73
512	494	3.6
513	495	3.56
514	495	3.45
515	496	3.4
516	496	3.37
517	496	3.36
518	497	3.36
519	497	3.37
520	498	3.38
521	498	3.33
522	498	3.29
523	498	3.27
524	499	3.08
525	501	2.69
526	503	2.4
527	503	2.19
528	504	1.74
529	505	1.52
530	505	1.44
531	506	1.42
532	506	1.42
533	507	1.4
534	507	1.4
535	507	1.38
536	508	1.36
537	508	1.37
538	509	1.38
539	509	1.38
540	510	1.37
541	510	1.36
542	511	1.18
543	512	0.94
544	514	0.97

FS Scale	SS Scale	SEM
545	515	1.02
546	516	1.06
547	517	1.14
548	518	1.24
549	518	1.13
550	518	1.08
551	518	1.12
552	519	1.04
553	520	1.03
554	521	1.07
555	521	1.07
556	522	1.07
557	522	1.07
558	524	1.09
559	525	1.09
560	526	1.05
561	526	1.04
562	527	1.03
563	527	0.99
564	529	0.98
565	530	0.97
566	530	0.96
567	530	1.01
568	530	1.15
569	531	1.12
570	534	0.95
571	535	0.94
572	535	0.95
573	535	1.01
574	536	1.01
575	538	0.98
576	540	0.97
577	542	0.98
578	543	0.98
579	544	1.01
580	545	1.07

**Table D 9 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 2**

FS Scale	SS Scale	SEM
581	546	1.12
582	547	1.12
583	547	1.12
584	547	1.13
585	548	1.05
586	550	1.02
587	553	1.19
588	553	0.99
589	553	1.09
590	553	1.34
591	554	1.22
592	555	1.16
593	557	1.13
594	558	1.09
595	560	1.02
596	561	0.99
597	562	0.97
598	563	0.94
599	563	0.9
600	563	0.85
601	563	0.96
602	565	1.09
603	567	1.48
604	571	2.18
605	571	1.64
606	571	1.27
607	571	1.31
608	572	1.52
609	575	1.59
610	578	1.75
611	580	1.66
612	580	1.37
613	580	1.24
614	580	1.23
615	580	1.25
616	580	1.4

FS Scale	SS Scale	SEM
617	580	1.66
618	582	1.45
619	585	1.51
620	588	1.89
621	588	1.39
622	588	1.17
623	588	1.39
624	588	1.95
625	591	1.68
626	594	1.64
627	597	1.95
628	597	1.62
629	597	1.37
630	597	1.25
631	597	1.24
632	597	1.25
633	597	1.33
634	597	1.49
635	597	1.75
636	598	1.87
637	600	1.92
638	602	1.81
639	604	1.67
640	606	1.6
641	608	1.58
642	610	1.6
643	611	1.57
644	611	1.55
645	612	1.52
646	613	1.5
647	614	1.47
648	614	1.46
649	615	1.46
650	616	1.5
651	617	1.58
652	618	1.67

**Table D 9 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 2**

FS Scale	SS Scale	SEM
653	619	1.76
654	620	1.82
655	621	1.87
656	622	1.98
657	622	2.01
658	623	2.07
659	623	2.15
660	624	2.28
661	624	2.46
662	625	2.67
663	625	2.92
664	626	3.19
665	627	3.45
666	628	3.68
667	630	3.9
668	631	4.09
669	632	4.26
670	633	4.42
671	634	4.6
672	636	4.77
673	637	4.93
674	639	5.1
675	641	5.26
676	642	5.41
677	644	5.57
678	645	5.55
679	646	5.53
680	647	5.51
681	647	5.51
682	648	5.51
683	649	5.51
684	650	5.51
685	651	5.51
686	652	5.51
687	654	5.51
688	655	5.49

FS Scale	SS Scale	SEM
689	656	5.45
690	657	5.4
691	658	5.34
692	660	5.28
693	661	5.24
694	662	5.22
695	663	5.25
696	664	5.36
697	665	5.57
698	667	5.89
699	668	6.33
700	669	6.86
701	671	7.43
702	674	8
703	676	8.04
704	679	8.01
705	681	7.86
706	683	7.54
707	686	7.04
708	688	6.44
709	690	5.76
710	693	5.03
711	696	4.38
712	699	3.78
713	702	2.88
714	705	1.14

**Table D 10 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 3**

FS Scale	SS Scale	SEM
470	480	23.7
471	480	23.7
472	480	23.7
473	480	23.7
474	480	23.7
475	480	23.7
476	480	23.7
477	480	23.7
478	480	23.7
479	480	23.7
480	480	23.7
481	480	23.7
482	480	23.7
483	480	23.7
484	480	23.7
485	480	23.7
486	480	23.7
487	480	23.7
488	480	23.7
489	480	23.7
490	480	23.7
491	480	23.7
492	480	18.79
493	480	18.73
494	480	18.69
495	480	18.68
496	480	18.69
497	481	12.75
498	481	12.24
499	481	11.86
500	481	11.61
501	481	11.42
502	481	11.28
503	482	11.18
504	482	11.1
505	482	11.01

FS Scale	SS Scale	SEM
506	482	10.92
507	482	10.85
508	483	10.78
509	483	10.71
510	483	10.64
511	483	10.58
512	483	10.52
513	483	10.47
514	484	10.41
515	484	10.36
516	484	10.32
517	484	10.27
518	485	9.76
519	488	9.02
520	490	8.55
521	492	8.3
522	494	8.16
523	495	8
524	497	7.86
525	499	7.74
526	501	7.64
527	502	7.54
528	504	7.49
529	505	5.75
530	507	4.56
531	508	4.01
532	510	3.7
533	511	3.58
534	513	3.52
535	514	3.43
536	516	3.34
537	516	3.27
538	517	2.97
539	519	2.73
540	520	2.56
541	521	2.43

**Table D 10 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 3**

FS Scale	SS Scale	SEM
542	521	2.35
543	522	2.28
544	523	2.23
545	524	2.18
546	525	1.95
547	526	1.81
548	527	1.74
549	528	1.72
550	529	1.72
551	529	1.64
552	529	1.6
553	529	1.68
554	531	1.47
555	533	1.52
556	535	1.65
557	536	1.57
558	536	1.4
559	536	1.37
560	536	1.44
561	537	1.26
562	538	1.17
563	539	1.15
564	540	1.14
565	540	1.11
566	540	1.13
567	541	1.11
568	542	1.05
569	543	1.08
570	544	1.11
571	544	1.12
572	544	1.16
573	545	1.22
574	547	1.24
575	549	1.17
576	549	1.15
577	549	1.16

FS Scale	SS Scale	SEM
578	549	1.19
579	550	1.05
580	552	0.93
581	553	0.88
582	553	0.87
583	553	0.87
584	554	0.9
585	556	1.08
586	558	1.08
587	558	1.03
588	558	1.25
589	559	1.19
590	560	0.96
591	562	0.93
592	562	0.88
593	562	0.88
594	562	0.92
595	564	0.89
596	566	0.96
597	566	0.95
598	566	0.99
599	567	1.21
600	568	1.17
601	570	1.18
602	571	1.25
603	571	1.22
604	571	1.43
605	573	1.42
606	575	1.24
607	577	1.35
608	577	1.25
609	577	1.38
610	577	1.69
611	580	1.36
612	583	1.21
613	584	1.09

**Table D 10 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 3**

FS Scale	SS Scale	SEM
614	584	1.04
615	584	1.25
616	587	1.2
617	590	1.49
618	592	1.52
619	592	1.46
620	592	1.51
621	593	1.53
622	596	1.47
623	598	1.36
624	599	1.33
625	599	1.25
626	599	1.6
627	601	1.67
628	604	1.17
629	607	1.45
630	607	1.25
631	607	1.17
632	607	1.32
633	610	1.38
634	613	1.43
635	615	1.59
636	615	1.26
637	615	1.09
638	615	1.08
639	616	1.15
640	617	1.21
641	618	1.22
642	619	1.17
643	621	1.15
644	622	1.18
645	623	1.27
646	624	1.31
647	625	1.29
648	627	1.19
649	628	1.06

FS Scale	SS Scale	SEM
650	629	1.01
651	630	1.06
652	631	1.29
653	632	1.59
654	633	1.65
655	635	1.61
656	636	1.51
657	637	1.43
658	638	1.38
659	639	1.35
660	640	1.31
661	641	1.28
662	642	1.28
663	642	1.25
664	643	1.23
665	644	1.21
666	644	1.21
667	645	1.23
668	645	1.27
669	646	1.32
670	647	1.37
671	647	1.42
672	648	1.45
673	649	1.49
674	649	1.48
675	650	1.5
676	650	1.53
677	651	1.59
678	652	1.65
679	653	1.69
680	654	1.72
681	655	1.73
682	655	1.77
683	656	1.85
684	657	1.98
685	658	2.14

**Table D 10 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 3**

FS Scale	SS Scale	SEM
686	660	2.29
687	661	2.38
688	662	2.39
689	662	2.36
690	663	2.32
691	663	2.28
692	664	2.24
693	664	2.2
694	665	2.16
695	666	2.14
696	666	2.11
697	667	2.09
698	667	2.08
699	668	2.07
700	668	2.07
701	669	2.1
702	670	2.17
703	670	2.3
704	671	2.48
705	671	2.74
706	672	3.05
707	672	3.4
708	674	3.79
709	675	4.2
710	676	4.31
711	677	4.41
712	678	4.51
713	678	4.6
714	679	4.67
715	680	4.75
716	681	4.83
717	681	4.91
718	682	5
719	683	5.09
720	685	5.18
721	686	5.27

FS Scale	SS Scale	SEM
722	687	5.36
723	688	5.45
724	690	5.58
725	691	5.74
726	692	5.95
727	694	6.28
728	695	6.69
729	697	7.19
730	700	7.74
731	704	8.28
732	708	8.85
733	711	9.63
734	714	10.17
735	715	9.9
736	716	9.6
737	718	9.25
738	721	8.89
739	724	8.52
740	727	8.14
741	729	7.59
742	732	6.81
743	735	5.64
744	738	3.83
745	752	6.44

**Table D 11 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 4**

FS Scale	SS Scale	SEM
479	449	0
480	449	0
481	449	0
482	449	0
483	449	0
484	449	0
485	449	0
486	449	0
487	449	0
488	449	0
489	449	0
490	449	0
491	449	0
492	449	0
493	449	0
494	449	0
495	449	0
496	449	0
497	449	0
498	449	0
499	449	0
500	449	0
501	482	7.62
502	489	9.07
503	496	11.09
504	504	12.63
505	511	13.51
506	515	13.95
507	516	13.31
508	518	13.14
509	520	13.01
510	521	12.78
511	523	12.57
512	524	12.3
513	526	12.05
514	527	11.78

FS Scale	SS Scale	SEM
515	529	11.49
516	530	11.2
517	531	10.89
518	531	10.59
519	531	10.29
520	531	10
521	532	9.71
522	532	9.42
523	532	9.13
524	532	8.85
525	533	8.57
526	533	8.32
527	533	8.08
528	534	6.05
529	535	4.65
530	536	3.69
531	536	3.02
532	536	2.59
533	536	2.32
534	536	2.14
535	537	2
536	537	1.92
537	537	1.86
538	537	1.82
539	538	1.53
540	539	1.43
541	539	1.4
542	540	1.39
543	541	1.41
544	541	1.44
545	542	1.49
546	542	1.54
547	542	1.6
548	543	1.57
549	544	1.54
550	545	1.54

**Table D 11 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 4**

FS Scale	SS Scale	SEM
551	546	1.55
552	546	1.59
553	547	1.64
554	548	1.69
555	548	1.72
556	549	1.71
557	550	1.71
558	551	1.69
559	552	1.67
560	552	1.66
561	553	1.65
562	554	1.61
563	555	1.53
564	556	1.43
565	556	1.33
566	557	1.25
567	557	1.21
568	558	1.2
569	558	1.16
570	559	1.16
571	560	1.18
572	561	1.21
573	561	1.23
574	562	1.23
575	563	1.2
576	563	1.17
577	564	1.15
578	564	1.12
579	565	1.08
580	565	1.03
581	566	0.92
582	566	0.86
583	567	0.83
584	567	0.84
585	568	0.88
586	568	0.92

FS Scale	SS Scale	SEM
587	569	0.97
588	570	1.01
589	570	1.03
590	571	1.05
591	572	1.06
592	573	1.06
593	573	1.08
594	574	1.13
595	575	1.21
596	576	1.28
597	577	1.33
598	578	1.4
599	579	1.45
600	580	1.47
601	581	1.45
602	582	1.39
603	583	1.33
604	584	1.28
605	585	1.24
606	585	1.21
607	586	1.16
608	587	1.1
609	588	1.06
610	589	1.01
611	590	0.97
612	591	0.91
613	592	0.84
614	592	0.76
615	593	0.72
616	593	0.73
617	594	0.78
618	595	0.88
619	595	0.98
620	596	1.02
621	597	1.01
622	598	0.98

**Table D 11 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 4**

FS Scale	SS Scale	SEM
623	599	0.94
624	599	0.93
625	600	0.94
626	601	0.97
627	601	1
628	602	1.01
629	603	1
630	604	0.99
631	605	1.01
632	605	1.06
633	606	1.16
634	607	1.23
635	608	1.22
636	610	1.12
637	610	1.02
638	611	0.98
639	612	0.95
640	613	0.9
641	614	0.88
642	615	0.86
643	615	0.85
644	616	0.86
645	617	0.86
646	618	0.84
647	618	0.78
648	619	0.74
649	620	0.72
650	620	0.72
651	621	0.73
652	622	0.76
653	622	0.79
654	623	0.79
655	624	0.8
656	624	0.84
657	625	0.9
658	626	0.94

FS Scale	SS Scale	SEM
659	627	0.96
660	628	0.95
661	628	0.93
662	629	0.89
663	630	0.87
664	631	0.86
665	631	0.86
666	632	0.88
667	633	0.88
668	634	0.87
669	635	0.84
670	636	0.83
671	636	0.81
672	637	0.79
673	637	0.77
674	638	0.78
675	638	0.84
676	639	0.97
677	640	1.11
678	641	1.2
679	642	1.2
680	643	1.13
681	643	1.03
682	644	0.95
683	644	0.89
684	645	0.85
685	645	0.82
686	645	0.81
687	646	0.82
688	646	0.85
689	647	0.9
690	647	0.98
691	648	1.06
692	648	1.13
693	649	1.17
694	650	1.19

**Table D 11 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 4**

FS Scale	SS Scale	SEM
695	650	1.23
696	651	1.26
697	651	1.27
698	651	1.29
699	652	1.32
700	653	1.34
701	653	1.36
702	654	1.38
703	654	1.39
704	655	1.4
705	655	1.43
706	656	1.47
707	656	1.54
708	657	1.62
709	657	1.7
710	658	1.78
711	659	1.83
712	660	1.87
713	660	1.9
714	661	1.94
715	662	1.98
716	663	2.03
717	664	2.07
718	664	2.06
719	665	2.04
720	665	2.02
721	665	1.99
722	666	1.96
723	666	1.92
724	667	1.89
725	667	1.85
726	668	1.81
727	668	1.77
728	669	1.75
729	669	1.72
730	670	1.69

FS Scale	SS Scale	SEM
731	670	1.67
732	671	1.65
733	671	1.63
734	672	1.63
735	672	1.65
736	673	1.71
737	673	1.82
738	674	1.99
739	674	2.21
740	675	2.5
741	676	2.82
742	677	3.2
743	678	3.45
744	680	3.81
745	681	4.37
746	682	5.16
747	685	6.03
748	689	6.86
749	694	7.33
750	700	7.33
751	705	7.13
752	713	6.67
753	721	5.48
754	750	9.17

**Table D 12 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 5**

FS Scale	SS Scale	SEM
497	450	0
498	450	0
499	450	0
500	450	0
501	450	0
502	450	0
503	450	0
504	450	0
505	450	0
506	450	0
507	450	0
508	450	0
509	450	0
510	450	0
511	450	0
512	450	0
513	450	0
514	450	0
515	450	0
516	450	0
517	450	0
518	450	0
519	489	6.36
520	495	8.36
521	500	10.62
522	506	12.46
523	511	13.56
524	517	14.26
525	521	12.57
526	522	12.61
527	522	12.69
528	522	12.48
529	523	12.31
530	523	12.1
531	524	11.92
532	524	11.73

FS Scale	SS Scale	SEM
533	525	11.48
534	525	11.26
535	526	11.07
536	526	10.9
537	526	10.72
538	527	10.55
539	527	10.39
540	527	10.24
541	528	10.1
542	528	9.97
543	528	9.85
544	529	9.75
545	529	9.66
546	529	9.03
547	530	8.55
548	530	8.21
549	531	7.98
550	531	7.77
551	532	7.57
552	533	7.43
553	534	7.33
554	535	7.27
555	537	7.22
556	538	7.02
557	538	6.74
558	539	6.54
559	540	6.37
560	540	6.23
561	541	6.13
562	542	6.02
563	543	5.9
564	544	5.8
565	546	5.06
566	548	4.43
567	549	3.8
568	550	3.3

**Table D 12 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 5**

FS Scale	SS Scale	SEM
569	551	2.86
570	551	2.52
571	551	2.25
572	552	1.92
573	552	1.65
574	553	1.57
575	553	1.59
576	554	1.66
577	554	1.76
578	555	1.85
579	556	1.92
580	557	1.91
581	559	1.88
582	560	1.85
583	561	1.86
584	562	1.91
585	563	1.96
586	564	1.92
587	565	1.89
588	566	1.86
589	567	1.83
590	567	1.8
591	568	1.72
592	569	1.6
593	570	1.56
594	571	1.57
595	572	1.61
596	573	1.64
597	574	1.58
598	575	1.52
599	576	1.45
600	577	1.4
601	577	1.37
602	578	1.32
603	579	1.28
604	580	1.26

FS Scale	SS Scale	SEM
605	580	1.26
606	581	1.3
607	582	1.32
608	583	1.31
609	584	1.3
610	585	1.29
611	586	1.23
612	587	1.12
613	588	1.04
614	589	1.05
615	590	1.14
616	591	1.24
617	592	1.26
618	593	1.2
619	594	1.17
620	595	1.15
621	596	1.14
622	597	1.12
623	598	1.09
624	599	1.1
625	600	1.18
626	601	1.32
627	602	1.35
628	604	1.15
629	605	0.97
630	606	0.95
631	607	0.99
632	608	1.02
633	609	1.05
634	611	1.11
635	612	1.14
636	613	1.13
637	614	1.11
638	615	1
639	616	0.86
640	616	0.77

**Table D 12 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 5**

FS Scale	SS Scale	SEM
641	617	0.75
642	618	0.76
643	618	0.77
644	619	0.77
645	620	0.78
646	621	0.79
647	621	0.82
648	622	0.87
649	623	0.87
650	624	0.89
651	625	0.94
652	625	1
653	626	1.03
654	627	1.03
655	628	0.97
656	629	0.93
657	630	0.9
658	631	0.86
659	632	0.79
660	632	0.74
661	633	0.71
662	634	0.7
663	634	0.69
664	635	0.69
665	636	0.7
666	637	0.71
667	637	0.72
668	638	0.72
669	639	0.7
670	640	0.69
671	640	0.68
672	641	0.67
673	642	0.7
674	643	0.8
675	644	0.88
676	645	0.88

FS Scale	SS Scale	SEM
677	645	0.88
678	646	0.89
679	647	0.91
680	647	0.94
681	648	0.96
682	649	0.98
683	650	1
684	650	1.05
685	651	1.07
686	652	1.09
687	653	1.09
688	653	1.08
689	654	1.05
690	655	1.04
691	656	1.04
692	657	1.05
693	657	1.05
694	658	1.06
695	659	1.05
696	660	1.04
697	660	1.03
698	661	1.04
699	661	1.05
700	662	1.06
701	662	1.06
702	663	1.06
703	664	1.06
704	664	1.09
705	665	1.16
706	665	1.31
707	666	1.51
708	667	1.69
709	668	1.74
710	668	1.78
711	669	1.79
712	670	1.78

**Table D 12 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 5**

FS Scale	SS Scale	SEM
713	670	1.77
714	671	1.76
715	671	1.75
716	672	1.75
717	672	1.75
718	673	1.76
719	674	1.77
720	674	1.78
721	675	1.78
722	676	1.78
723	676	1.78
724	677	1.8
725	678	1.85
726	678	1.95
727	679	2.07
728	680	2.21
729	681	2.35
730	681	2.36
731	682	2.37
732	682	2.37
733	683	2.37
734	683	2.36
735	684	2.36
736	684	2.35
737	685	2.36
738	685	2.39
739	686	2.44
740	686	2.52
741	687	2.61
742	687	2.71
743	688	2.82
744	689	2.92
745	690	3
746	691	3.08
747	692	3.16
748	693	3.28

FS Scale	SS Scale	SEM
749	694	3.49
750	695	3.85
751	696	4.37
752	697	5.05
753	699	5.9
754	701	6.59
755	703	6.97
756	705	7.39
757	707	7.87
758	709	8.4
759	712	8.89
760	717	9.34
761	723	9.45
762	729	9.1
763	736	8.3
764	745	6.83
765	755	6.46

**Table D 13 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 6**

FS Scale	SS Scale	SEM
505	457	0
506	457	0
507	457	0
508	457	0
509	457	0
510	457	0
511	457	0
512	457	0
513	457	0
514	457	0
515	457	0
516	457	0
517	457	0
518	496	13.84
519	499	14.99
520	503	16.34
521	506	17.85
522	509	19.41
523	512	20.86
524	516	22.24
525	519	23.32
526	522	24.37
527	525	25.09
528	529	25.66
529	532	26.21
530	535	26.79
531	538	27.3
532	538	17.57
533	539	16.94
534	539	16.41
535	540	15.99
536	541	15.57
537	541	14.72
538	542	14.33
539	542	13.96
540	543	13.63

FS Scale	SS Scale	SEM
541	544	13.35
542	544	13.11
543	545	12.89
544	546	12.7
545	546	11.73
546	547	10.91
547	548	10.23
548	549	9.65
549	550	9.15
550	551	8.67
551	551	8.25
552	552	7.88
553	552	7.56
554	552	7.29
555	553	7.06
556	553	6.84
557	554	6.63
558	554	6.42
559	555	6.22
560	555	6.03
561	555	5.85
562	555	5.68
563	555	5.52
564	556	4.28
565	557	3.63
566	558	3.24
567	559	3.01
568	560	2.86
569	560	2.77
570	561	2.7
571	561	2.66
572	562	2.63
573	563	2.48
574	563	2.38
575	564	2.31
576	564	2.27

**Table D 13 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 6**

FS Scale	SS Scale	SEM
577	564	2.25
578	565	2.26
579	565	2.29
580	565	2.36
581	566	2.37
582	567	2.41
583	568	2.45
584	569	2.5
585	570	2.51
586	571	2.49
587	571	2.47
588	573	2.29
589	574	2.23
590	575	2.24
591	576	2.29
592	577	2.36
593	579	2.44
594	580	2.45
595	581	2.37
596	582	2.3
597	584	2.23
598	585	2.16
599	586	2.07
600	587	1.9
601	588	1.69
602	589	1.56
603	591	1.53
604	592	1.52
605	593	1.46
606	594	1.37
607	594	1.28
608	594	1.22
609	595	1.21
610	595	1.24
611	596	1.33
612	597	1.44

FS Scale	SS Scale	SEM
613	598	1.55
614	599	1.6
615	600	1.59
616	601	1.57
617	602	1.51
618	603	1.47
619	604	1.46
620	605	1.43
621	606	1.35
622	607	1.23
623	608	1.14
624	608	1.09
625	609	1.06
626	610	1.05
627	610	1.04
628	611	1.03
629	612	1.04
630	613	1.08
631	613	1.13
632	614	1.14
633	615	1.06
634	616	0.99
635	617	0.96
636	618	0.95
637	619	0.94
638	619	0.94
639	620	0.95
640	621	0.99
641	622	1.08
642	623	1.16
643	624	1.17
644	625	1.11
645	626	1.07
646	627	1.05
647	628	1.01
648	629	0.98

**Table D 13 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 6**

FS Scale	SS Scale	SEM
649	630	0.93
650	631	0.9
651	632	0.88
652	633	0.88
653	634	0.87
654	634	0.84
655	635	0.76
656	636	0.72
657	637	0.71
658	637	0.72
659	638	0.75
660	639	0.82
661	640	0.86
662	641	0.86
663	642	0.86
664	643	0.88
665	644	0.91
666	646	0.92
667	646	0.87
668	647	0.85
669	648	0.83
670	649	0.79
671	650	0.75
672	651	0.75
673	652	0.75
674	652	0.74
675	653	0.74
676	654	0.75
677	655	0.75
678	656	0.76
679	657	0.81
680	658	0.93
681	658	0.99
682	659	1.01
683	660	1.01
684	661	1.01

FS Scale	SS Scale	SEM
685	662	1.03
686	663	1.06
687	664	1.08
688	665	1.08
689	666	1.04
690	667	1.01
691	667	0.99
692	668	0.98
693	669	0.97
694	670	1
695	671	1.15
696	673	1.34
697	674	1.45
698	675	1.43
699	675	1.41
700	676	1.4
701	677	1.41
702	678	1.42
703	679	1.42
704	679	1.42
705	680	1.42
706	681	1.45
707	682	1.52
708	683	1.61
709	683	1.63
710	684	1.63
711	685	1.62
712	686	1.6
713	686	1.6
714	687	1.61
715	688	1.66
716	688	1.76
717	690	1.87
718	691	1.97
719	692	2.03
720	693	2.08

**Table D 13 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 6**

FS Scale	SS Scale	SEM
721	694	2.18
722	695	2.4
723	696	2.58
724	697	2.63
725	697	2.68
726	698	2.73
727	699	2.77
728	699	2.79
729	700	2.81
730	701	2.85
731	702	2.88
732	702	2.94
733	703	3.02
734	704	3.14
735	704	3.29
736	705	3.46
737	707	3.64
738	708	3.81
739	709	3.96
740	711	4.12
741	712	4.33
742	713	4.6
743	715	4.94
744	717	5.44
745	718	5.45
746	718	5.46
747	719	5.48
748	719	5.49
749	720	5.51
750	720	5.54
751	721	5.57
752	722	5.61
753	722	5.66
754	723	5.73
755	723	5.82
756	724	5.95

FS Scale	SS Scale	SEM
757	724	6.1
758	725	6.29
759	725	6.51
760	726	6.78
761	726	7.09
762	727	7.44
763	727	7.84
764	728	8.27
765	730	8.75
766	732	9.3
767	734	9.98
768	736	10.86
769	738	12.59
770	740	12.37
771	741	12.2
772	742	12.02
773	743	11.77
774	745	11.43
775	746	11.18
776	747	10.59
777	749	10.02
778	755	9.25
779	761	7.94
780	767	6.6
781	784	9.34

**Table D 14 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 7**

FS Scale	SS Scale	SEM
514	462	0
515	462	0
516	462	0
517	462	0
518	462	0
519	462	0
520	462	0
521	462	0
522	462	0
523	462	0
524	462	0
525	462	0
526	462	0
527	462	0
528	462	0
529	462	0
530	462	0
531	462	0
532	462	0
533	462	0
534	462	0
535	462	0
536	503	14.56
537	506	15.63
538	509	16.83
539	512	18.12
540	515	19.42
541	518	20.63
542	521	10.75
543	524	11.2
544	527	12.05
545	530	12.3
546	533	12.5
547	536	12.7
548	539	12.93
549	540	12.97

FS Scale	SS Scale	SEM
550	540	12.78
551	541	12.61
552	541	12.47
553	541	12.33
554	541	12.13
555	541	11.94
556	542	11.75
557	542	11.57
558	542	11.4
559	542	11.26
560	542	11.14
561	543	11.04
562	543	10.97
563	545	8.18
564	546	6.6
565	547	5.71
566	547	5.24
567	548	5.03
568	549	4.94
569	550	5.01
570	551	5.14
571	551	5.28
572	552	5.42
573	553	5.54
574	555	5.18
575	559	4.88
576	561	4.55
577	562	4.17
578	563	3.77
579	564	3.41
580	565	3.14
581	565	2.91
582	566	2.73
583	567	2.41
584	567	2.14
585	568	1.93

**Table D 14 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 7**

FS Scale	SS Scale	SEM
586	568	1.79
587	569	1.7
588	569	1.64
589	570	1.6
590	570	1.54
591	571	1.46
592	571	1.4
593	572	1.37
594	572	1.36
595	573	1.39
596	573	1.45
597	574	1.56
598	575	1.74
599	575	1.94
600	576	2.1
601	578	2.18
602	579	2.17
603	580	2.15
604	581	2.06
605	582	2.16
606	584	2.32
607	585	2.37
608	587	2.32
609	588	2.22
610	590	2.02
611	591	1.86
612	592	1.76
613	593	1.69
614	594	1.67
615	595	1.7
616	596	1.69
617	596	1.69
618	597	1.69
619	598	1.7
620	599	1.73
621	600	1.74

FS Scale	SS Scale	SEM
622	601	1.79
623	602	1.86
624	603	1.92
625	604	1.91
626	605	1.88
627	607	1.82
628	608	1.8
629	610	1.76
630	611	1.66
631	612	1.55
632	614	1.43
633	615	1.33
634	616	1.33
635	617	1.4
636	618	1.46
637	619	1.44
638	620	1.33
639	621	1.25
640	622	1.22
641	622	1.21
642	623	1.21
643	624	1.18
644	625	1.14
645	626	1.11
646	627	1.1
647	627	1.08
648	629	1.02
649	629	0.98
650	630	1
651	631	1.09
652	632	1.22
653	634	1.25
654	635	1.15
655	636	1.06
656	637	1.02
657	638	0.99

**Table D 14 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 7**

FS Scale	SS Scale	SEM
658	639	0.95
659	640	0.93
660	641	0.94
661	642	0.97
662	643	1.01
663	644	1.04
664	645	1.03
665	646	1.04
666	647	1.03
667	648	1
668	649	0.98
669	650	0.99
670	652	0.97
671	653	0.96
672	654	0.96
673	655	0.95
674	657	0.96
675	658	0.98
676	659	0.95
677	660	0.86
678	661	0.79
679	662	0.78
680	663	0.81
681	664	0.93
682	665	1.05
683	666	1.04
684	668	1.02
685	669	1
686	670	0.99
687	671	0.99
688	672	1.06
689	673	1.18
690	674	1.19
691	675	1.17
692	676	1.14
693	678	1.1

FS Scale	SS Scale	SEM
694	679	1.06
695	679	1.04
696	680	1.03
697	681	1.04
698	682	1.07
699	683	1.13
700	684	1.22
701	685	1.27
702	686	1.28
703	687	1.26
704	689	1.25
705	690	1.26
706	691	1.28
707	692	1.29
708	693	1.26
709	694	1.25
710	695	1.24
711	695	1.28
712	696	1.35
713	697	1.44
714	698	1.53
715	699	1.58
716	700	1.6
717	701	1.63
718	702	1.7
719	703	1.73
720	704	1.8
721	704	1.9
722	705	2.01
723	706	2.12
724	707	2.18
725	708	2.2
726	709	2.19
727	710	2.18
728	712	2.19
729	713	2.27

**Table D 14 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 7**

FS Scale	SS Scale	SEM
730	714	2.45
731	715	2.73
732	716	3.03
733	717	3.08
734	718	3.12
735	719	3.13
736	720	3.11
737	720	3.08
738	721	3.05
739	722	3.01
740	723	2.97
741	724	2.95
742	724	2.96
743	725	3.01
744	726	3.13
745	727	3.31
746	728	3.54
747	728	3.81
748	730	4.1
749	732	4.35
750	734	4.56
751	736	4.7
752	737	4.8
753	739	4.95
754	740	5.1
755	741	5.08
756	742	5.07
757	742	5.08
758	743	5.11
759	743	5.19
760	744	5.33
761	744	5.53
762	745	5.81
763	745	6.13
764	746	6.54
765	747	7.01

FS Scale	SS Scale	SEM
766	747	7.52
767	748	8.06
768	748	8.62
769	750	9.14
770	753	9.58
771	756	9.92
772	760	10.18
773	763	10.28
774	766	10.15
775	769	9.87
776	772	9.39
777	774	8.81
778	776	8.17
779	778	7.63
780	779	7.13
781	779	6.65
782	780	6.09
783	780	5.58
784	781	5.09
785	781	4.61
786	782	4.11
787	782	3.61
788	783	3.03
789	783	2.48
790	784	2.06
791	784	1.65

**Table D 15 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 8**

FS Scale	SS Scale	SEM
520	528	32.76
521	528	32.76
522	528	32.76
523	528	32.76
524	528	32.76
525	528	32.76
526	528	32.76
527	528	32.76
528	528	32.76
529	528	32.76
530	528	32.76
531	528	32.76
532	528	32.76
533	528	32.76
534	528	32.76
535	528	32.76
536	528	32.76
537	528	32.76
538	528	32.76
539	528	32.76
540	528	32.76
541	528	32.76
542	529	28.27
543	530	28.11
544	531	27.99
545	532	27.89
546	534	27.83
547	535	27.79
548	536	23.91
549	537	23.56
550	538	23.26
551	540	22.98
552	541	21.74
553	542	21.42
554	543	21.15
555	544	20.88

FS Scale	SS Scale	SEM
556	546	20.57
557	547	20.32
558	548	20.07
559	549	19.84
560	550	19.62
561	552	19.4
562	553	19.22
563	554	19.05
564	555	18.85
565	556	18.68
566	558	18.52
567	559	18.36
568	560	18.22
569	560	17.55
570	560	17.05
571	561	16.68
572	561	16.37
573	561	16.1
574	561	15.77
575	562	15.47
576	562	15.19
577	562	14.93
578	562	14.74
579	563	13.96
580	563	12.81
581	564	11.91
582	564	11.15
583	564	10.55
584	565	10.01
585	565	9.55
586	566	9.15
587	566	8.83
588	567	7.33
589	568	6.33
590	568	5.63
591	569	5.09

**Table D 15 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 8**

FS Scale	SS Scale	SEM
592	570	4.59
593	570	4.12
594	571	3.82
595	571	3.59
596	572	2.71
597	573	2.39
598	574	2.28
599	575	2.31
600	575	2.4
601	576	2.53
602	578	2.64
603	579	2.59
604	580	2.5
605	581	2.42
606	582	2.4
607	583	2.43
608	584	2.52
609	586	2.52
610	588	2.41
611	590	2.14
612	592	1.88
613	593	1.75
614	594	1.76
615	595	1.73
616	596	1.72
617	597	1.74
618	598	1.8
619	599	1.89
620	600	1.98
621	601	1.96
622	603	1.85
623	604	1.69
624	605	1.56
625	606	1.5
626	607	1.49
627	607	1.49

FS Scale	SS Scale	SEM
628	608	1.51
629	609	1.53
630	610	1.56
631	611	1.6
632	612	1.57
633	613	1.55
634	614	1.53
635	615	1.48
636	616	1.43
637	617	1.37
638	618	1.31
639	619	1.31
640	620	1.3
641	621	1.23
642	622	1.11
643	623	1.03
644	624	1.07
645	625	1.19
646	626	1.31
647	627	1.35
648	628	1.33
649	629	1.3
650	630	1.23
651	631	1.16
652	632	1.12
653	633	1.12
654	634	1.16
655	635	1.13
656	637	1.02
657	637	0.93
658	638	0.88
659	639	0.92
660	640	1
661	641	1.04
662	642	1.04
663	643	1.04

**Table D 15 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 8**

FS Scale	SS Scale	SEM
664	644	1.03
665	645	1.05
666	646	1.11
667	647	1.13
668	648	1.1
669	649	1.01
670	650	0.97
671	651	0.95
672	652	0.92
673	653	0.91
674	654	0.92
675	655	0.87
676	656	0.82
677	656	0.78
678	657	0.78
679	658	0.85
680	659	0.99
681	660	1.06
682	661	1.01
683	663	0.95
684	664	0.94
685	665	0.93
686	666	0.93
687	667	0.93
688	668	0.9
689	669	0.88
690	670	0.88
691	671	0.89
692	672	0.92
693	673	0.96
694	674	1.07
695	675	1.17
696	676	1.24
697	677	1.21
698	678	1.1
699	679	0.99

FS Scale	SS Scale	SEM
700	680	0.93
701	681	0.93
702	682	0.95
703	683	0.97
704	684	0.99
705	685	1.01
706	686	1.02
707	686	1.02
708	687	1.05
709	688	1.17
710	689	1.33
711	691	1.45
712	692	1.47
713	693	1.44
714	694	1.43
715	694	1.42
716	695	1.42
717	696	1.42
718	697	1.42
719	698	1.44
720	699	1.49
721	700	1.58
722	701	1.69
723	702	1.75
724	703	1.75
725	703	1.74
726	704	1.74
727	705	1.76
728	706	1.83
729	706	1.96
730	707	2.13
731	709	2.3
732	710	2.41
733	711	2.47
734	713	2.52
735	714	2.61

**Table D 15 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 8**

FS Scale	SS Scale	SEM
736	715	2.75
737	717	2.92
738	718	2.94
739	719	2.95
740	719	2.96
741	720	2.97
742	721	2.97
743	722	2.99
744	722	3.04
745	723	3.12
746	724	3.25
747	724	3.42
748	725	3.63
749	726	3.85
750	728	4.09
751	729	4.32
752	731	4.54
753	732	4.78
754	733	5.08
755	735	5.45
756	736	5.9
757	738	6.43
758	740	7.02
759	741	7.09
760	742	7.16
761	743	7.21
762	744	7.26
763	746	7.3
764	747	7.33
765	748	7.32
766	749	7.3
767	750	7.28
768	751	7.24
769	752	7.19
770	753	7.12
771	754	7.06

FS Scale	SS Scale	SEM
772	756	7.01
773	757	6.97
774	758	6.93
775	759	6.91
776	761	6.89
777	762	6.89
778	764	6.89
779	766	6.87
780	768	6.85
781	770	6.81
782	772	6.73
783	773	6.78
784	774	6.38
785	775	5.99
786	776	5.55
787	777	5.07
788	777	4.57
789	778	4.14
790	779	3.58
791	780	3.02
792	781	2.47
793	781	1.92
794	782	1.39
795	794	5.11

**Table D 16 Fall SAT/9 and Spring SAT/9 Linking Table—
Language Grade 9**

FS Scale	SS Scale	SEM
532	485	0
533	485	0
534	485	0
535	485	0
536	485	0
537	485	0
538	485	0
539	485	0
540	485	0
541	485	0
542	485	0
543	485	0
544	485	0
545	485	0
546	485	0
547	485	0
548	485	0
549	485	0
550	485	0
551	485	0
552	485	0
553	485	0
554	518	7.07
555	525	8.91
556	532	11.32
557	539	12.95
558	546	13.76
559	549	14.13
560	551	13.44
561	552	13.3
562	554	13.19
563	556	12.92
564	557	12.66
565	559	12.35
566	560	12.05
567	562	11.75

FS Scale	SS Scale	SEM
568	563	11.44
569	565	11.16
570	565	10.86
571	566	10.59
572	566	10.32
573	566	10.07
574	566	9.81
575	567	9.56
576	567	9.3
577	567	9.05
578	567	8.8
579	568	8.58
580	568	8.37
581	569	7.07
582	570	6.18
583	570	5.64
584	571	5.21
585	572	4.88
586	573	4.66
587	573	4.51
588	573	4.41
589	574	4.35
590	574	4.31
591	575	4.26
592	575	4.02
593	576	3.88
594	577	3.81
595	578	3.75
596	578	3.7
597	579	3.65
598	580	3.59
599	581	3.53
600	582	3.44
601	583	2.9
602	584	2.43
603	585	2.03

**Table D 16 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 9**

FS Scale	SS Scale	SEM
604	586	1.77
605	586	1.61
606	587	1.5
607	587	1.46
608	588	1.41
609	588	1.37
610	589	1.36
611	589	1.35
612	590	1.36
613	591	1.39
614	591	1.42
615	592	1.46
616	593	1.51
617	593	1.62
618	595	1.73
619	596	1.82
620	597	1.85
621	598	1.84
622	599	1.75
623	600	1.57
624	601	1.37
625	601	1.21
626	602	1.12
627	602	1.09
628	603	1.08
629	604	1.06
630	605	1.05
631	606	1.06
632	607	1.07
633	607	1.1
634	608	1.1
635	609	1.09
636	609	1.07
637	610	1.07
638	611	1.08
639	611	1.1

FS Scale	SS Scale	SEM
640	612	1.1
641	613	1.1
642	614	1.11
643	615	1.08
644	616	1.04
645	617	0.99
646	618	0.94
647	619	0.93
648	620	0.96
649	621	1.04
650	622	1.11
651	623	1.11
652	624	1.03
653	625	0.93
654	626	0.88
655	626	0.89
656	627	0.91
657	628	0.98
658	629	1.02
659	630	1.03
660	631	1.04
661	632	1.04
662	633	1.02
663	634	1.01
664	636	0.97
665	637	0.87
666	637	0.76
667	638	0.72
668	639	0.74
669	640	0.8
670	641	0.83
671	642	0.79
672	643	0.7
673	644	0.65
674	644	0.65
675	645	0.68

**Table D 16 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 9**

FS Scale	SS Scale	SEM
676	646	0.74
677	647	0.79
678	648	0.82
679	649	0.92
680	650	1.02
681	651	1.01
682	652	0.98
683	653	0.93
684	654	0.92
685	655	0.94
686	656	0.95
687	657	0.91
688	658	0.89
689	659	0.86
690	660	0.89
691	661	0.98
692	662	1.07
693	663	1.11
694	664	1.16
695	665	1.16
696	666	1.15
697	667	1.16
698	668	1.19
699	670	1.22
700	671	1.22
701	672	1.21
702	673	1.18
703	674	1.13
704	675	1.09
705	676	1.08
706	676	1.11
707	677	1.23
708	678	1.38
709	679	1.46
710	680	1.49
711	681	1.48

FS Scale	SS Scale	SEM
712	682	1.45
713	683	1.43
714	684	1.43
715	685	1.46
716	686	1.47
717	687	1.47
718	688	1.48
719	689	1.48
720	690	1.51
721	691	1.59
722	692	1.73
723	693	1.89
724	695	2.02
725	696	2.16
726	697	2.17
727	698	2.19
728	699	2.22
729	699	2.26
730	700	2.32
731	701	2.4
732	702	2.51
733	703	2.64
734	704	2.73
735	706	2.78
736	707	2.76
737	708	2.67
738	708	2.59
739	709	2.5
740	710	2.43
741	710	2.36
742	711	2.32
743	712	2.31
744	712	2.34
745	713	2.43
746	714	2.59
747	714	2.83

**Table D 16 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Language Grade 9**

FS Scale	SS Scale	SEM
748	715	3.15
749	717	3.59
750	718	3.86
751	718	3.88
752	719	3.91
753	719	3.94
754	719	3.97
755	720	4
756	720	4.04
757	720	4.09
758	721	4.14
759	721	4.21
760	722	4.29
761	722	4.38
762	722	4.48
763	723	4.58
764	724	4.71
765	725	4.86
766	726	5.02
767	727	5.2
768	728	5.38
769	729	5.6
770	730	5.84
771	730	6.19
772	731	6.2
773	731	6.24
774	732	6.28
775	732	6.32
776	733	6.36
777	733	6.4
778	734	6.45
779	735	6.52
780	735	6.61
781	736	6.72
782	737	6.86
783	737	7

FS Scale	SS Scale	SEM
784	738	7.17
785	739	7.38
786	739	7.64
787	740	7.91
788	741	8.22
789	742	8.61
790	742	9.08
791	743	9.62
792	744	10.25
793	744	10.93
794	745	11.73
795	746	12.7
796	747	13.69
797	750	13.39
798	753	13.13
799	755	12.81
800	758	12.4
801	761	11.93
802	763	11.3
803	766	10.55
804	772	9.57
805	778	8.34
806	784	7.04
807	791	9.6

**Table D 17 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 2**

FS Scale	SS Scale	SEM
387	368	0
388	368	0
389	368	0
390	368	0
391	368	0
392	368	0
393	368	0
394	368	0
395	368	0
396	368	0
397	368	0
398	368	0
399	368	0
400	368	0
401	368	0
402	368	0
403	368	0
404	368	0
405	368	0
406	368	0
407	368	0
408	368	0
409	368	0
410	368	0
411	368	0
412	368	0
413	368	0
414	368	0
415	368	0
416	368	0
417	368	0
418	368	0
419	368	0
420	368	0
421	368	0
422	368	0

FS Scale	SS Scale	SEM
423	368	0
424	368	0
425	368	0
426	368	0
427	368	0
428	368	0
429	368	0
430	368	0
431	368	0
432	381	7.71
433	381	7.97
434	381	6.69
435	381	6.93
436	382	7.18
437	382	6.09
438	382	6.36
439	382	5.63
440	382	5.93
441	383	6.26
442	383	6.61
443	383	6.97
444	383	7.34
445	384	7.71
446	384	8.09
447	384	8.42
448	384	8.74
449	384	9.07
450	385	9.4
451	385	9.73
452	385	10.05
453	385	10.37
454	386	10.69
455	386	11.01
456	386	11.33
457	386	11.63
458	386	11.93

**Table D 17 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 2**

FS Scale	SS Scale	SEM
459	387	12.24
460	387	12.56
461	387	12.89
462	387	13.21
463	388	13.51
464	388	13.81
465	388	14.12
466	388	14.42
467	388	14.72
468	389	15.02
469	389	15.31
470	389	15.6
471	389	15.87
472	390	16.15
473	390	16.43
474	390	16.71
475	390	16.99
476	390	17.28
477	391	17.56
478	392	17.95
479	394	18.6
480	396	19.49
481	398	20.44
482	400	21.41
483	402	22.37
484	404	23.56
485	406	24.65
486	408	25.9
487	410	27.16
488	418	27.73
489	430	28.3
490	449	28.42
491	461	27.96
492	469	26.09
493	477	22.83
494	481	19.9

FS Scale	SS Scale	SEM
495	483	17.54
496	484	15.21
497	485	13.39
498	485	11.68
499	486	10.42
500	487	9.4
501	487	7.31
502	488	6.1
503	488	5.34
504	489	4.94
505	490	3.57
506	491	3.16
507	493	3.05
508	493	2.92
509	494	2.76
510	495	2.67
511	496	2.63
512	496	2.47
513	497	2.39
514	497	2.34
515	498	2.32
516	500	2.09
517	502	1.93
518	502	1.93
519	502	1.96
520	503	1.99
521	504	2.12
522	506	2.26
523	507	2.21
524	509	2.08
525	510	1.91
526	510	1.66
527	511	1.51
528	512	1.48
529	513	1.46
530	515	1.51

**Table D 17 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 2**

FS Scale	SS Scale	SEM
531	515	1.54
532	516	1.54
533	516	1.6
534	517	1.71
535	517	1.73
536	518	1.77
537	520	1.83
538	522	1.7
539	522	1.68
540	524	1.54
541	527	1.55
542	527	1.48
543	528	1.38
544	530	1.17
545	531	1.1
546	531	1.11
547	531	1.07
548	533	1.19
549	533	1.22
550	534	1.31
551	535	1.44
552	537	1.45
553	538	1.32
554	539	1.26
555	540	1.31
556	540	1.52
557	541	1.55
558	544	1.15
559	545	1.1
560	545	0.93
561	546	0.88
562	547	1.02
563	547	1.05
564	548	1.16
565	551	1.12
566	551	1.02

FS Scale	SS Scale	SEM
567	551	1.11
568	553	1.2
569	555	1.24
570	555	1.24
571	557	1.16
572	559	1.24
573	559	1.11
574	559	1.35
575	562	1.54
576	564	1.56
577	564	1.39
578	565	1.34
579	566	1.21
580	568	1.13
581	569	1.17
582	569	1.22
583	569	1.59
584	571	1.61
585	574	1.39
586	574	1.05
587	574	1.17
588	577	1.02
589	578	1.17
590	578	1.1
591	578	1.11
592	579	1.18
593	580	1.13
594	581	1.04
595	582	1.01
596	583	1
597	584	0.99
598	585	1
599	586	1.04
600	587	1.1
601	588	1.17
602	589	1.18

**Table D 17 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 2**

FS Scale	SS Scale	SEM
603	590	1.19
604	591	1.2
605	592	1.2
606	594	1.2
607	595	1.22
608	596	1.26
609	597	1.37
610	599	1.45
611	601	1.5
612	601	1.48
613	602	1.43
614	602	1.55
615	603	1.72
616	608	2.27
617	610	2.35
618	610	1.79
619	610	1.5
620	610	1.42
621	610	1.53
622	610	2.05
623	610	2.79
624	614	2.3
625	619	2.46
626	621	2.39
627	621	1.73
628	621	1.3
629	621	1.29
630	621	1.4
631	622	1.43
632	623	1.5
633	624	1.56
634	625	1.59
635	626	1.6
636	627	1.61
637	628	1.65
638	629	1.7

FS Scale	SS Scale	SEM
639	631	1.75
640	631	1.75
641	632	1.76
642	633	1.79
643	634	1.85
644	635	1.93
645	636	1.99
646	637	2.03
647	638	2.04
648	639	2.04
649	640	2.02
650	641	2.01
651	642	2.02
652	643	2.03
653	644	2.02
654	645	1.98
655	646	1.94
656	646	1.91
657	647	1.89
658	647	1.9
659	648	1.94
660	648	2.01
661	649	2.11
662	650	2.22
663	651	2.34
664	652	2.43
665	653	2.49
666	654	2.53
667	655	2.55
668	656	2.58
669	657	2.68
670	658	2.9
671	659	3.25
672	660	3.71
673	662	4.19
674	663	4.31

**Table D 17 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 2**

FS Scale	SS Scale	SEM
675	664	4.41
676	665	4.5
677	666	4.57
678	667	4.63
679	667	4.67
680	668	4.68
681	669	4.7
682	670	4.71
683	671	4.75
684	672	4.81
685	673	4.88
686	674	4.96
687	676	5.05
688	677	5.13
689	679	5.21
690	680	5.26
691	682	5.27
692	683	5.25
693	685	5.24
694	686	5.24
695	688	5.3
696	689	5.48
697	691	5.82
698	692	6.11
699	693	6.23
700	694	6.44
701	697	6.7
702	700	6.92
703	704	7.01
704	707	6.86
705	711	6.34
706	714	5.54
707	718	4.66
708	724	4.33
709	731	3.27

**Table D 18 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 3**

FS Scale	SS Scale	SEM
422	399	0
423	399	0
424	399	0
425	399	0
426	399	0
427	399	0
428	399	0
429	399	0
430	399	0
431	399	0
432	399	0
433	399	0
434	399	0
435	399	0
436	399	0
437	399	0
438	399	0
439	399	0
440	399	0
441	399	0
442	399	0
443	399	0
444	399	0
445	399	0
446	399	0
447	399	0
448	399	0
449	431	19.32
450	432	20.11
451	433	20.92
452	434	21.76
453	435	22.62
454	437	23.51
455	438	24.42
456	439	25.34
457	440	19.93

FS Scale	SS Scale	SEM
458	441	20.66
459	442	21.4
460	444	22.1
461	445	22.75
462	446	23.42
463	447	24.08
464	448	24.73
465	449	25.39
466	451	18.18
467	452	18.09
468	453	18.2
469	454	18.4
470	455	18.8
471	457	19.19
472	458	19.44
473	459	19.67
474	460	19.89
475	461	20.12
476	462	20.33
477	464	20.55
478	465	20.74
479	466	20.9
480	467	21.03
481	468	21.16
482	469	21.28
483	471	21.28
484	472	21.18
485	473	21.08
486	475	21.01
487	476	20.93
488	477	20.88
489	479	20.8
490	480	20.72
491	481	20.65
492	482	20.28
493	484	19.77

**Table D 18 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 3**

FS Scale	SS Scale	SEM
494	485	19.46
495	486	19.21
496	488	18.99
497	489	18.8
498	490	18.62
499	492	18.46
500	493	18.32
501	502	15.04
502	508	12.73
503	509	11.03
504	511	9.63
505	512	8.54
506	512	7.67
507	512	7.02
508	512	6.54
509	513	6.16
510	513	5.86
511	513	5.66
512	514	4.99
513	514	4.09
514	515	3.6
515	515	3.3
516	515	3.17
517	516	3.03
518	516	2.93
519	517	2.94
520	517	3.02
521	518	3.13
522	519	3.17
523	520	3.27
524	520	3.36
525	521	3.45
526	522	3.43
527	524	3.41
528	525	3.44
529	526	3.45

FS Scale	SS Scale	SEM
530	527	3.25
531	529	3.04
532	530	2.8
533	530	2.59
534	530	2.41
535	531	2.02
536	532	1.6
537	533	1.45
538	534	1.33
539	535	1.28
540	535	1.27
541	536	1.25
542	537	1.22
543	537	1.24
544	537	1.24
545	537	1.29
546	538	1.3
547	539	1.45
548	540	1.6
549	541	1.65
550	542	1.64
551	543	1.58
552	544	1.44
553	545	1.37
554	546	1.35
555	547	1.26
556	548	1.15
557	549	1.08
558	549	1.05
559	550	1
560	551	1.04
561	551	1.03
562	551	1.11
563	553	1.06
564	554	1.09
565	554	1.14

**Table D 18 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 3**

FS Scale	SS Scale	SEM
566	555	1.21
567	558	1.25
568	558	1.25
569	558	1.27
570	560	1.29
571	560	1.29
572	560	1.31
573	561	1.23
574	563	1.11
575	563	1.14
576	564	1.2
577	566	1.1
578	567	1.06
579	568	1.13
580	570	1.2
581	571	1.16
582	571	1.26
583	572	1.1
584	574	1.07
585	574	1.09
586	575	1.2
587	578	1.27
588	578	1.22
589	579	1.15
590	580	1.14
591	581	1.2
592	581	1.23
593	583	1.23
594	585	1.23
595	585	1.14
596	585	1.16
597	586	1.03
598	588	0.97
599	589	0.9
600	591	0.87
601	592	0.94

FS Scale	SS Scale	SEM
602	592	0.93
603	592	0.96
604	593	1.01
605	594	1.07
606	595	1.14
607	595	1.21
608	595	1.44
609	596	1.43
610	599	1.25
611	599	1.22
612	599	1.27
613	602	1.35
614	604	1.32
615	604	1.08
616	604	1.04
617	605	0.94
618	606	0.9
619	607	0.98
620	608	1.21
621	609	1.39
622	611	1.32
623	612	1.23
624	612	1.13
625	612	1.11
626	613	1.09
627	615	1.14
628	616	1.14
629	616	1.05
630	616	1.04
631	617	1
632	618	0.96
633	619	0.93
634	620	0.9
635	621	0.9
636	622	0.99
637	623	1.26

**Table D 18 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 3**

FS Scale	SS Scale	SEM
638	625	1.69
639	626	1.81
640	626	1.66
641	626	1.6
642	626	1.6
643	626	1.76
644	626	2.04
645	629	1.54
646	632	1.4
647	633	1.34
648	633	1.14
649	633	1.14
650	633	1.29
651	634	1.27
652	635	1.19
653	636	1.1
654	637	1.05
655	638	1.06
656	639	1.16
657	640	1.22
658	641	1.28
659	642	1.3
660	643	1.29
661	644	1.28
662	645	1.29
663	646	1.29
664	647	1.3
665	649	1.32
666	649	1.31
667	650	1.3
668	651	1.29
669	652	1.28
670	652	1.29
671	653	1.31
672	654	1.35
673	655	1.39

FS Scale	SS Scale	SEM
674	656	1.41
675	657	1.42
676	658	1.43
677	658	1.38
678	659	1.35
679	660	1.32
680	660	1.3
681	661	1.28
682	662	1.27
683	663	1.29
684	663	1.35
685	664	1.44
686	665	1.55
687	666	1.62
688	667	1.67
689	668	1.71
690	669	1.79
691	670	1.88
692	670	1.91
693	671	1.96
694	672	2
695	672	2.04
696	673	2.07
697	674	2.08
698	674	2.08
699	675	2.07
700	676	2.05
701	676	2.03
702	677	2.02
703	677	2.02
704	678	2.02
705	679	2.03
706	680	2.05
707	680	2.06
708	681	2.08
709	682	2.09

**Table D 18 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 3**

FS Scale	SS Scale	SEM
710	683	2.11
711	683	2.15
712	684	2.24
713	685	2.27
714	685	2.32
715	685	2.39
716	686	2.48
717	686	2.58
718	687	2.7
719	687	2.82
720	688	2.93
721	689	3.03
722	690	3.11
723	691	3.18
724	692	3.24
725	692	3.31
726	693	3.39
727	694	3.49
728	695	3.63
729	696	3.81
730	696	4.03
731	698	4.28
732	700	4.55
733	701	4.87
734	703	5.27
735	704	5.76
736	706	6.41
737	707	7.29
738	709	7.58
739	710	7.9
740	713	8.24
741	716	8.5
742	720	8.64
743	723	8.61
744	727	8.42
745	730	8.13

FS Scale	SS Scale	SEM
746	736	7.62
747	742	6.87
748	749	5.02
749	767	5.73

**Table D 19 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 4**

FS Scale	SS Scale	SEM
453	435	0
454	435	0
455	435	0
456	435	0
457	435	0
458	435	0
459	435	0
460	435	0
461	435	0
462	435	0
463	435	0
464	435	0
465	435	0
466	435	0
467	435	0
468	435	0
469	435	0
470	435	0
471	435	0
472	435	0
473	435	0
474	435	0
475	435	0
476	435	0
477	435	0
478	435	0
479	435	0
480	435	0
481	435	0
482	435	0
483	435	0
484	435	0
485	435	0
486	435	0
487	435	0
488	435	0

FS Scale	SS Scale	SEM
489	435	0
490	435	0
491	472	20
492	473	20.7
493	474	21.42
494	475	11.14
495	476	11.64
496	477	12.23
497	479	7.96
498	480	8.69
499	481	9.36
500	482	10.2
501	483	10.99
502	484	11.69
503	485	12.36
504	486	13.06
505	487	13.52
506	488	13.94
507	489	14.38
508	491	14.82
509	492	15.21
510	493	15.61
511	494	15.98
512	495	16.12
513	496	16.21
514	497	16.32
515	498	16.43
516	499	16.43
517	500	16.44
518	501	16.44
519	502	16.43
520	504	16.4
521	505	16.38
522	506	16.36
523	507	16.33
524	508	16.3

**Table D 19 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 4**

FS Scale	SS Scale	SEM
525	509	16.28
526	510	16.26
527	511	16.24
528	512	16.22
529	513	16.22
530	514	16.22
531	516	16.23
532	520	15.13
533	524	14.62
534	528	14.25
535	531	13.92
536	534	13.69
537	538	12.28
538	542	10.54
539	543	9.46
540	543	8.54
541	544	7.8
542	544	6.8
543	544	5.66
544	545	4.94
545	545	4.43
546	546	4.06
547	546	3.76
548	546	3.5
549	546	3.06
550	546	2.75
551	546	2.68
552	548	2.29
553	549	2.29
554	550	2.33
555	552	2.33
556	553	2.01
557	554	1.67
558	555	1.57
559	556	1.76
560	556	1.89

FS Scale	SS Scale	SEM
561	556	2.06
562	557	2.2
563	559	2.31
564	560	2.27
565	560	2.22
566	561	2.22
567	562	2.19
568	564	2.17
569	565	2.22
570	566	2.3
571	567	2.23
572	568	2.13
573	569	2.02
574	570	1.79
575	571	1.57
576	572	1.51
577	573	1.51
578	574	1.44
579	575	1.41
580	575	1.41
581	576	1.4
582	577	1.36
583	578	1.31
584	578	1.22
585	579	1.12
586	580	1.07
587	580	1.02
588	581	0.98
589	582	0.95
590	582	0.96
591	583	0.98
592	584	1.08
593	585	1.24
594	586	1.43
595	587	1.62
596	589	1.7

**Table D 19 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 4**

FS Scale	SS Scale	SEM
597	591	1.48
598	592	1.17
599	592	0.99
600	593	1
601	594	1.09
602	595	1.07
603	596	0.97
604	597	0.84
605	598	0.75
606	598	0.74
607	599	0.78
608	599	0.86
609	600	0.98
610	601	1.11
611	602	1.24
612	603	1.31
613	605	1.33
614	606	1.34
615	607	1.26
616	608	1.1
617	609	0.97
618	610	0.92
619	611	0.94
620	612	0.96
621	613	0.96
622	614	0.93
623	615	0.89
624	616	0.84
625	616	0.81
626	617	0.79
627	618	0.72
628	619	0.67
629	619	0.7
630	620	0.88
631	621	1.06
632	622	0.99

FS Scale	SS Scale	SEM
633	623	0.86
634	624	0.79
635	625	0.79
636	626	0.85
637	626	0.97
638	628	1.1
639	629	1.06
640	630	0.89
641	631	0.81
642	632	0.79
643	633	0.82
644	633	0.85
645	634	0.9
646	635	0.95
647	636	0.93
648	638	0.86
649	639	0.86
650	640	0.94
651	641	0.93
652	642	0.86
653	643	0.81
654	644	0.82
655	644	0.89
656	645	0.96
657	647	0.99
658	648	1.02
659	649	1.06
660	650	1.06
661	651	0.98
662	652	0.94
663	653	0.95
664	654	1.01
665	655	1.09
666	656	1.12
667	657	1.14
668	658	1.17

**Table D 19 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 4**

FS Scale	SS Scale	SEM
669	659	1.16
670	661	1.08
671	662	1.03
672	662	1.01
673	663	1.03
674	664	1.12
675	666	1.21
676	667	1.22
677	668	1.2
678	669	1.19
679	670	1.2
680	671	1.18
681	672	1.17
682	673	1.17
683	674	1.16
684	675	1.16
685	676	1.2
686	677	1.29
687	678	1.38
688	679	1.46
689	680	1.56
690	681	1.72
691	682	1.88
692	683	1.94
693	685	1.87
694	686	1.7
695	687	1.54
696	688	1.44
697	689	1.41
698	690	1.39
699	690	1.38
700	691	1.39
701	691	1.43
702	692	1.5
703	693	1.58
704	694	1.65

FS Scale	SS Scale	SEM
705	695	1.7
706	695	1.75
707	696	1.87
708	697	2.14
709	698	2.54
710	699	2.99
711	701	3.24
712	702	3.32
713	703	3.35
714	704	3.34
715	705	3.27
716	706	3.16
717	707	3.04
718	707	2.9
719	708	2.75
720	709	2.62
721	710	2.52
722	711	2.44
723	711	2.38
724	712	2.35
725	713	2.37
726	714	2.43
727	715	2.58
728	715	2.83
729	716	3.15
730	718	3.51
731	719	3.88
732	720	3.96
733	721	4.03
734	721	4.09
735	722	4.15
736	723	4.23
737	723	4.32
738	724	4.45
739	725	4.6
740	725	4.8

**Table D 19 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 4**

FS Scale	SS Scale	SEM
741	726	5.06
742	727	5.34
743	728	5.69
744	728	6.09
745	729	6.53
746	730	6.99
747	732	7.46
748	734	7.94
749	737	8.43
750	739	8.9
751	741	9.41
752	744	9.88
753	746	10.33
754	748	10.79
755	752	11.14
756	755	11.09
757	758	10.73
758	760	10.31
759	763	9.8
760	766	9.2
761	768	8.42
762	771	7.48
763	774	6.47
764	776	5.46
765	779	4.5
766	781	3.41
767	784	2.39

**Table D 20 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 5**

FS Scale	SS Scale	SEM
481	458	0
482	458	0
483	458	0
484	458	0
485	458	0
486	458	0
487	458	0
488	458	0
489	458	0
490	458	0
491	458	0
492	458	0
493	458	0
494	458	0
495	458	0
496	458	0
497	458	0
498	458	0
499	458	0
500	458	0
501	458	0
502	508	25.02
503	509	26.08
504	511	27.18
505	513	28.31
506	514	29.47
507	516	30.66
508	518	31.83
509	519	32.99
510	521	34.11
511	523	35.23
512	524	26.34
513	526	27.02
514	528	27.7
515	529	28.4
516	531	22.24

FS Scale	SS Scale	SEM
517	533	22.43
518	534	22.65
519	536	19.67
520	538	19.76
521	539	19.88
522	541	16.69
523	543	16.6
524	544	16.52
525	546	16.49
526	548	16.47
527	549	16.5
528	551	16.54
529	553	16.51
530	554	16.49
531	556	16.49
532	556	16.19
533	557	15.91
534	557	15.66
535	557	15.44
536	557	15.15
537	558	14.88
538	558	14.65
539	558	14.36
540	559	14.1
541	559	13.84
542	559	13.57
543	559	13.33
544	560	13.11
545	560	12.9
546	561	12.47
547	561	12.1
548	562	11.78
549	562	11.31
550	563	10.91
551	563	10.57
552	564	10.12

**Table D 20 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 5**

FS Scale	SS Scale	SEM
553	564	9.44
554	565	8.91
555	565	8.52
556	566	7.87
557	566	7.44
558	567	7.13
559	568	6
560	569	5.4
561	570	5
562	571	4.68
563	572	4.42
564	573	4.08
565	573	3.7
566	573	3.44
567	574	3.23
568	574	3.05
569	574	2.85
570	575	2.64
571	575	2.46
572	575	2.35
573	575	2.27
574	576	2.09
575	577	1.98
576	577	1.91
577	578	1.89
578	578	1.8
579	579	1.72
580	579	1.7
581	580	1.74
582	581	1.82
583	582	1.83
584	582	1.87
585	583	1.93
586	584	1.96
587	586	1.92
588	588	1.93

FS Scale	SS Scale	SEM
589	589	1.95
590	590	1.88
591	591	1.86
592	593	1.84
593	594	1.83
594	595	1.74
595	595	1.71
596	596	1.75
597	597	1.78
598	599	1.75
599	600	1.66
600	601	1.5
601	602	1.33
602	602	1.19
603	603	1.12
604	604	0.99
605	605	0.93
606	606	0.89
607	607	0.87
608	608	0.86
609	608	0.92
610	609	1
611	610	1.07
612	611	1.13
613	612	1.08
614	612	0.92
615	613	0.82
616	614	0.89
617	615	1.04
618	616	1.09
619	617	1.04
620	618	0.95
621	619	0.9
622	619	0.9
623	620	0.91
624	621	0.92

**Table D 20 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 5**

FS Scale	SS Scale	SEM
625	622	0.89
626	623	0.85
627	623	0.87
628	624	0.93
629	625	0.96
630	626	0.94
631	627	0.91
632	628	0.94
633	629	1.04
634	630	1.12
635	631	1.14
636	632	1.12
637	633	1.06
638	634	0.97
639	635	0.87
640	636	0.79
641	636	0.76
642	637	0.81
643	638	0.88
644	639	0.84
645	639	0.72
646	640	0.65
647	641	0.61
648	641	0.58
649	642	0.57
650	643	0.57
651	643	0.56
652	644	0.58
653	645	0.69
654	646	0.84
655	647	0.87
656	648	0.85
657	649	0.84
658	650	0.76
659	651	0.7
660	651	0.71

FS Scale	SS Scale	SEM
661	652	0.79
662	654	0.88
663	655	1.01
664	656	1.05
665	657	0.87
666	658	0.78
667	659	0.85
668	660	0.98
669	661	0.95
670	662	0.82
671	663	0.74
672	664	0.78
673	665	0.92
674	666	1
675	667	0.88
676	668	0.7
677	669	0.66
678	670	0.7
679	670	0.77
680	671	0.82
681	672	0.83
682	673	0.86
683	674	0.88
684	675	0.93
685	676	1.07
686	677	1.18
687	678	1.15
688	680	1.08
689	681	0.99
690	682	0.94
691	683	0.9
692	683	0.87
693	684	0.87
694	685	0.9
695	686	0.92
696	687	0.94

**Table D 20 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 5**

FS Scale	SS Scale	SEM
697	688	0.96
698	689	0.98
699	689	1.03
700	690	1.11
701	692	1.17
702	692	1.18
703	693	1.22
704	694	1.27
705	695	1.33
706	696	1.35
707	697	1.35
708	698	1.36
709	699	1.39
710	700	1.39
711	701	1.42
712	702	1.54
713	703	1.73
714	705	1.88
715	706	1.91
716	708	1.84
717	709	1.76
718	710	1.72
719	711	1.72
720	712	1.72
721	713	1.77
722	713	1.85
723	714	1.95
724	715	2.06
725	716	2.14
726	717	2.19
727	718	2.27
728	719	2.41
729	721	2.6
730	722	2.79
731	724	2.91
732	725	2.95

FS Scale	SS Scale	SEM
733	726	2.87
734	727	2.78
735	728	2.67
736	729	2.55
737	729	2.44
738	730	2.34
739	731	2.26
740	731	2.19
741	732	2.13
742	733	2.09
743	733	2.08
744	734	2.1
745	735	2.18
746	735	2.35
747	736	2.62
748	737	2.99
749	737	3.44
750	739	3.91
751	741	4.35
752	743	4.73
753	744	4.91
754	745	4.94
755	746	4.95
756	747	4.95
757	748	4.93
758	748	4.92
759	749	4.9
760	750	4.88
761	751	4.87
762	752	4.87
763	753	4.86
764	755	4.85
765	756	4.82
766	757	4.78
767	758	4.71
768	759	4.62

**Table D 20 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 5**

FS Scale	SS Scale	SEM
769	760	4.53
770	762	4.48
771	763	4.5
772	764	4.66
773	765	5.06
774	766	5.95
775	768	7.17
776	769	8.69
777	770	9.73
778	771	10.15
779	776	10.48
780	782	10.65
781	787	10.41
782	793	9.62
783	795	8.5
784	797	7.12
785	799	5.48
786	801	3.95
787	803	2.3
788	805	1.15

**Table D 21 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 6**

FS Scale	SS Scale	SEM
494	482	0
495	482	0
496	482	0
497	482	0
498	482	0
499	482	0
500	482	0
501	482	0
502	482	0
503	482	0
504	482	0
505	482	0
506	482	0
507	482	0
508	482	0
509	482	0
510	482	0
511	482	0
512	482	0
513	482	0
514	482	0
515	482	0
516	482	0
517	482	0
518	482	0
519	482	0
520	482	0
521	482	0
522	482	0
523	482	0
524	482	0
525	482	0
526	482	0
527	482	0
528	482	0
529	532	24.95

FS Scale	SS Scale	SEM
530	533	25.42
531	533	25.92
532	534	4.35
533	534	4.98
534	535	6.02
535	535	6.32
536	536	7.85
537	536	9.33
538	537	10.67
539	537	11.71
540	537	12.62
541	538	13.32
542	538	13.9
543	539	14.38
544	539	14.8
545	540	15.23
546	540	15.53
547	541	15.81
548	541	15.98
549	542	16.13
550	542	16.25
551	543	16.37
552	543	16.49
553	543	16.52
554	544	16.52
555	544	16.53
556	545	16.53
557	545	16.52
558	546	16.52
559	546	16.52
560	547	16.5
561	547	16.5
562	548	16.5
563	548	16.49
564	548	16.49
565	549	16.49

**Table D 21 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 6**

FS Scale	SS Scale	SEM
566	556	14.71
567	569	12.67
568	582	11.22
569	584	10.17
570	584	9.38
571	585	8.8
572	585	8.4
573	585	7.44
574	585	6.77
575	586	6.06
576	586	5.42
577	586	4.97
578	586	4.3
579	587	3.71
580	588	3.54
581	589	3.56
582	590	3.68
583	591	3.73
584	592	3.74
585	593	3.76
586	594	3.79
587	595	3.79
588	596	3.69
589	597	3.48
590	598	3.3
591	600	3.07
592	601	2.85
593	602	2.53
594	602	2.23
595	603	1.98
596	603	1.82
597	604	1.6
598	604	1.46
599	605	1.41
600	605	1.39
601	606	1.34

FS Scale	SS Scale	SEM
602	607	1.35
603	607	1.4
604	608	1.45
605	609	1.43
606	610	1.41
607	612	1.35
608	612	1.26
609	613	1.16
610	614	1.12
611	615	1.14
612	616	1.15
613	616	1.25
614	617	1.41
615	618	1.59
616	619	1.77
617	620	1.99
618	622	2.18
619	623	2.18
620	624	2.12
621	625	2
622	626	1.69
623	627	1.28
624	628	1.14
625	629	1.14
626	630	1.13
627	631	1.1
628	631	1.09
629	632	1.1
630	633	1.32
631	635	1.54
632	636	1.57
633	637	1.51
634	638	1.45
635	639	1.35
636	640	1.19
637	641	1.04

**Table D 21 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 6**

FS Scale	SS Scale	SEM
638	641	0.91
639	642	0.94
640	643	0.99
641	644	0.92
642	645	0.82
643	646	0.8
644	647	0.8
645	647	0.79
646	647	0.79
647	648	0.79
648	648	0.76
649	649	0.75
650	649	0.79
651	650	0.92
652	651	1.06
653	652	1.03
654	653	0.92
655	654	0.84
656	655	0.85
657	656	0.91
658	657	0.96
659	658	1.02
660	658	1.08
661	660	1.1
662	661	1.07
663	662	1.01
664	663	1
665	664	0.98
666	665	0.91
667	666	0.84
668	667	0.79
669	667	0.8
670	668	0.9
671	669	1.05
672	671	1.14
673	672	1.18

FS Scale	SS Scale	SEM
674	673	1.13
675	674	0.94
676	675	0.77
677	675	0.72
678	676	0.73
679	677	0.74
680	677	0.74
681	678	0.74
682	679	0.77
683	679	0.76
684	680	0.75
685	681	0.73
686	682	0.74
687	683	0.73
688	684	0.75
689	685	0.79
690	686	0.88
691	687	0.99
692	687	1.05
693	688	1.12
694	689	1.2
695	690	1.27
696	691	1.27
697	692	1.2
698	693	1.14
699	694	1.09
700	695	1.03
701	696	0.99
702	697	0.97
703	697	0.97
704	698	1
705	699	1.02
706	700	1.02
707	701	0.96
708	701	0.91
709	702	0.89

**Table D 21 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 6**

FS Scale	SS Scale	SEM
710	703	0.91
711	703	0.98
712	704	1.07
713	705	1.11
714	706	1.07
715	707	1.01
716	708	0.96
717	708	0.94
718	709	0.94
719	710	0.94
720	711	0.91
721	711	0.88
722	712	0.86
723	713	0.86
724	713	0.9
725	714	0.98
726	715	1.06
727	716	1.1
728	717	1.12
729	718	1.15
730	718	1.2
731	719	1.24
732	720	1.26
733	721	1.25
734	722	1.23
735	723	1.22
736	724	1.22
737	725	1.24
738	725	1.23
739	726	1.22
740	727	1.21
741	727	1.22
742	728	1.25
743	729	1.27
744	730	1.29
745	730	1.29

FS Scale	SS Scale	SEM
746	731	1.3
747	732	1.33
748	733	1.37
749	734	1.43
750	734	1.48
751	735	1.54
752	736	1.54
753	736	1.54
754	737	1.56
755	737	1.59
756	737	1.64
757	738	1.71
758	738	1.79
759	739	1.89
760	740	1.98
761	740	2.06
762	741	2.12
763	742	2.15
764	743	2.17
765	743	2.17
766	744	2.18
767	745	2.19
768	746	2.21
769	746	2.24
770	747	2.28
771	748	2.33
772	749	2.35
773	749	2.34
774	750	2.34
775	750	2.34
776	751	2.35
777	751	2.39
778	752	2.44
779	752	2.51
780	753	2.6
781	754	2.71

**Table D 21 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 6**

FS Scale	SS Scale	SEM
782	754	2.81
783	755	2.89
784	756	2.96
785	757	3.01
786	758	3.04
787	759	3.07
788	760	3.09
789	761	3.13
790	762	3.17
791	762	3.24
792	764	3.32
793	765	3.4
794	766	3.48
795	767	3.54
796	769	3.53
797	770	3.42
798	772	3.39
799	773	3.58
800	775	3.98
801	778	4.48
802	782	4.74
803	786	4.62
804	790	5.02
805	794	7.53
806	811	10.56
807	831	3.63

**Table D 22 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 7**

FS Scale	SS Scale	SEM
525	507	0
526	507	0
527	507	0
528	507	0
529	507	0
530	507	0
531	507	0
532	507	0
533	507	0
534	507	0
535	507	0
536	507	0
537	507	0
538	507	0
539	507	0
540	507	0
541	507	0
542	507	0
543	507	0
544	507	0
545	507	0
546	507	0
547	507	0
548	507	0
549	507	0
550	507	0
551	507	0
552	556	23.69
553	557	24.58
554	559	25.51
555	560	26.47
556	562	12.49
557	564	13.21
558	565	14.01
559	567	14.88
560	568	10.22

FS Scale	SS Scale	SEM
561	570	11.22
562	572	11.92
563	573	12.21
564	575	12.86
565	576	13.4
566	578	13.98
567	580	14.22
568	581	14.21
569	583	14.17
570	585	14.12
571	586	14.12
572	588	14.12
573	589	14.06
574	591	13.94
575	593	13.83
576	594	13.76
577	596	13.7
578	597	13.67
579	599	13.62
580	601	13.59
581	602	13.59
582	603	13.02
583	604	12.16
584	604	11.64
585	605	11.21
586	605	10.55
587	605	10.01
588	606	9.58
589	606	9.23
590	607	8.22
591	607	6.85
592	608	5.98
593	608	5.36
594	609	4.9
595	609	4.55
596	610	4.24

**Table D 22 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 7**

FS Scale	SS Scale	SEM
597	610	3.61
598	610	3.19
599	610	2.93
600	610	2.67
601	610	2.45
602	610	2.27
603	610	1.85
604	611	1.7
605	611	1.64
606	611	1.63
607	611	1.65
608	612	1.6
609	613	1.59
610	614	1.64
611	615	1.69
612	616	1.72
613	617	1.65
614	618	1.49
615	619	1.36
616	619	1.29
617	620	1.28
618	621	1.23
619	622	1.28
620	623	1.41
621	624	1.57
622	625	1.6
623	626	1.51
624	627	1.33
625	628	1.22
626	629	1.07
627	630	1.06
628	632	1.07
629	633	1.08
630	634	0.98
631	634	0.88
632	635	0.83

FS Scale	SS Scale	SEM
633	636	0.91
634	637	0.98
635	638	1.04
636	639	1.08
637	640	1.06
638	641	0.9
639	642	0.76
640	643	0.77
641	644	0.79
642	644	0.81
643	645	0.85
644	646	0.94
645	647	1.12
646	649	1.18
647	650	1.05
648	651	0.86
649	652	0.8
650	653	0.86
651	654	0.89
652	655	0.84
653	656	0.79
654	657	0.77
655	658	0.79
656	659	0.77
657	660	0.75
658	661	0.78
659	662	0.84
660	662	0.85
661	663	0.81
662	664	0.78
663	665	0.76
664	665	0.78
665	666	0.78
666	667	0.76
667	668	0.77
668	669	0.76

**Table D 22 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 7**

FS Scale	SS Scale	SEM
669	669	0.76
670	670	0.81
671	671	0.9
672	672	0.89
673	673	0.75
674	674	0.7
675	675	0.79
676	676	0.9
677	677	0.93
678	678	0.86
679	679	0.84
680	679	0.84
681	680	0.81
682	681	0.72
683	682	0.68
684	683	0.71
685	684	0.79
686	685	0.79
687	686	0.76
688	687	0.71
689	688	0.7
690	688	0.74
691	689	0.87
692	690	1.04
693	692	1.03
694	693	0.8
695	694	0.74
696	694	0.78
697	695	0.74
698	696	0.63
699	697	0.59
700	698	0.7
701	698	0.85
702	700	0.92
703	701	0.88
704	701	0.85

FS Scale	SS Scale	SEM
705	702	0.82
706	703	0.84
707	705	0.9
708	706	0.96
709	706	0.96
710	707	0.91
711	708	0.88
712	709	0.85
713	710	0.84
714	711	0.85
715	712	0.87
716	713	0.91
717	713	0.92
718	714	0.91
719	715	0.85
720	716	0.78
721	716	0.74
722	717	0.74
723	718	0.86
724	719	1.03
725	720	1.13
726	721	1.1
727	721	1.02
728	722	1
729	723	1.06
730	724	1.17
731	725	1.25
732	726	1.18
733	727	1.09
734	728	1.02
735	729	1
736	729	1.02
737	730	1.07
738	731	1.08
739	731	1.1
740	732	1.13

**Table D 22 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 7**

FS Scale	SS Scale	SEM
741	733	1.16
742	734	1.22
743	734	1.31
744	735	1.39
745	736	1.39
746	737	1.35
747	738	1.3
748	739	1.26
749	740	1.26
750	741	1.26
751	742	1.3
752	743	1.36
753	743	1.35
754	744	1.35
755	745	1.36
756	746	1.4
757	746	1.5
758	747	1.6
759	748	1.77
760	749	2.07
761	750	2.48
762	752	2.73
763	753	2.79
764	755	2.74
765	756	2.6
766	757	2.44
767	758	2.33
768	759	2.29
769	760	2.33
770	761	2.45
771	762	2.63
772	763	2.82
773	765	2.97
774	766	3.09
775	768	3.2
776	769	3.17

FS Scale	SS Scale	SEM
777	769	3.13
778	770	3.1
779	771	3.06
780	772	3.01
781	773	2.96
782	774	2.89
783	774	2.83
784	775	2.76
785	776	2.71
786	777	2.67
787	778	2.64
788	779	2.62
789	780	2.6
790	780	2.6
791	781	2.62
792	782	2.68
793	783	2.82
794	784	3.05
795	785	3.37
796	785	3.58
797	786	3.66
798	787	3.74
799	787	3.81
800	788	3.88
801	789	3.97
802	790	4.05
803	790	4.15
804	791	4.28
805	792	4.45
806	793	4.67
807	793	4.99
808	794	5.42
809	795	5.92
810	796	6.48
811	796	7.07
812	797	7.71

**Table D 22 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 7**

FS Scale	SS Scale	SEM
813	798	8.38
814	799	9.04
815	803	9.57
816	806	9.98
817	810	10.27
818	813	10.38
819	817	10.26
820	820	9.91
821	822	9.25
822	824	8.53
823	826	7.85
824	828	7.12
825	830	6.24
826	832	5.4
827	834	4.53
828	836	3.55
829	838	2.49
830	840	1.3
831	843	5.07

**Table D 23 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 8**

FS Scale	SS Scale	SEM
537	520	0
538	520	0
539	520	0
540	520	0
541	520	0
542	520	0
543	520	0
544	520	0
545	520	0
546	520	0
547	520	0
548	520	0
549	520	0
550	520	0
551	520	0
552	520	0
553	520	0
554	520	0
555	520	0
556	520	0
557	520	0
558	520	0
559	520	0
560	520	0
561	520	0
562	520	0
563	520	0
564	520	0
565	520	0
566	520	0
567	520	0
568	556	18.97
569	557	19.71
570	558	20.48
571	560	21.28
572	561	11.41

FS Scale	SS Scale	SEM
573	562	12.01
574	563	12.7
575	564	9.09
576	565	9.83
577	567	10.59
578	568	10.72
579	569	11.59
580	570	12.14
581	571	12.71
582	573	13.17
583	574	13.65
584	575	14.17
585	576	14.43
586	577	14.48
587	578	14.52
588	580	14.57
589	581	14.61
590	582	14.67
591	583	14.64
592	584	14.59
593	585	14.54
594	587	14.5
595	588	14.47
596	589	14.43
597	590	14.39
598	591	14.35
599	592	14.31
600	594	14.28
601	595	14.26
602	596	14.26
603	600	13.13
604	603	12.47
605	607	12.06
606	610	11.6
607	611	11.22
608	612	10.89

**Table D 23 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 8**

FS Scale	SS Scale	SEM
609	614	10.65
610	616	9
611	619	7.96
612	619	7.26
613	619	6.47
614	620	5.9
615	620	5.48
616	621	3.72
617	622	3.01
618	623	2.7
619	623	2.59
620	624	2.6
621	625	2.59
622	626	2.76
623	627	3.05
624	629	3.23
625	631	3.2
626	633	2.92
627	634	2.46
628	634	2.09
629	635	1.86
630	636	1.74
631	637	1.52
632	638	1.12
633	639	0.85
634	639	0.82
635	640	0.94
636	641	1.05
637	642	1.11
638	643	1.13
639	643	1.13
640	645	1
641	645	0.88
642	646	0.85
643	647	0.92
644	647	0.99

FS Scale	SS Scale	SEM
645	648	1.09
646	649	1.2
647	650	1.28
648	651	1.16
649	652	0.95
650	653	0.9
651	654	0.95
652	655	1.05
653	656	1.2
654	657	1.27
655	658	1.15
656	659	0.95
657	660	0.82
658	661	0.84
659	662	0.91
660	664	0.97
661	665	0.91
662	666	0.84
663	667	0.83
664	668	0.87
665	668	0.88
666	669	0.87
667	670	0.89
668	671	0.92
669	672	0.94
670	673	0.9
671	674	0.85
672	675	0.8
673	676	0.77
674	676	0.73
675	677	0.66
676	678	0.63
677	678	0.72
678	679	0.81
679	679	0.93
680	680	1.06

**Table D 23 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 8**

FS Scale	SS Scale	SEM
681	681	1.19
682	683	1.22
683	684	1.07
684	685	0.99
685	686	1.05
686	687	1.08
687	688	1.01
688	689	0.91
689	690	0.82
690	691	0.8
691	691	0.86
692	692	0.98
693	693	1.03
694	694	0.98
695	695	0.9
696	695	0.81
697	696	0.78
698	697	1.02
699	698	1.24
700	700	1.14
701	701	0.92
702	702	0.84
703	703	0.87
704	704	0.9
705	705	0.93
706	705	0.95
707	707	0.91
708	708	0.87
709	708	0.89
710	709	0.99
711	710	1.07
712	711	1.07
713	712	1.01
714	713	0.89
715	714	0.83
716	715	0.87

FS Scale	SS Scale	SEM
717	716	0.98
718	717	1.08
719	718	1.09
720	719	1.08
721	720	1.05
722	722	1.08
723	723	1.11
724	724	1.14
725	725	1.13
726	725	1.14
727	726	1.15
728	727	1.17
729	728	1.12
730	729	0.97
731	729	0.86
732	730	0.87
733	731	1.03
734	732	1.17
735	733	1.27
736	734	1.27
737	735	1.25
738	736	1.26
739	737	1.34
740	738	1.46
741	740	1.52
742	741	1.5
743	742	1.43
744	743	1.35
745	744	1.27
746	744	1.21
747	745	1.19
748	745	1.23
749	746	1.28
750	746	1.4
751	747	1.58
752	747	1.77

**Table D 23 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 8**

FS Scale	SS Scale	SEM
753	749	1.95
754	750	2.06
755	751	2.06
756	751	2.01
757	752	1.97
758	753	2
759	754	2.09
760	755	2.24
761	756	2.38
762	757	2.45
763	758	2.39
764	759	2.27
765	760	2.11
766	760	1.93
767	761	1.77
768	761	1.66
769	762	1.6
770	762	1.6
771	763	1.63
772	763	1.64
773	764	1.68
774	764	1.73
775	764	1.8
776	765	1.88
777	766	1.97
778	766	2.06
779	767	2.15
780	768	2.24
781	768	2.3
782	769	2.32
783	770	2.35
784	770	2.38
785	771	2.43
786	772	2.47
787	773	2.5
788	773	2.51

FS Scale	SS Scale	SEM
789	774	2.5
790	775	2.47
791	776	2.45
792	777	2.45
793	777	2.45
794	778	2.45
795	778	2.43
796	779	2.42
797	779	2.42
798	779	2.42
799	780	2.43
800	780	2.46
801	780	2.51
802	781	2.59
803	781	2.72
804	781	2.89
805	782	3.11
806	782	3.36
807	783	3.66
808	783	3.96
809	783	4.28
810	784	4.62
811	784	4.96
812	784	5.3
813	785	5.64
814	786	5.97
815	788	6.09
816	789	6.18
817	791	6.22
818	792	6.23
819	794	6.23
820	795	6.19
821	796	6.13
822	797	6.07
823	797	6.02
824	798	5.96

**Table D 23 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 8**

FS Scale	SS Scale	SEM
825	799	5.94
826	800	6.01
827	801	6.12
828	802	6.33
829	803	6.68
830	804	7.15
831	805	7.74
832	805	8.43
833	806	9.24
834	808	10.1
835	811	10.99
836	815	11.83
837	818	12.61
838	822	13.46
839	825	13.27
840	828	13.04
841	832	12.61
842	836	12.1
843	839	11.42
844	843	10.59
845	847	9.48
846	850	8.08
847	854	6.38
848	857	4.76
849	861	3.09

**Table D 24 Fall SAT/9 and Spring SAT/9 Linking Table—
Mathematics Grade 9**

FS Scale	SS Scale	SEM
572	553	0
573	553	0
574	553	0
575	553	0
576	553	0
577	553	0
578	553	0
579	553	0
580	553	0
581	553	0
582	553	0
583	553	0
584	553	0
585	553	0
586	591	5.56
587	600	8.69
588	608	10.93
589	616	11.92
590	618	12.17
591	619	12.08
592	619	11.94
593	620	10.12
594	621	9.62
595	622	9.18
596	623	8.76
597	624	8.36
598	624	7.99
599	624	7.65
600	625	7.33
601	625	7.05
602	625	6.78
603	625	6.52
604	625	6.29
605	626	6.08
606	626	5.59
607	626	4.91

FS Scale	SS Scale	SEM
608	627	4.42
609	627	4.06
610	627	3.75
611	628	3.5
612	628	3.29
613	629	3.14
614	629	3.01
615	629	2.92
616	630	2.84
617	630	2.78
618	630	2.73
619	630	2.69
620	631	2.45
621	631	2.31
622	632	2.22
623	632	2.18
624	633	2.17
625	633	2.17
626	634	2.2
627	634	2.23
628	635	2.27
629	635	2.32
630	636	2.36
631	636	2.32
632	637	2.3
633	638	2.27
634	639	2.22
635	640	2.17
636	641	2.12
637	641	2.09
638	642	2.07
639	642	2.07
640	644	1.96
641	645	1.9
642	646	1.86
643	647	1.82

**Table D 24 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 9**

FS Scale	SS Scale	SEM
644	648	1.8
645	649	1.76
646	650	1.72
647	651	1.61
648	651	1.49
649	652	1.4
650	653	1.31
651	654	1.22
652	655	1.14
653	655	1.1
654	656	1.1
655	657	1.13
656	658	1.23
657	659	1.38
658	660	1.46
659	661	1.43
660	662	1.29
661	663	1.05
662	664	0.93
663	665	0.91
664	665	0.92
665	666	0.94
666	667	0.97
667	668	0.96
668	668	0.94
669	669	0.93
670	670	0.93
671	670	0.94
672	671	0.96
673	672	0.93
674	673	0.91
675	674	0.91
676	675	0.93
677	676	0.98
678	677	1.01
679	678	0.99

FS Scale	SS Scale	SEM
680	679	0.93
681	680	0.88
682	681	0.87
683	682	0.85
684	683	0.82
685	684	0.81
686	685	0.83
687	686	0.9
688	687	0.95
689	688	0.98
690	689	1.06
691	690	1.13
692	691	1.18
693	692	1.2
694	694	1.17
695	695	1.02
696	696	0.84
697	697	0.79
698	698	0.78
699	699	0.76
700	699	0.76
701	700	0.77
702	701	0.79
703	702	0.85
704	702	0.87
705	703	0.88
706	704	0.9
707	705	0.97
708	706	1.07
709	707	1.13
710	708	1.06
711	709	0.97
712	710	0.95
713	711	1.03
714	713	1.1
715	714	1.1

**Table D 24 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 9**

FS Scale	SS Scale	SEM
716	715	1.07
717	716	1.06
718	717	1.06
719	718	1.09
720	719	1.09
721	720	1.09
722	721	1.08
723	721	1.04
724	722	1
725	723	0.97
726	724	0.92
727	724	0.9
728	725	0.92
729	726	1.01
730	727	1.14
731	728	1.23
732	729	1.22
733	730	1.2
734	730	1.2
735	731	1.22
736	732	1.22
737	733	1.21
738	734	1.19
739	735	1.16
740	736	1.15
741	736	1.17
742	737	1.25
743	738	1.4
744	739	1.57
745	740	1.64
746	741	1.6
747	742	1.52
748	743	1.43
749	743	1.36
750	744	1.31
751	744	1.28

FS Scale	SS Scale	SEM
752	745	1.29
753	746	1.26
754	746	1.25
755	747	1.25
756	747	1.29
757	748	1.33
758	748	1.39
759	749	1.45
760	750	1.49
761	750	1.54
762	751	1.52
763	751	1.51
764	752	1.51
765	752	1.53
766	753	1.57
767	753	1.61
768	754	1.66
769	755	1.7
770	755	1.76
771	756	1.85
772	757	1.98
773	757	2.04
774	758	2.13
775	758	2.22
776	759	2.32
777	760	2.4
778	761	2.45
779	762	2.47
780	763	2.47
781	764	2.48
782	765	2.5
783	766	2.53
784	767	2.6
785	768	2.7
786	769	2.89
787	769	2.9

**Table D 24 (cont.) Fall SAT/9 and Spring SAT/9 Linking
Table—Mathematics Grade 9**

FS Scale	SS Scale	SEM
788	769	2.92
789	769	2.94
790	770	2.97
791	770	3.01
792	770	3.04
793	770	3.09
794	771	3.14
795	771	3.2
796	771	3.25
797	771	3.31
798	771	3.38
799	772	3.45
800	772	3.52
801	773	3.59
802	773	3.66
803	774	3.74
804	774	3.81
805	775	3.89
806	775	3.96
807	776	4.04
808	776	4.04
809	776	4.04
810	777	4.04
811	777	4.04
812	778	4.03
813	778	4.01
814	779	3.99
815	779	3.97
816	780	3.94
817	780	3.92
818	781	3.91
819	781	3.9
820	782	3.9
821	782	3.9
822	783	3.92
823	784	3.95

FS Scale	SS Scale	SEM
824	784	4
825	785	4.08
826	785	4.2
827	786	4.41
828	787	4.69
829	787	5.08
830	788	5.57
831	788	6.15
832	789	6.82
833	790	7.22
834	792	7.69
835	794	8.24
836	796	8.92
837	799	9.7
838	801	10.68
839	803	11.76
840	811	12.73
841	820	13.26
842	828	12.92
843	840	11.96
844	860	11.13

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Table E 1
TN and Spring SAT/9 Linking Table—Reading Grade 2

TN Scale	SS Scale	SEM
423	508	1.8
424	508	1.8
425	508	1.8
426	508	1.8
427	508	1.8
428	508	1.8
429	508	1.8
430	508	1.8
431	508	1.8
432	508	1.8
433	508	1.8
434	508	1.8
435	508	1.8
436	508	1.8
437	508	1.8
438	508	1.8
439	508	1.8
440	508	1.79
441	508	1.79
442	508	1.78
443	508	1.78
444	508	1.77
445	508	1.77
446	508	1.76
447	508	1.76
448	508	1.76
449	508	1.75
450	508	1.75
451	508	1.74
452	508	1.74
453	508	1.74
454	508	1.74
455	508	1.73
456	508	1.73
457	508	1.73
458	508	1.73

TN Scale	SS Scale	SEM
459	508	1.73
460	508	1.73
461	508	1.73
462	509	1.73
463	509	1.72
464	509	1.72
465	509	1.72
466	509	1.72
467	509	1.71
468	509	1.71
469	509	1.71
470	509	1.71
471	509	1.71
472	509	1.71
473	509	1.71
474	509	1.72
475	509	1.72
476	509	1.72
477	509	1.72
478	509	1.72
479	509	1.72
480	509	1.73
481	509	1.73
482	509	1.73
483	509	1.73
484	509	1.73
485	509	1.73
486	509	1.74
487	509	1.74
488	509	1.74
489	509	1.75
490	509	1.75
491	509	1.75
492	509	1.75
493	509	1.76
494	509	1.77

Table E 1 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 2

TN Scale	SS Scale	SEM
495	509	1.78
496	509	1.79
497	509	1.8
498	510	1.81
499	510	1.82
500	510	1.83
501	510	1.85
502	510	1.86
503	510	1.87
504	510	1.88
505	510	1.89
506	510	1.9
507	510	1.91
508	510	1.91
509	510	1.92
510	510	1.92
511	510	1.93
512	510	1.94
513	510	1.95
514	511	1.97
515	511	1.99
516	511	2
517	511	2.01
518	511	2.02
519	511	2.02
520	512	2.03
521	512	2.04
522	512	2.01
523	513	1.98
524	513	1.95
525	514	1.91
526	514	1.86
527	514	1.79
528	514	1.69
529	515	1.62
530	515	1.57

TN Scale	SS Scale	SEM
531	515	1.53
532	515	1.49
533	515	1.44
534	515	1.37
535	516	1.35
536	516	1.35
537	516	1.35
538	516	1.36
539	517	1.38
540	517	1.38
541	517	1.39
542	518	1.39
543	519	1.36
544	519	1.29
545	520	1.2
546	520	1.13
547	520	1.05
548	520	1
549	521	0.96
550	521	0.96
551	521	0.96
552	521	0.97
553	521	0.98
554	522	1.01
555	522	1.07
556	523	1.1
557	523	1.13
558	523	1.16
559	524	1.19
560	525	1.22
561	525	1.24
562	526	1.25
563	526	1.25
564	527	1.24
565	528	1.23
566	529	1.19

Table E 1 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 2

TN Scale	SS Scale	SEM
567	529	1.16
568	530	1.15
569	530	1.14
570	531	1.12
571	532	1.08
572	532	1.05
573	533	1.04
574	534	1.08
575	535	1.11
576	535	1.2
577	536	1.38
578	538	1.46
579	539	1.43
580	540	1.35
581	541	1.24
582	542	1.16
583	543	1.13
584	544	1.16
585	545	1.17
586	546	1.15
587	547	1.1
588	548	1.06
589	548	1.07
590	549	1.17
591	550	1.38
592	552	1.49
593	554	1.43
594	556	1.4
595	557	1.43
596	558	1.56
597	560	1.64
598	562	1.44
599	563	1.25
600	564	1.27
601	565	1.41
602	566	1.5

TN Scale	SS Scale	SEM
603	567	1.52
604	569	1.44
605	570	1.3
606	572	1.28
607	573	1.32
608	575	1.23
609	576	1.11
610	576	1.1
611	578	1.18
612	579	1.18
613	580	1.14
614	581	1.14
615	582	1.26
616	583	1.45
617	584	1.59
618	586	1.47
619	588	1.37
620	589	1.47
621	590	1.62
622	592	1.65
623	593	1.63
624	595	1.53
625	596	1.27
626	597	0.98
627	598	0.85
628	598	0.97
629	599	1.19
630	600	1.37
631	601	1.46
632	603	1.36
633	604	1.21
634	605	1.18
635	606	1.19
636	607	1.23
637	608	1.24
638	609	1.21

Table E 1 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 2

TN Scale	SS Scale	SEM
639	610	1.19
640	611	1.24
641	613	1.34
642	614	1.42
643	615	1.44
644	616	1.44
645	617	1.49
646	618	1.56
647	619	1.61
648	620	1.6
649	622	1.56
650	624	1.58
651	624	1.61
652	626	1.59
653	628	1.52
654	628	1.61
655	629	1.68
656	629	1.73
657	630	1.9
658	632	2.02
659	633	1.99
660	635	1.9
661	635	1.83
662	635	1.77
663	637	1.6
664	639	1.65
665	640	1.66
666	640	1.67
667	641	1.63
668	641	1.61
669	642	1.6
670	642	1.57
671	642	1.56
672	643	1.55
673	643	1.58
674	644	1.7

TN Scale	SS Scale	SEM
675	645	1.98
676	647	2.18
677	648	2.21
678	650	2.17
679	651	2.14
680	652	2.11
681	653	2.1
682	655	2.12
683	656	2.18
684	657	2.29
685	658	2.37
686	659	2.38
687	659	2.39
688	659	2.39
689	660	2.4
690	660	2.41
691	660	2.42
692	660	2.43
693	661	2.44
694	661	2.45
695	661	2.46
696	662	2.47
697	662	2.49
698	662	2.51
699	663	2.53
700	663	2.55
701	663	2.58
702	664	2.61
703	664	2.63
704	665	2.66
705	666	2.66
706	667	2.66
707	668	2.66
708	669	2.66
709	670	2.67
710	671	2.67

Table E 1 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 2

TN Scale	SS Scale	SEM
711	673	2.7
712	674	2.8
713	676	2.91
714	678	2.99
715	680	2.97
716	682	2.91
717	684	2.83
718	687	2.74
719	690	2.92
720	693	4.52
721	700	6.46
722	736	12.61

Table E 2
TN and Spring SAT/9 Linking Table—Reading Grade 3

TN Scale	SS Scale	SEM
427	525	2.49
428	525	2.49
429	525	2.49
430	525	2.49
431	525	2.49
432	525	2.49
433	525	2.49
434	525	2.49
435	525	2.49
436	525	2.49
437	525	2.49
438	525	2.49
439	525	2.49
440	525	2.49
441	525	2.49
442	525	2.49
443	525	2.49
444	525	2.49
445	525	2.49
446	525	2.49
447	525	2.49
448	525	2.49
449	525	2.49
450	525	2.49
451	525	2.49
452	525	2.49
453	525	2.49
454	525	2.48
455	525	2.48
456	525	2.48
457	525	2.48
458	525	2.48
459	525	2.48
460	525	2.48
461	525	2.48
462	525	2.48

TN Scale	SS Scale	SEM
463	525	2.48
464	525	2.48
465	525	2.48
466	525	2.48
467	525	2.48
468	525	2.48
469	525	2.48
470	525	2.49
471	525	2.49
472	525	2.49
473	525	2.49
474	525	2.5
475	525	2.5
476	525	2.5
477	525	2.51
478	525	2.51
479	525	2.51
480	525	2.51
481	525	2.51
482	525	2.52
483	525	2.52
484	525	2.52
485	525	2.53
486	526	2.53
487	526	2.54
488	526	2.54
489	526	2.55
490	526	2.55
491	526	2.56
492	526	2.56
493	526	2.57
494	526	2.57
495	526	2.58
496	526	2.59
497	526	2.6
498	526	2.61

Table E 2 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 3

TN Scale	SS Scale	SEM
499	526	2.62
500	526	2.63
501	526	2.64
502	526	2.66
503	526	2.68
504	526	2.7
505	526	2.72
506	526	2.74
507	527	2.77
508	527	2.81
509	527	2.84
510	528	2.87
511	528	2.88
512	528	2.9
513	528	2.92
514	528	2.93
515	529	2.94
516	529	2.95
517	529	2.96
518	529	2.98
519	530	2.99
520	530	3
521	530	3.01
522	530	3.01
523	530	3.01
524	530	3
525	530	2.98
526	531	2.95
527	531	2.92
528	531	2.88
529	532	2.84
530	532	2.8
531	533	2.77
532	533	2.73
533	533	2.67
534	534	2.62

TN Scale	SS Scale	SEM
535	534	2.56
536	535	2.51
537	535	2.45
538	536	2.36
539	536	2.25
540	536	2.18
541	536	2.1
542	537	1.95
543	538	1.79
544	538	1.67
545	538	1.59
546	538	1.54
547	539	1.45
548	539	1.41
549	539	1.42
550	539	1.46
551	540	1.48
552	540	1.52
553	540	1.57
554	540	1.62
555	540	1.68
556	541	1.74
557	542	1.8
558	542	1.83
559	543	1.82
560	544	1.76
561	544	1.67
562	545	1.59
563	545	1.5
564	546	1.48
565	547	1.51
566	547	1.65
567	548	1.77
568	550	1.81
569	551	1.77
570	551	1.58

Table E 2 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 3

TN Scale	SS Scale	SEM
571	552	1.3
572	553	1.18
573	553	1.09
574	554	1.06
575	554	1.06
576	555	1.1
577	556	1.16
578	557	1.19
579	558	1.16
580	559	1.16
581	560	1.24
582	560	1.42
583	561	1.56
584	562	1.65
585	563	1.66
586	564	1.62
587	565	1.5
588	566	1.32
589	567	1.18
590	568	1.07
591	569	1.06
592	570	1.1
593	571	1.14
594	572	1.18
595	572	1.27
596	573	1.4
597	574	1.43
598	575	1.33
599	577	1.05
600	578	0.89
601	578	0.91
602	579	1.04
603	580	1.09
604	581	1.09
605	582	1.12
606	583	1.21

TN Scale	SS Scale	SEM
607	585	1.2
608	586	1.08
609	586	1.01
610	587	0.97
611	588	1
612	590	1.06
613	591	1.21
614	593	1.33
615	595	1.14
616	596	1.11
617	597	1.15
618	599	1.04
619	600	0.88
620	601	0.77
621	601	0.79
622	602	0.88
623	603	0.95
624	604	0.94
625	605	0.93
626	606	0.95
627	607	0.96
628	608	0.94
629	609	1.05
630	610	1.3
631	612	1.42
632	614	1.35
633	615	1.3
634	616	1.24
635	617	1.17
636	618	1.13
637	620	1.35
638	621	1.47
639	623	1.44
640	624	1.29
641	625	1.16
642	626	1.14

Table E 2 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 3

TN Scale	SS Scale	SEM
643	627	1.22
644	629	1.28
645	631	1.31
646	632	1.32
647	634	1.21
648	635	1.1
649	636	1.11
650	637	1.19
651	638	1.27
652	640	1.27
653	641	1.24
654	642	1.26
655	643	1.28
656	644	1.32
657	645	1.34
658	646	1.36
659	648	1.46
660	649	1.58
661	651	1.65
662	653	1.7
663	655	1.68
664	656	1.62
665	658	1.59
666	659	1.61
667	660	1.65
668	661	1.68
669	662	1.61
670	664	1.48
671	665	1.38
672	666	1.43
673	667	1.65
674	669	2.05
675	671	2.12
676	672	2.04
677	673	1.81
678	674	1.64

TN Scale	SS Scale	SEM
679	675	1.59
680	675	1.58
681	676	1.66
682	677	1.84
683	680	2.08
684	682	2.01
685	683	1.92
686	684	1.86
687	685	1.74
688	687	1.71
689	687	1.72
690	687	1.72
691	687	1.73
692	688	1.79
693	689	1.96
694	690	2.24
695	691	2.5
696	693	2.61
697	693	2.67
698	693	2.71
699	695	2.76
700	696	2.83
701	697	2.94
702	698	3.13
703	698	3.18
704	699	3.25
705	700	3.31
706	700	3.38
707	701	3.41
708	701	3.46
709	701	3.49
710	703	3.51
711	704	3.59
712	705	3.65
713	705	3.67
714	706	3.76

Table E 2 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 3

TN Scale	SS Scale	SEM
715	706	3.77
716	706	3.78
717	707	3.79
718	707	3.8
719	707	3.82
720	707	3.84
721	708	3.87
722	708	3.89
723	708	3.92
724	709	3.95
725	709	3.98
726	709	4.02
727	710	4.06
728	710	4.11
729	710	4.16
730	711	4.22
731	711	4.29
732	711	4.36
733	712	4.43
734	713	4.49
735	715	4.54
736	716	4.7
737	717	4.97
738	718	5.39
739	720	5.95
740	722	6.59
741	726	7.27
742	730	7.83
743	734	8.22
744	737	8.5
745	742	8.85
746	749	9.13
747	756	8.61
748	764	6.86
749	769	4.67
750	775	1.99

Table E 3
TN and Spring SAT/9 Linking Table—Reading Grade 4

TN Scale	SS Scale	SEM
433	554	1.84
434	554	1.84
435	554	1.84
436	554	1.83
437	554	1.83
438	554	1.83
439	554	1.83
440	554	1.83
441	554	1.84
442	554	1.84
443	555	1.84
444	555	1.85
445	555	1.85
446	555	1.86
447	555	1.86
448	555	1.86
449	555	1.87
450	555	1.87
451	555	1.88
452	555	1.89
453	555	1.9
454	555	1.91
455	555	1.93
456	555	1.94
457	555	1.95
458	555	1.96
459	555	1.97
460	555	1.99
461	555	2
462	555	2.01
463	555	2.02
464	556	2.04
465	556	2.06
466	556	2.08
467	556	2.1
468	556	2.11

TN Scale	SS Scale	SEM
469	556	2.13
470	556	2.16
471	556	2.2
472	557	2.3
473	557	2.42
474	558	2.56
475	559	2.69
476	560	2.75
477	560	2.74
478	560	2.73
479	560	2.72
480	560	2.71
481	560	2.71
482	560	2.7
483	560	2.7
484	560	2.69
485	560	2.68
486	560	2.68
487	560	2.67
488	560	2.67
489	560	2.66
490	560	2.66
491	560	2.66
492	560	2.65
493	560	2.65
494	560	2.65
495	560	2.65
496	560	2.65
497	560	2.64
498	560	2.64
499	561	2.63
500	561	2.63
501	561	2.63
502	561	2.62
503	561	2.62
504	561	2.61

Table E 3 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 4

TN Scale	SS Scale	SEM
505	561	2.61
506	561	2.6
507	561	2.59
508	561	2.58
509	561	2.57
510	561	2.55
511	562	2.54
512	562	2.53
513	562	2.51
514	562	2.48
515	562	2.45
516	563	2.41
517	563	2.35
518	563	2.3
519	563	2.25
520	563	2.2
521	564	2.14
522	564	2.08
523	564	2.03
524	564	1.96
525	564	1.89
526	565	1.77
527	565	1.7
528	565	1.67
529	565	1.65
530	565	1.63
531	565	1.63
532	565	1.62
533	566	1.61
534	566	1.61
535	566	1.61
536	566	1.61
537	566	1.62
538	566	1.63
539	566	1.64
540	566	1.66

TN Scale	SS Scale	SEM
541	567	1.69
542	567	1.71
543	567	1.73
544	567	1.75
545	567	1.77
546	567	1.8
547	568	1.84
548	568	1.88
549	568	1.91
550	568	1.93
551	569	1.96
552	569	2
553	570	2
554	570	2.01
555	570	2.01
556	571	1.97
557	571	1.92
558	572	1.88
559	572	1.83
560	572	1.79
561	573	1.76
562	573	1.73
563	573	1.69
564	574	1.64
565	574	1.62
566	575	1.6
567	575	1.59
568	575	1.57
569	576	1.53
570	577	1.49
571	577	1.41
572	578	1.34
573	578	1.32
574	579	1.3
575	579	1.3
576	579	1.28

Table E 3 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 4

TN Scale	SS Scale	SEM
577	579	1.28
578	580	1.28
579	580	1.29
580	580	1.36
581	581	1.53
582	582	1.67
583	583	1.75
584	583	1.79
585	584	1.83
586	584	1.84
587	585	1.8
588	586	1.68
589	587	1.5
590	588	1.36
591	589	1.3
592	589	1.29
593	590	1.35
594	591	1.44
595	592	1.43
596	593	1.37
597	594	1.34
598	595	1.36
599	596	1.42
600	597	1.45
601	598	1.49
602	599	1.54
603	600	1.56
604	601	1.53
605	603	1.41
606	604	1.31
607	605	1.3
608	605	1.31
609	606	1.28
610	607	1.22
611	608	1.15
612	610	1.22

TN Scale	SS Scale	SEM
613	611	1.33
614	612	1.34
615	613	1.26
616	615	1.31
617	615	1.44
618	617	1.58
619	619	1.5
620	620	1.31
621	621	1.13
622	621	1.05
623	623	1.04
624	624	1.11
625	625	1.16
626	626	1.16
627	627	1.15
628	628	1.16
629	629	1.22
630	631	1.25
631	632	1.19
632	633	1.07
633	634	1.07
634	635	1.13
635	635	1.2
636	636	1.27
637	637	1.37
638	639	1.45
639	640	1.42
640	641	1.29
641	642	1.17
642	643	1.05
643	644	0.98
644	645	1.09
645	646	1.25
646	647	1.34
647	649	1.34
648	650	1.31

Table E 3 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 4

TN Scale	SS Scale	SEM
649	651	1.25
650	651	1.18
651	653	1.11
652	655	1.1
653	656	1.16
654	657	1.27
655	658	1.35
656	660	1.23
657	661	0.98
658	662	0.89
659	663	0.91
660	664	0.97
661	665	1.04
662	666	1.16
663	667	1.24
664	668	1.22
665	669	1.12
666	669	1.03
667	670	0.99
668	671	1.03
669	671	1.13
670	672	1.27
671	674	1.37
672	675	1.45
673	676	1.5
674	678	1.41
675	679	1.27
676	680	1.21
677	681	1.15
678	682	1.15
679	683	1.15
680	684	1.15
681	685	1.17
682	686	1.27
683	686	1.33
684	686	1.39

TN Scale	SS Scale	SEM
685	688	1.49
686	689	1.59
687	690	1.66
688	691	1.78
689	693	1.9
690	694	1.88
691	696	1.76
692	697	1.68
693	698	1.65
694	699	1.67
695	699	1.69
696	700	1.8
697	701	1.91
698	702	2.03
699	703	2.17
700	704	2.33
701	706	2.53
702	708	2.75
703	710	2.82
704	712	2.77
705	713	2.7
706	714	2.65
707	715	2.53
708	716	2.49
709	717	2.47
710	717	2.47
711	717	2.45
712	718	2.47
713	719	2.62
714	720	2.71
715	720	2.77
716	721	2.85
717	721	2.98
718	723	3.17
719	724	3.31
720	724	3.35

Table E 3 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 4

TN Scale	SS Scale	SEM
721	725	3.4
722	725	3.45
723	725	3.5
724	726	3.52
725	727	3.59
726	728	3.58
727	729	3.61
728	730	3.69
729	732	3.86
730	732	3.86
731	733	3.87
732	733	3.88
733	733	3.91
734	733	3.93
735	734	3.95
736	734	3.98
737	734	4
738	735	4
739	735	4.01
740	735	4.02
741	735	4.04
742	736	4.05
743	736	4.05
744	736	4.04
745	736	4.04
746	737	4.04
747	737	4.05
748	737	4.05
749	737	4.06
750	737	4.07
751	738	4.08
752	738	4.11
753	738	4.14
754	738	4.18
755	739	4.22
756	739	4.28

TN Scale	SS Scale	SEM
757	739	4.35
758	739	4.44
759	739	4.53
760	740	4.64
761	740	4.75
762	740	4.86
763	741	4.99
764	742	5.18
765	742	5.41
766	743	5.67
767	743	5.97
768	745	6.27
769	747	6.57
770	749	6.87
771	751	7.13
772	753	7.27
773	755	7.31
774	757	7.33
775	759	7.58
776	761	8.27
777	763	9.34
778	774	10.07
779	790	9.82
780	799	6.99

Table E 4
TN and Spring SAT/9 Linking Table—Reading Grade 5

TN Scale	SS Scale	SEM
475	585	1.78
476	585	1.78
477	585	1.78
478	585	1.78
479	585	1.78
480	585	1.78
481	585	1.76
482	585	1.74
483	585	1.73
484	585	1.71
485	586	1.7
486	586	1.69
487	586	1.68
488	586	1.67
489	586	1.67
490	587	1.66
491	587	1.66
492	587	1.65
493	587	1.64
494	587	1.63
495	587	1.63
496	587	1.62
497	587	1.62
498	587	1.62
499	587	1.61
500	587	1.61
501	587	1.61
502	587	1.61
503	587	1.61
504	587	1.6
505	587	1.6
506	587	1.6
507	587	1.6
508	587	1.59
509	587	1.59
510	587	1.59

TN Scale	SS Scale	SEM
511	587	1.58
512	587	1.58
513	587	1.57
514	587	1.57
515	588	1.56
516	588	1.55
517	588	1.55
518	588	1.54
519	588	1.53
520	588	1.53
521	588	1.53
522	588	1.52
523	588	1.52
524	588	1.51
525	588	1.51
526	588	1.5
527	588	1.49
528	588	1.49
529	588	1.48
530	588	1.47
531	589	1.46
532	589	1.45
533	589	1.44
534	589	1.42
535	589	1.4
536	589	1.39
537	589	1.38
538	589	1.37
539	590	1.36
540	590	1.33
541	591	1.34
542	591	1.38
543	591	1.41
544	591	1.44
545	591	1.46
546	591	1.49

Table E 4 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 5

TN Scale	SS Scale	SEM
547	591	1.53
548	592	1.58
549	592	1.65
550	592	1.74
551	593	1.83
552	593	1.86
553	593	1.88
554	593	1.89
555	593	1.9
556	593	1.91
557	593	1.92
558	593	1.93
559	594	1.94
560	594	1.95
561	594	1.96
562	594	1.98
563	594	1.98
564	595	1.99
565	595	1.96
566	596	1.91
567	596	1.83
568	597	1.76
569	597	1.69
570	597	1.61
571	598	1.54
572	598	1.48
573	598	1.38
574	599	1.31
575	599	1.28
576	599	1.26
577	599	1.25
578	599	1.24
579	599	1.23
580	599	1.23
581	600	1.23
582	600	1.25

TN Scale	SS Scale	SEM
583	600	1.26
584	600	1.31
585	601	1.39
586	601	1.44
587	601	1.47
588	602	1.53
589	602	1.6
590	603	1.65
591	603	1.7
592	604	1.7
593	605	1.66
594	605	1.63
595	606	1.58
596	606	1.52
597	607	1.46
598	607	1.39
599	608	1.31
600	608	1.27
601	608	1.25
602	609	1.26
603	609	1.3
604	610	1.32
605	610	1.35
606	611	1.4
607	611	1.42
608	612	1.39
609	613	1.34
610	614	1.27
611	614	1.24
612	614	1.21
613	615	1.18
614	616	1.18
615	617	1.18
616	617	1.15
617	618	1.12
618	618	1.09

Table E 4 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 5

TN Scale	SS Scale	SEM
619	619	1.05
620	619	1.02
621	620	1.01
622	620	1.03
623	621	1.09
624	622	1.15
625	623	1.16
626	624	1.15
627	625	1.13
628	626	1.13
629	627	1.13
630	627	1.11
631	628	1.09
632	629	1.09
633	630	1.09
634	631	1.17
635	632	1.25
636	633	1.24
637	634	1.18
638	635	1.13
639	636	1.11
640	637	1.1
641	638	1.09
642	639	1.06
643	640	1.03
644	641	1.01
645	642	0.96
646	643	0.88
647	644	0.83
648	645	0.86
649	646	0.92
650	647	0.93
651	648	1.04
652	650	1.16
653	651	0.98
654	652	0.79

TN Scale	SS Scale	SEM
655	652	0.79
656	653	0.92
657	654	1.11
658	655	1.19
659	656	1.12
660	657	1.01
661	658	0.94
662	659	0.9
663	660	0.9
664	661	0.97
665	662	1.06
666	663	1.14
667	665	1.12
668	666	1.02
669	667	0.92
670	668	0.86
671	669	0.82
672	669	0.79
673	670	0.77
674	671	0.77
675	672	0.8
676	673	0.83
677	674	0.82
678	675	0.81
679	676	0.81
680	677	0.85
681	678	0.89
682	679	0.9
683	680	0.86
684	681	0.85
685	682	0.88
686	683	1
687	684	1.13
688	685	1.17
689	686	1.15
690	688	1.16

Table E 4 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 5

TN Scale	SS Scale	SEM
691	689	1.18
692	690	1.21
693	691	1.22
694	692	1.17
695	693	1.11
696	694	1.09
697	695	1.07
698	696	1.06
699	697	1.07
700	698	1.05
701	699	1.05
702	699	1.08
703	700	1.11
704	700	1.13
705	701	1.14
706	702	1.18
707	703	1.31
708	705	1.44
709	706	1.48
710	706	1.5
711	707	1.52
712	707	1.56
713	708	1.65
714	709	1.76
715	710	1.81
716	711	1.89
717	713	1.99
718	713	2.03
719	715	2.06
720	716	2.02
721	718	1.94
722	720	1.9
723	720	1.88
724	721	1.9
725	721	1.92
726	721	1.93

TN Scale	SS Scale	SEM
727	721	1.95
728	722	1.98
729	722	2.02
730	722	2.1
731	723	2.19
732	723	2.23
733	723	2.28
734	723	2.36
735	724	2.6
736	726	3.04
737	727	3.12
738	728	3.22
739	728	3.3
740	729	3.39
741	729	3.59
742	734	3.54
743	737	3.42
744	738	3.3
745	739	3.24
746	739	3.2
747	740	3.11
748	740	3.05
749	741	3.14
750	741	3.13
751	741	3.13
752	741	3.13
753	741	3.12
754	741	3.12
755	741	3.12
756	741	3.12
757	741	3.12
758	741	3.13
759	741	3.13
760	741	3.14
761	741	3.15
762	741	3.16

Table E 4 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 5

TN Scale	SS Scale	SEM
763	742	3.17
764	742	3.19
765	742	3.21
766	742	3.23
767	742	3.25
768	742	3.27
769	742	3.29
770	742	3.32
771	742	3.36
772	743	3.43
773	743	3.54
774	744	3.7
775	744	3.94
776	745	4.23
777	745	4.6
778	746	5.09
779	747	5.67
780	747	6.41
781	748	7.33
782	750	8.31
783	752	9.67
784	754	11.12
785	756	12.88
786	759	14.71
787	763	15.53
788	793	15.23
789	804	13.15
790	816	8.8

Table E 5
TN and Spring SAT/9 Linking Table—Reading Grade 6

TN Scale	SS Scale	SEM
486	598	2.54
487	598	2.54
488	598	2.54
489	598	2.54
490	598	2.54
491	599	2.51
492	599	2.47
493	599	2.35
494	599	2.37
495	599	2.43
496	599	2.49
497	599	2.48
498	603	1.88
499	606	2.21
500	606	2.08
501	606	1.94
502	606	1.82
503	606	1.71
504	606	1.63
505	606	1.57
506	606	1.52
507	606	1.49
508	606	1.46
509	606	1.43
510	606	1.41
511	606	1.39
512	606	1.38
513	606	1.37
514	606	1.37
515	606	1.37
516	606	1.37
517	606	1.37
518	606	1.37
519	606	1.36
520	606	1.36
521	606	1.36

TN Scale	SS Scale	SEM
522	606	1.36
523	606	1.36
524	606	1.36
525	606	1.36
526	606	1.36
527	606	1.36
528	606	1.35
529	606	1.35
530	606	1.35
531	606	1.35
532	606	1.35
533	606	1.35
534	606	1.35
535	606	1.34
536	606	1.34
537	607	1.34
538	607	1.34
539	607	1.34
540	607	1.34
541	607	1.33
542	607	1.33
543	607	1.33
544	607	1.33
545	607	1.33
546	607	1.32
547	607	1.32
548	607	1.32
549	607	1.32
550	607	1.32
551	607	1.32
552	607	1.32
553	607	1.32
554	607	1.32
555	607	1.33
556	607	1.33
557	607	1.34

Table E 5 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 6

TN Scale	SS Scale	SEM
558	607	1.36
559	608	1.38
560	608	1.4
561	608	1.42
562	608	1.45
563	608	1.47
564	608	1.49
565	608	1.51
566	608	1.53
567	608	1.56
568	608	1.59
569	608	1.64
570	608	1.71
571	609	1.76
572	609	1.8
573	609	1.87
574	609	1.94
575	610	2.01
576	610	2.05
577	611	2.07
578	612	2.05
579	612	2.01
580	613	1.97
581	613	1.91
582	613	1.87
583	614	1.75
584	614	1.62
585	614	1.55
586	615	1.47
587	615	1.41
588	615	1.36
589	615	1.33
590	615	1.33
591	616	1.32
592	616	1.3
593	616	1.31

TN Scale	SS Scale	SEM
594	617	1.35
595	617	1.39
596	618	1.42
597	619	1.42
598	619	1.41
599	620	1.4
600	620	1.37
601	620	1.35
602	620	1.32
603	621	1.29
604	621	1.26
605	621	1.19
606	622	1.1
607	622	1.02
608	623	0.98
609	623	0.99
610	624	1.03
611	624	1.15
612	625	1.41
613	626	1.59
614	627	1.68
615	628	1.67
616	628	1.62
617	629	1.55
618	630	1.54
619	630	1.57
620	632	1.62
621	633	1.57
622	634	1.42
623	635	1.28
624	636	1.23
625	637	1.18
626	638	1.04
627	639	0.86
628	640	0.82
629	641	0.88

Table E 5 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 6

TN Scale	SS Scale	SEM
630	642	1.01
631	643	1.09
632	644	1.14
633	645	1.17
634	646	1.15
635	647	1.09
636	648	1.04
637	649	1
638	650	0.98
639	651	0.97
640	651	0.95
641	652	0.94
642	652	0.93
643	653	0.95
644	654	0.95
645	655	0.92
646	656	0.89
647	656	0.88
648	657	0.91
649	658	0.92
650	659	0.87
651	660	0.8
652	661	0.82
653	662	0.85
654	663	0.82
655	663	0.76
656	664	0.73
657	665	0.76
658	666	0.81
659	667	0.8
660	668	0.74
661	668	0.8
662	669	0.96
663	671	1.03
664	672	1
665	673	0.93

TN Scale	SS Scale	SEM
666	674	0.8
667	675	0.7
668	676	0.65
669	677	0.64
670	677	0.67
671	678	0.77
672	679	0.86
673	680	0.92
674	681	0.99
675	682	1.02
676	683	0.94
677	684	0.87
678	685	0.89
679	686	0.95
680	687	0.95
681	688	0.88
682	689	0.81
683	690	0.81
684	691	0.87
685	692	0.9
686	693	0.91
687	694	0.91
688	695	0.92
689	695	0.93
690	696	0.95
691	698	0.97
692	699	1
693	700	1.04
694	702	1.02
695	703	0.93
696	704	0.85
697	704	0.83
698	705	0.84
699	706	0.89
700	706	0.94
701	707	0.97

Table E 5 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 6

TN Scale	SS Scale	SEM
702	708	1.02
703	708	1.1
704	709	1.28
705	710	1.5
706	711	1.57
707	712	1.57
708	712	1.54
709	713	1.46
710	714	1.42
711	715	1.41
712	715	1.41
713	716	1.4
714	717	1.4
715	718	1.41
716	718	1.42
717	718	1.44
718	719	1.45
719	720	1.44
720	721	1.45
721	721	1.46
722	722	1.45
723	723	1.48
724	724	1.48
725	725	1.53
726	725	1.53
727	725	1.54
728	725	1.56
729	726	1.58
730	727	1.61
731	728	1.67
732	729	1.79
733	730	2
734	730	2
735	730	2
736	730	2.01
737	730	2.03

TN Scale	SS Scale	SEM
738	730	2.05
739	730	2.07
740	730	2.08
741	730	2.09
742	730	2.1
743	730	2.11
744	730	2.12
745	730	2.13
746	730	2.14
747	730	2.15
748	730	2.16
749	731	2.17
750	731	2.18
751	731	2.2
752	731	2.21
753	731	2.23
754	731	2.25
755	731	2.27
756	731	2.3
757	732	2.32
758	732	2.35
759	732	2.37
760	732	2.39
761	733	2.41
762	733	2.43
763	733	2.45
764	734	2.46
765	734	2.47
766	734	2.49
767	734	2.5
768	735	2.5
769	735	2.51
770	735	2.52
771	735	2.53
772	736	2.53
773	736	2.54

Table E 5 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 6

TN Scale	SS Scale	SEM
774	736	2.55
775	736	2.56
776	737	2.57
777	737	2.58
778	737	2.6
779	738	2.62
780	738	2.64
781	738	2.65
782	739	2.63
783	740	2.63
784	740	2.65
785	741	2.73
786	742	2.87
787	743	3.06
788	743	3.3
789	745	3.58
790	746	3.85
791	748	4.11
792	750	4.31
793	752	4.48
794	755	4.74
795	757	5.07
796	760	5.76
797	765	6.94
798	771	8.69
799	785	10.1
800	817	8.17

Table E 6
TN and Spring SAT/9 Linking Table—Reading Grade 7

TN Scale	SS Scale	SEM
498	602	1.59
499	602	1.59
500	602	1.59
501	602	1.59
502	602	1.58
503	602	1.58
504	602	1.58
505	602	1.57
506	602	1.57
507	602	1.56
508	602	1.56
509	602	1.55
510	602	1.55
511	602	1.54
512	603	1.54
513	603	1.53
514	603	1.54
515	603	1.54
516	603	1.54
517	603	1.54
518	603	1.54
519	603	1.54
520	603	1.53
521	604	1.53
522	604	1.53
523	604	1.53
524	604	1.53
525	604	1.53
526	604	1.53
527	604	1.53
528	604	1.53
529	604	1.54
530	604	1.54
531	604	1.54
532	604	1.55
533	604	1.56

TN Scale	SS Scale	SEM
534	604	1.56
535	604	1.57
536	604	1.58
537	604	1.58
538	604	1.59
539	605	1.59
540	605	1.59
541	605	1.59
542	605	1.59
543	605	1.6
544	605	1.6
545	605	1.6
546	605	1.6
547	605	1.6
548	605	1.6
549	605	1.6
550	605	1.6
551	605	1.6
552	605	1.6
553	605	1.61
554	605	1.61
555	605	1.61
556	605	1.62
557	606	1.64
558	606	1.66
559	606	1.68
560	606	1.7
561	607	1.73
562	607	1.76
563	607	1.77
564	607	1.77
565	608	1.78
566	608	1.8
567	608	1.82
568	608	1.84
569	608	1.86

Table E 6 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 7

TN Scale	SS Scale	SEM
570	609	1.88
571	609	1.88
572	609	1.88
573	609	1.88
574	610	1.86
575	610	1.84
576	611	1.79
577	611	1.71
578	612	1.64
579	612	1.55
580	612	1.47
581	613	1.47
582	613	1.45
583	613	1.47
584	614	1.54
585	614	1.62
586	615	1.71
587	615	1.78
588	616	1.81
589	616	1.83
590	616	1.85
591	617	1.88
592	617	1.94
593	618	2.02
594	619	2.05
595	620	2.05
596	620	2.04
597	621	2.04
598	621	2.01
599	622	1.97
600	622	1.86
601	623	1.75
602	624	1.6
603	625	1.44
604	626	1.38
605	626	1.4

TN Scale	SS Scale	SEM
606	627	1.51
607	628	1.64
608	629	1.75
609	630	1.81
610	630	1.8
611	631	1.8
612	632	1.81
613	633	1.82
614	635	1.83
615	636	1.87
616	636	1.98
617	637	2.12
618	639	2.16
619	640	2.07
620	641	1.89
621	642	1.63
622	643	1.47
623	644	1.37
624	644	1.31
625	645	1.29
626	646	1.34
627	647	1.45
628	648	1.57
629	649	1.62
630	650	1.62
631	651	1.65
632	652	1.67
633	653	1.58
634	654	1.34
635	655	1.1
636	655	0.95
637	656	0.91
638	657	0.98
639	658	1.06
640	659	1.13
641	660	1.21

Table E 6 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 7

TN Scale	SS Scale	SEM
642	661	1.25
643	662	1.26
644	663	1.25
645	664	1.24
646	665	1.31
647	666	1.4
648	668	1.4
649	669	1.29
650	670	1.16
651	671	1.02
652	671	0.84
653	672	0.74
654	673	0.74
655	674	0.76
656	674	0.75
657	675	0.69
658	676	0.65
659	676	0.71
660	677	0.88
661	679	0.99
662	680	0.97
663	681	0.95
664	682	0.97
665	684	0.99
666	685	0.95
667	686	0.92
668	687	0.88
669	687	0.86
670	688	0.86
671	689	0.87
672	690	0.9
673	691	0.91
674	692	0.87
675	693	0.84
676	693	0.83
677	695	0.84

TN Scale	SS Scale	SEM
678	696	0.88
679	697	0.87
680	697	0.86
681	698	0.86
682	699	0.85
683	700	0.83
684	701	0.8
685	702	0.79
686	703	0.79
687	704	0.83
688	705	0.86
689	706	0.86
690	707	0.85
691	707	0.84
692	708	0.81
693	709	0.75
694	710	0.66
695	711	0.65
696	711	0.66
697	712	0.75
698	713	0.92
699	714	1.03
700	715	1.03
701	716	1
702	717	0.97
703	717	0.96
704	718	0.94
705	719	0.94
706	720	0.97
707	721	1.04
708	722	1.08
709	722	1.08
710	723	1.06
711	724	1.03
712	724	0.97
713	725	0.92

Table E 6 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 7

TN Scale	SS Scale	SEM
714	726	0.89
715	727	0.89
716	728	0.95
717	728	1.04
718	728	1.2
719	729	1.38
720	730	1.5
721	731	1.56
722	732	1.55
723	733	1.48
724	734	1.43
725	735	1.38
726	736	1.33
727	736	1.32
728	737	1.34
729	737	1.38
730	738	1.41
731	738	1.44
732	738	1.48
733	739	1.53
734	739	1.58
735	739	1.62
736	740	1.65
737	740	1.67
738	741	1.7
739	741	1.74
740	742	1.75
741	743	1.79
742	743	1.82
743	744	1.84
744	744	1.89
745	744	1.93
746	747	2.01
747	749	2.23
748	749	2.35
749	750	2.59

TN Scale	SS Scale	SEM
750	751	2.81
751	751	2.94
752	751	3.08
753	751	3.13
754	752	3.17
755	752	3.2
756	752	3.23
757	752	3.25
758	752	3.28
759	753	3.31
760	753	3.35
761	753	3.38
762	753	3.41
763	753	3.45
764	754	3.48
765	754	3.49
766	754	3.51
767	754	3.52
768	754	3.53
769	754	3.54
770	755	3.56
771	755	3.57
772	755	3.58
773	755	3.59
774	755	3.6
775	755	3.61
776	755	3.62
777	756	3.63
778	756	3.63
779	756	3.64
780	756	3.65
781	756	3.65
782	756	3.66
783	757	3.67
784	757	3.67
785	757	3.68

Table E 6 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 7

TN Scale	SS Scale	SEM
786	757	3.69
787	757	3.69
788	757	3.7
789	757	3.7
790	758	3.71
791	758	3.72
792	758	3.72
793	759	3.64
794	760	3.54
795	761	3.44
796	762	3.34
797	763	3.26
798	764	3.23
799	765	3.28
800	766	3.45
801	767	3.76
802	768	4.2
803	770	4.72
804	773	5.26
805	777	5.91
806	780	6.83
807	786	8.26
808	794	10.27
809	808	11.43
810	837	7.27

Table E 7
TN and Spring SAT/9 Linking Table—Reading Grade 8

TN Scale	SS Scale	SEM
507	615	3.77
508	615	3.77
509	615	3.77
510	615	3.77
511	615	3.77
512	615	3.77
513	615	3.77
514	616	3.77
515	616	3.77
516	616	3.76
517	616	3.76
518	616	3.76
519	616	3.76
520	616	3.76
521	616	3.76
522	616	3.77
523	616	3.77
524	616	3.77
525	616	3.77
526	616	3.77
527	616	3.77
528	616	3.78
529	616	3.78
530	616	3.78
531	616	3.78
532	616	3.79
533	616	3.79
534	616	3.79
535	616	3.79
536	616	3.79
537	616	3.79
538	616	3.79
539	616	3.79
540	616	3.8
541	616	3.8
542	616	3.8

TN Scale	SS Scale	SEM
543	616	3.81
544	616	3.81
545	616	3.81
546	616	3.81
547	616	3.82
548	616	3.82
549	616	3.82
550	616	3.82
551	616	3.82
552	616	3.83
553	616	3.83
554	616	3.83
555	616	3.84
556	616	3.86
557	616	3.87
558	616	3.88
559	617	3.9
560	618	3.91
561	619	3.93
562	619	3.95
563	620	3.98
564	620	3.98
565	620	3.98
566	621	3.97
567	621	3.96
568	621	3.94
569	621	3.91
570	622	3.9
571	622	3.84
572	623	3.8
573	624	3.76
574	624	3.71
575	624	3.66
576	624	3.61
577	624	3.56
578	625	3.52

Table E 7 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 8

TN Scale	SS Scale	SEM
579	625	3.46
580	625	3.4
581	625	3.25
582	626	3.08
583	626	2.98
584	627	2.91
585	627	2.81
586	627	2.75
587	627	2.7
588	627	2.64
589	628	2.55
590	628	2.49
591	629	2.41
592	629	2.33
593	630	2.24
594	631	2.19
595	631	2.16
596	631	2.11
597	632	2.08
598	632	2.06
599	632	2.04
600	632	2.01
601	633	2
602	633	1.99
603	634	1.98
604	634	1.95
605	634	1.93
606	635	1.91
607	635	1.88
608	636	1.85
609	636	1.82
610	636	1.76
611	637	1.71
612	637	1.66
613	638	1.6
614	638	1.54

TN Scale	SS Scale	SEM
615	639	1.51
616	640	1.51
617	640	1.49
618	641	1.48
619	641	1.46
620	642	1.44
621	644	1.48
622	644	1.51
623	645	1.53
624	645	1.58
625	646	1.6
626	646	1.68
627	647	1.78
628	648	1.85
629	649	1.84
630	650	1.77
631	651	1.59
632	652	1.46
633	652	1.33
634	653	1.26
635	654	1.31
636	654	1.35
637	655	1.37
638	655	1.36
639	656	1.3
640	657	1.18
641	658	1.08
642	659	1.04
643	659	1.01
644	660	1
645	661	1.02
646	662	1.06
647	662	1.1
648	663	1.12
649	664	1.12
650	665	1.1

Table E 7 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 8

TN Scale	SS Scale	SEM
651	666	1.04
652	667	1.01
653	668	0.99
654	669	1.01
655	670	0.99
656	670	0.95
657	671	0.87
658	672	0.78
659	672	0.73
660	673	0.86
661	673	1.12
662	674	1.32
663	676	1.36
664	677	1.31
665	678	1.25
666	679	1.17
667	681	1.04
668	682	0.93
669	682	0.8
670	683	0.78
671	684	0.89
672	685	1.01
673	687	0.98
674	688	0.91
675	689	0.87
676	690	0.87
677	691	0.9
678	691	0.9
679	692	0.88
680	694	0.86
681	695	0.79
682	695	0.71
683	696	0.64
684	696	0.63
685	697	0.71
686	698	0.81

TN Scale	SS Scale	SEM
687	698	0.87
688	699	0.89
689	700	0.9
690	701	0.92
691	703	0.95
692	704	0.91
693	705	0.83
694	705	0.76
695	706	0.74
696	707	0.75
697	708	0.79
698	708	0.8
699	709	0.79
700	710	0.78
701	711	0.77
702	712	0.77
703	712	0.77
704	713	0.77
705	714	0.78
706	715	0.8
707	715	0.89
708	716	0.98
709	717	1.04
710	718	1
711	719	0.88
712	719	0.79
713	720	0.75
714	721	0.76
715	721	0.81
716	722	0.89
717	723	0.94
718	724	0.94
719	725	0.95
720	725	0.98
721	726	1.02
722	727	1.02

Table E 7 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 8

TN Scale	SS Scale	SEM
723	728	1
724	728	0.98
725	729	0.98
726	730	0.97
727	730	0.97
728	731	0.98
729	731	0.98
730	732	1.01
731	732	1.07
732	733	1.11
733	734	1.13
734	735	1.12
735	736	1.14
736	736	1.17
737	738	1.22
738	739	1.26
739	739	1.3
740	740	1.43
741	740	1.48
742	741	1.59
743	742	1.72
744	743	1.77
745	744	1.76
746	745	1.72
747	746	1.69
748	747	1.6
749	747	1.58
750	748	1.58
751	748	1.58
752	748	1.59
753	749	1.7
754	750	1.88
755	750	1.96
756	750	2.03
757	750	2.21
758	751	2.5

TN Scale	SS Scale	SEM
759	754	2.81
760	755	2.97
761	755	3
762	755	3.03
763	756	3.06
764	756	3.08
765	756	3.12
766	757	3.15
767	757	3.2
768	758	3.23
769	758	3.24
770	758	3.26
771	759	3.28
772	759	3.29
773	759	3.29
774	760	3.28
775	760	3.27
776	760	3.26
777	760	3.25
778	760	3.24
779	760	3.23
780	761	3.22
781	761	3.21
782	761	3.2
783	761	3.19
784	761	3.17
785	762	3.16
786	762	3.15
787	762	3.14
788	762	3.13
789	762	3.12
790	762	3.11
791	763	3.1
792	763	3.09
793	763	3.08
794	763	3.07

Table E 7 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 8

TN Scale	SS Scale	SEM
795	763	3.06
796	764	3.06
797	764	2.95
798	765	2.85
799	765	2.74
800	766	2.63
801	767	2.52
802	767	2.43
803	768	2.35
804	769	2.3
805	769	2.27
806	770	2.28
807	771	2.31
808	771	2.36
809	772	2.43
810	774	2.48
811	775	2.5
812	776	2.5
813	777	2.55
814	778	2.77
815	779	3.3
816	780	4.28
817	784	5.58
818	788	6.82
819	792	7.99
820	825	12.95

Table E 8
TN and Spring SAT/9 Linking Table—Reading Grade 9

TN Scale	SS Scale	SEM
512	626	1.28
513	626	1.28
514	626	1.28
515	626	1.28
516	626	1.28
517	626	1.28
518	626	1.28
519	626	1.28
520	626	1.28
521	627	1.28
522	627	1.28
523	627	1.28
524	627	1.29
525	627	1.3
526	627	1.31
527	627	1.32
528	627	1.34
529	627	1.36
530	628	1.38
531	628	1.38
532	628	1.39
533	628	1.39
534	628	1.4
535	628	1.41
536	628	1.41
537	628	1.42
538	628	1.42
539	628	1.42
540	628	1.43
541	628	1.43
542	628	1.43
543	628	1.44
544	628	1.44
545	628	1.45
546	628	1.45
547	628	1.46

TN Scale	SS Scale	SEM
548	628	1.46
549	628	1.46
550	628	1.47
551	628	1.47
552	628	1.48
553	628	1.48
554	628	1.49
555	628	1.49
556	628	1.5
557	628	1.5
558	628	1.5
559	628	1.51
560	628	1.51
561	628	1.52
562	628	1.52
563	628	1.53
564	628	1.54
565	629	1.55
566	629	1.56
567	629	1.56
568	629	1.57
569	629	1.58
570	629	1.58
571	629	1.58
572	629	1.59
573	629	1.59
574	629	1.6
575	629	1.6
576	629	1.61
577	629	1.62
578	629	1.63
579	629	1.65
580	630	1.67
581	630	1.69
582	630	1.7
583	630	1.71

Table E 8 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 9

TN Scale	SS Scale	SEM
584	630	1.73
585	630	1.75
586	631	1.77
587	631	1.78
588	631	1.78
589	631	1.79
590	631	1.8
591	631	1.8
592	631	1.81
593	631	1.81
594	632	1.82
595	632	1.82
596	632	1.82
597	632	1.83
598	632	1.83
599	633	1.82
600	633	1.8
601	633	1.79
602	633	1.77
603	634	1.73
604	634	1.67
605	634	1.6
606	635	1.59
607	635	1.6
608	635	1.6
609	635	1.64
610	636	1.75
611	636	1.82
612	636	1.87
613	637	1.95
614	637	2.02
615	638	2.06
616	638	2.1
617	638	2.1
618	639	2.1
619	639	2.08

TN Scale	SS Scale	SEM
620	640	2.02
621	641	1.93
622	641	1.87
623	641	1.83
624	642	1.73
625	642	1.68
626	643	1.67
627	644	1.66
628	644	1.66
629	645	1.65
630	645	1.63
631	646	1.6
632	647	1.53
633	647	1.47
634	648	1.43
635	649	1.42
636	649	1.4
637	651	1.35
638	652	1.28
639	652	1.24
640	653	1.2
641	653	1.16
642	654	1.17
643	654	1.2
644	655	1.23
645	656	1.22
646	657	1.15
647	657	1.03
648	658	0.97
649	658	0.97
650	659	1
651	659	1.03
652	660	1.05
653	661	1.04
654	662	0.97
655	662	0.89

Table E 8 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 9

TN Scale	SS Scale	SEM
656	663	0.86
657	664	0.89
658	664	0.95
659	665	1
660	666	1
661	667	1
662	668	1.04
663	669	1.06
664	670	1.01
665	670	0.94
666	671	0.89
667	672	0.87
668	673	0.88
669	674	0.92
670	675	0.97
671	676	0.99
672	677	0.89
673	678	0.76
674	679	0.85
675	679	1
676	681	1.01
677	681	0.93
678	682	0.86
679	683	0.87
680	684	0.88
681	684	0.88
682	685	0.85
683	686	0.82
684	687	0.81
685	688	0.81
686	689	0.81
687	690	0.82
688	691	0.81
689	691	0.79
690	692	0.79
691	692	0.82

TN Scale	SS Scale	SEM
692	693	0.87
693	694	0.92
694	695	0.93
695	696	0.94
696	697	0.97
697	698	1
698	699	0.95
699	700	0.85
700	701	0.76
701	701	0.72
702	702	0.7
703	702	0.72
704	703	0.77
705	704	0.82
706	705	0.86
707	706	0.89
708	707	0.93
709	708	0.94
710	709	0.93
711	710	0.93
712	712	0.99
713	712	1.07
714	714	1.22
715	715	1.28
716	716	1.2
717	717	1.11
718	717	1.03
719	718	0.95
720	719	0.92
721	720	0.94
722	721	1.05
723	723	1.22
724	724	1.21
725	725	1.12
726	726	1.06
727	727	1.1

Table E 8 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 9

TN Scale	SS Scale	SEM
728	728	1.26
729	729	1.37
730	730	1.39
731	731	1.36
732	732	1.33
733	733	1.32
734	734	1.39
735	735	1.49
736	736	1.57
737	737	1.61
738	737	1.65
739	739	1.7
740	740	1.76
741	741	1.79
742	742	1.81
743	742	1.86
744	743	1.92
745	744	1.94
746	745	1.94
747	746	1.9
748	747	1.93
749	748	1.96
750	748	1.99
751	749	2.01
752	750	2.13
753	751	2.33
754	752	2.41
755	752	2.48
756	753	2.55
757	754	2.74
758	754	2.88
759	755	3
760	755	3.05
761	755	3.11
762	755	3.18
763	756	3.24

TN Scale	SS Scale	SEM
764	756	3.26
765	756	3.28
766	756	3.31
767	756	3.34
768	757	3.37
769	757	3.41
770	758	3.49
771	758	3.61
772	759	3.74
773	760	3.95
774	761	4.27
775	763	4.79
776	764	5.74
777	766	6.89
778	767	7.79
779	767	7.79
780	767	7.8
781	767	7.8
782	767	7.81
783	767	7.82
784	767	7.84
785	767	7.85
786	767	7.86
787	767	7.88
788	767	7.9
789	767	7.92
790	767	7.95
791	767	7.98
792	767	8.01
793	767	8.05
794	767	8.09
795	767	8.14
796	767	8.21
797	767	8.29
798	767	8.38
799	767	8.48

Table E 8 (cont.)
TN and Spring SAT/9 Linking Table—Reading Grade 9

TN Scale	SS Scale	SEM
800	767	8.59
801	767	8.72
802	767	8.89
803	767	9.07
804	767	9.28
805	767	9.42
806	767	9.57
807	768	9.79
808	769	10.09
809	769	10.43
810	770	10.8
811	771	11.22
812	772	11.68
813	772	12.15
814	773	12.62
815	774	13.14
816	775	13.7
817	775	14.29
818	777	14.87
819	779	15.45
820	781	16.03
821	783	16.54
822	785	16.99
823	788	17.31
824	793	17.56
825	798	17.67
826	805	17.48
827	812	17.09
828	819	16.3
829	823	15.06
830	828	13.42
831	832	10.93
832	837	7.69
833	853	7.85

Table E 9
TN and Spring SAT/9 Linking Table—Language Grade 2

TN Scale	SS Scale	SEM
424	499	2.8
425	499	2.8
426	499	2.8
427	499	2.8
428	499	2.8
429	499	2.8
430	499	2.8
431	499	2.8
432	499	2.8
433	499	2.8
434	499	2.8
435	499	2.8
436	499	2.8
437	499	2.8
438	499	2.8
439	499	2.8
440	499	2.8
441	499	2.8
442	499	2.8
443	499	2.8
444	499	2.8
445	499	2.8
446	499	2.8
447	499	2.8
448	499	2.8
449	499	2.8
450	499	2.79
451	499	2.79
452	499	2.79
453	499	2.79
454	499	2.78
455	499	2.78
456	499	2.78
457	499	2.78
458	499	2.78
459	499	2.77

TN Scale	SS Scale	SEM
460	499	2.77
461	499	2.77
462	499	2.77
463	499	2.76
464	499	2.76
465	499	2.76
466	499	2.75
467	499	2.75
468	499	2.75
469	499	2.75
470	499	2.74
471	499	2.74
472	499	2.74
473	499	2.74
474	499	2.73
475	499	2.73
476	499	2.72
477	499	2.72
478	499	2.71
479	499	2.71
480	499	2.71
481	499	2.7
482	499	2.7
483	499	2.7
484	499	2.69
485	499	2.69
486	499	2.69
487	499	2.69
488	499	2.68
489	499	2.68
490	499	2.67
491	500	2.66
492	500	2.65
493	500	2.64
494	500	2.64
495	500	2.63

Table E 9 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 2

TN Scale	SS Scale	SEM
496	500	2.62
497	500	2.62
498	500	2.61
499	500	2.6
500	500	2.57
501	500	2.55
502	501	2.53
503	501	2.51
504	501	2.48
505	501	2.45
506	501	2.41
507	502	2.36
508	502	2.32
509	502	2.27
510	502	2.22
511	503	2.17
512	503	2.07
513	503	1.95
514	504	1.85
515	504	1.76
516	504	1.68
517	504	1.62
518	504	1.54
519	505	1.48
520	505	1.41
521	506	1.38
522	506	1.37
523	506	1.37
524	506	1.37
525	507	1.37
526	507	1.37
527	507	1.38
528	507	1.38
529	507	1.37
530	507	1.37
531	507	1.35

TN Scale	SS Scale	SEM
532	508	1.35
533	508	1.35
534	509	1.35
535	509	1.35
536	509	1.35
537	510	1.34
538	510	1.32
539	510	1.31
540	510	1.28
541	511	1.25
542	511	1.18
543	512	1.12
544	512	1.08
545	512	1.06
546	513	1.05
547	513	1.05
548	514	1.06
549	514	1.06
550	515	1.05
551	515	1.04
552	515	1.03
553	515	1.03
554	516	1.02
555	517	1.04
556	517	1.05
557	518	1.05
558	519	1.04
559	519	1.04
560	520	1.05
561	521	1.06
562	521	1.07
563	522	1.09
564	522	1.1
565	523	1.13
566	524	1.15
567	525	1.14

Table E 9 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 2

TN Scale	SS Scale	SEM
568	525	1.12
569	526	1.07
570	527	1.01
571	528	0.99
572	528	0.98
573	529	0.96
574	530	0.92
575	531	0.9
576	531	0.91
577	532	0.9
578	533	0.89
579	534	0.86
580	535	0.87
581	535	0.88
582	536	0.89
583	537	0.89
584	538	0.91
585	539	0.94
586	540	0.95
587	541	0.97
588	542	0.97
589	543	0.98
590	544	1.02
591	545	1.06
592	546	1.08
593	548	1.04
594	549	1.03
595	550	1.02
596	551	1
597	552	0.99
598	553	0.99
599	554	1
600	555	1.03
601	556	1.06
602	557	1.08
603	558	1.09

TN Scale	SS Scale	SEM
604	559	1.08
605	561	1.07
606	562	1.04
607	563	0.98
608	563	0.92
609	564	0.89
610	565	0.91
611	566	0.99
612	567	1.1
613	568	1.14
614	569	1.16
615	570	1.18
616	571	1.21
617	571	1.23
618	572	1.25
619	573	1.29
620	574	1.33
621	575	1.37
622	576	1.39
623	577	1.39
624	577	1.36
625	579	1.29
626	580	1.25
627	581	1.23
628	582	1.2
629	583	1.19
630	584	1.18
631	585	1.17
632	586	1.16
633	586	1.17
634	586	1.18
635	587	1.2
636	587	1.23
637	588	1.27
638	589	1.31
639	590	1.33

Table E 9 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 2

TN Scale	SS Scale	SEM
640	590	1.33
641	592	1.29
642	593	1.3
643	594	1.3
644	595	1.3
645	595	1.31
646	596	1.32
647	597	1.39
648	597	1.49
649	598	1.54
650	598	1.6
651	599	1.68
652	599	1.75
653	600	1.79
654	600	1.83
655	601	1.88
656	602	1.89
657	604	1.85
658	605	1.86
659	606	1.84
660	607	1.83
661	608	1.76
662	610	1.71
663	612	1.71
664	613	1.72
665	613	1.72
666	613	1.74
667	614	1.71
668	615	1.66
669	615	1.67
670	615	1.67
671	616	1.67
672	616	1.68
673	616	1.69
674	617	1.7
675	617	1.72

TN Scale	SS Scale	SEM
676	617	1.74
677	617	1.76
678	618	1.77
679	618	1.78
680	618	1.8
681	618	1.81
682	618	1.82
683	618	1.82
684	619	1.83
685	619	1.85
686	620	1.82
687	622	1.8
688	623	1.93
689	624	2.48
690	626	3.22
691	629	3.75
692	632	4.03
693	634	4.17
694	638	4.29
695	642	4.35
696	645	4.49
697	649	4.96
698	655	5.48
699	656	5.44
700	657	5.42
701	657	5.42
702	658	5.44
703	658	5.52
704	659	5.72
705	667	5.84
706	705	0.51

Table E 10
TN and Spring SAT/9 Linking Table—Language Grade 3

TN Scale	SS Scale	SEM
455	519	2.57
456	519	2.57
457	519	2.57
458	519	2.57
459	519	2.57
460	519	2.57
461	519	2.57
462	519	2.57
463	519	2.57
464	519	2.57
465	519	2.57
466	519	2.57
467	519	2.57
468	519	2.57
469	519	2.57
470	519	2.57
471	519	2.57
472	519	2.57
473	519	2.57
474	519	2.57
475	519	2.57
476	519	2.57
477	519	2.57
478	519	2.57
479	519	2.57
480	519	2.57
481	519	2.57
482	519	2.57
483	519	2.57
484	519	2.57
485	519	2.57
486	519	2.56
487	519	2.56
488	519	2.56
489	519	2.56
490	519	2.55

TN Scale	SS Scale	SEM
491	519	2.55
492	519	2.55
493	519	2.55
494	519	2.55
495	519	2.54
496	519	2.54
497	519	2.54
498	519	2.54
499	519	2.53
500	519	2.53
501	519	2.53
502	519	2.53
503	519	2.53
504	519	2.52
505	519	2.52
506	519	2.52
507	519	2.52
508	519	2.52
509	519	2.52
510	520	2.51
511	520	2.51
512	520	2.51
513	520	2.51
514	520	2.51
515	520	2.5
516	520	2.49
517	520	2.48
518	520	2.48
519	520	2.47
520	520	2.46
521	520	2.46
522	520	2.45
523	520	2.45
524	520	2.44
525	521	2.44
526	521	2.44

Table E 10 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 3

TN Scale	SS Scale	SEM
527	521	2.44
528	521	2.43
529	521	2.42
530	521	2.42
531	521	2.41
532	521	2.4
533	522	2.38
534	522	2.37
535	522	2.35
536	522	2.34
537	523	2.3
538	523	2.25
539	523	2.22
540	524	2.18
541	524	2.14
542	524	2.1
543	524	2.04
544	525	2
545	525	1.96
546	525	1.93
547	525	1.9
548	525	1.88
549	525	1.85
550	525	1.82
551	526	1.78
552	526	1.75
553	526	1.7
554	526	1.65
555	526	1.63
556	526	1.62
557	527	1.57
558	527	1.52
559	528	1.46
560	529	1.41
561	529	1.36
562	530	1.32

TN Scale	SS Scale	SEM
563	530	1.29
564	530	1.27
565	531	1.24
566	531	1.23
567	531	1.23
568	531	1.24
569	532	1.27
570	533	1.35
571	534	1.44
572	535	1.51
573	536	1.49
574	537	1.44
575	537	1.39
576	537	1.33
577	538	1.27
578	538	1.22
579	539	1.19
580	540	1.15
581	541	1.1
582	541	1.06
583	542	1.03
584	543	1.03
585	544	1.05
586	544	1.07
587	545	1.11
588	546	1.16
589	546	1.19
590	547	1.17
591	548	1.13
592	549	1.11
593	550	1.08
594	551	1.03
595	552	0.98
596	553	0.96
597	554	1
598	555	1.09

Table E 10 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 3

TN Scale	SS Scale	SEM
599	556	1.15
600	557	1.08
601	558	0.98
602	559	0.93
603	560	0.91
604	561	0.89
605	562	0.9
606	563	0.9
607	564	0.92
608	565	0.94
609	566	0.97
610	567	1.01
611	568	1.08
612	569	1.17
613	570	1.26
614	572	1.28
615	573	1.23
616	575	1.27
617	576	1.38
618	577	1.41
619	578	1.39
620	579	1.32
621	581	1.23
622	582	1.17
623	583	1.12
624	585	1.08
625	586	1.07
626	587	1.09
627	588	1.24
628	589	1.39
629	591	1.46
630	592	1.51
631	594	1.53
632	596	1.44
633	597	1.25
634	598	1.17

TN Scale	SS Scale	SEM
635	599	1.26
636	600	1.41
637	602	1.37
638	603	1.19
639	604	1.05
640	605	1.04
641	606	1.16
642	607	1.25
643	609	1.32
644	610	1.38
645	612	1.33
646	613	1.21
647	614	1.16
648	615	1.23
649	616	1.33
650	617	1.4
651	619	1.37
652	620	1.27
653	622	1.25
654	622	1.28
655	623	1.33
656	624	1.38
657	625	1.36
658	627	1.28
659	628	1.15
660	629	1.12
661	630	1.21
662	631	1.4
663	633	1.69
664	635	1.74
665	636	1.69
666	637	1.66
667	637	1.62
668	639	1.55
669	640	1.49
670	640	1.46

Table E 10 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 3

TN Scale	SS Scale	SEM
671	641	1.42
672	641	1.39
673	641	1.38
674	642	1.33
675	643	1.3
676	644	1.31
677	644	1.31
678	645	1.33
679	646	1.37
680	646	1.38
681	646	1.4
682	647	1.43
683	648	1.46
684	650	1.51
685	651	1.65
686	651	1.68
687	652	1.73
688	652	1.75
689	652	1.76
690	652	1.77
691	652	1.77
692	653	1.79
693	653	1.8
694	654	1.81
695	655	1.84
696	655	1.83
697	656	1.84
698	656	1.86
699	657	1.9
700	657	1.97
701	658	2.04
702	658	2.13
703	658	2.13
704	659	2.14
705	659	2.15
706	659	2.16

TN Scale	SS Scale	SEM
707	659	2.17
708	659	2.19
709	659	2.2
710	659	2.22
711	659	2.23
712	660	2.24
713	660	2.24
714	661	2.21
715	662	2.18
716	663	2.13
717	663	2.1
718	664	2.07
719	665	2.06
720	666	2.06
721	666	2.07
722	667	2.09
723	668	2.05
724	670	2.08
725	672	2.69
726	676	3.49
727	681	4
728	689	4.78
729	703	8.28
730	741	6.03

Table E 11
TN and Spring SAT/9 Linking Table—Language Grade 4

TN Scale	SS Scale	SEM
465	544	1.71
466	544	1.71
467	544	1.71
468	544	1.71
469	544	1.71
470	544	1.71
471	544	1.71
472	544	1.71
473	544	1.71
474	544	1.71
475	544	1.71
476	544	1.71
477	544	1.71
478	544	1.71
479	544	1.71
480	544	1.71
481	545	1.72
482	545	1.72
483	545	1.72
484	545	1.72
485	545	1.72
486	545	1.72
487	545	1.73
488	545	1.73
489	545	1.73
490	545	1.73
491	545	1.73
492	545	1.73
493	545	1.73
494	545	1.73
495	545	1.73
496	545	1.73
497	545	1.73
498	545	1.73
499	545	1.73
500	545	1.73

TN Scale	SS Scale	SEM
501	545	1.73
502	545	1.73
503	545	1.73
504	545	1.73
505	545	1.73
506	545	1.73
507	545	1.73
508	545	1.73
509	545	1.73
510	545	1.73
511	545	1.73
512	545	1.73
513	545	1.73
514	545	1.73
515	545	1.73
516	545	1.73
517	545	1.73
518	545	1.74
519	545	1.73
520	546	1.73
521	546	1.73
522	546	1.74
523	546	1.74
524	546	1.75
525	546	1.75
526	546	1.76
527	546	1.76
528	546	1.76
529	547	1.77
530	547	1.77
531	547	1.77
532	547	1.77
533	547	1.77
534	547	1.78
535	547	1.78
536	547	1.79

Table E 11 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 4

TN Scale	SS Scale	SEM
537	547	1.79
538	547	1.79
539	547	1.79
540	547	1.79
541	547	1.79
542	547	1.8
543	548	1.8
544	548	1.8
545	548	1.8
546	548	1.8
547	548	1.8
548	548	1.78
549	548	1.78
550	548	1.77
551	548	1.76
552	549	1.76
553	549	1.77
554	549	1.77
555	550	1.75
556	550	1.74
557	551	1.74
558	551	1.73
559	551	1.73
560	552	1.71
561	552	1.69
562	552	1.67
563	552	1.66
564	553	1.64
565	553	1.63
566	553	1.62
567	554	1.6
568	554	1.56
569	555	1.5
570	555	1.45
571	556	1.38
572	556	1.33

TN Scale	SS Scale	SEM
573	557	1.3
574	557	1.27
575	557	1.24
576	557	1.2
577	558	1.19
578	558	1.19
579	559	1.18
580	559	1.18
581	559	1.18
582	559	1.17
583	560	1.18
584	561	1.19
585	561	1.19
586	562	1.17
587	563	1.15
588	563	1.15
589	563	1.14
590	564	1.13
591	565	1.1
592	565	1.05
593	566	0.99
594	567	0.94
595	567	0.92
596	568	0.93
597	568	0.96
598	569	1.01
599	569	1.06
600	570	1.1
601	571	1.13
602	571	1.16
603	572	1.18
604	573	1.22
605	574	1.28
606	575	1.34
607	576	1.4
608	577	1.48

Table E 11 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 4

TN Scale	SS Scale	SEM
609	578	1.58
610	579	1.59
611	581	1.52
612	582	1.39
613	583	1.37
614	585	1.37
615	586	1.3
616	587	1.23
617	589	1.15
618	590	1.07
619	591	1
620	592	0.91
621	593	0.84
622	594	0.84
623	594	0.91
624	596	1
625	597	1.02
626	597	1.03
627	597	1.02
628	598	1.01
629	599	1
630	600	1
631	601	1.01
632	602	1.03
633	602	1.04
634	603	1.04
635	605	1.06
636	606	1.11
637	607	1.18
638	608	1.25
639	609	1.22
640	610	1.11
641	611	1.03
642	612	0.99
643	613	0.94
644	614	0.92

TN Scale	SS Scale	SEM
645	615	0.91
646	616	0.92
647	617	0.92
648	618	0.9
649	619	0.85
650	620	0.82
651	620	0.81
652	621	0.81
653	622	0.83
654	622	0.85
655	623	0.87
656	624	0.89
657	625	0.91
658	626	0.94
659	627	0.94
660	628	0.92
661	628	0.9
662	629	0.88
663	630	0.87
664	631	0.86
665	631	0.87
666	632	0.9
667	633	0.91
668	634	0.89
669	635	0.87
670	635	0.87
671	636	0.86
672	637	0.86
673	637	0.86
674	638	0.93
675	639	1.04
676	639	1.19
677	640	1.31
678	641	1.33
679	642	1.23
680	643	1.08

Table E 11 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 4

TN Scale	SS Scale	SEM
681	644	0.96
682	645	0.9
683	645	0.88
684	646	0.9
685	647	0.99
686	648	1.14
687	649	1.21
688	649	1.23
689	650	1.23
690	651	1.24
691	652	1.28
692	653	1.31
693	654	1.33
694	655	1.35
695	656	1.42
696	656	1.56
697	657	1.65
698	658	1.7
699	659	1.78
700	659	1.84
701	660	1.85
702	661	1.84
703	663	1.85
704	663	1.86
705	663	1.86
706	664	1.88
707	664	1.86
708	665	1.84
709	666	1.82
710	667	1.76
711	668	1.71
712	669	1.64
713	670	1.63
714	670	1.62
715	670	1.6
716	671	1.6

TN Scale	SS Scale	SEM
717	671	1.58
718	671	1.56
719	672	1.56
720	672	1.56
721	672	1.57
722	673	1.58
723	673	1.61
724	673	1.68
725	674	1.78
726	674	1.87
727	674	2.03
728	675	2.23
729	675	2.26
730	676	2.3
731	676	2.34
732	676	2.39
733	676	2.44
734	676	2.48
735	677	2.53
736	677	2.59
737	677	2.66
738	678	2.74
739	678	2.84
740	679	2.98
741	679	3.14
742	679	3.33
743	680	3.56
744	680	3.82
745	680	4.13
746	681	4.53
747	681	4.99
748	682	5.81
749	684	6.59
750	689	7.22
751	694	7.46
752	698	7.37

Table E 11 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 4

TN Scale	SS Scale	SEM
753	703	7.14
754	708	6.92
755	715	6.49
756	722	5.03
757	761	8.81

Table E 12
TN and Spring SAT/9 Linking Table—Language Grade 5

TN Scale	SS Scale	SEM
480	553	1.91
481	553	1.91
482	553	1.91
483	553	1.91
484	553	1.91
485	553	1.91
486	553	1.91
487	553	1.91
488	553	1.9
489	553	1.88
490	554	1.86
491	554	1.84
492	554	1.82
493	554	1.8
494	554	1.79
495	554	1.78
496	554	1.76
497	554	1.76
498	555	1.75
499	555	1.75
500	555	1.75
501	555	1.74
502	555	1.74
503	555	1.75
504	555	1.75
505	555	1.75
506	556	1.76
507	556	1.76
508	556	1.77
509	556	1.77
510	556	1.77
511	556	1.77
512	556	1.77
513	556	1.77
514	556	1.77
515	556	1.77

TN Scale	SS Scale	SEM
516	556	1.77
517	556	1.77
518	556	1.77
519	556	1.77
520	556	1.77
521	556	1.77
522	556	1.77
523	556	1.77
524	556	1.77
525	556	1.78
526	556	1.78
527	556	1.78
528	556	1.78
529	557	1.78
530	557	1.78
531	557	1.78
532	557	1.78
533	557	1.78
534	557	1.78
535	557	1.78
536	557	1.78
537	557	1.78
538	557	1.78
539	557	1.78
540	557	1.78
541	557	1.78
542	557	1.77
543	557	1.77
544	557	1.77
545	557	1.77
546	557	1.77
547	557	1.78
548	558	1.77
549	558	1.78
550	558	1.79
551	558	1.79

Table E 12 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 5

TN Scale	SS Scale	SEM
552	558	1.79
553	559	1.79
554	559	1.79
555	559	1.79
556	559	1.79
557	559	1.79
558	559	1.78
559	559	1.78
560	559	1.78
561	559	1.79
562	560	1.8
563	560	1.81
564	560	1.82
565	560	1.82
566	561	1.83
567	561	1.85
568	562	1.87
569	562	1.87
570	562	1.88
571	562	1.89
572	563	1.9
573	563	1.9
574	563	1.9
575	564	1.9
576	564	1.9
577	565	1.9
578	565	1.9
579	566	1.86
580	567	1.8
581	567	1.76
582	568	1.72
583	569	1.62
584	569	1.53
585	569	1.46
586	570	1.39
587	570	1.37

TN Scale	SS Scale	SEM
588	571	1.36
589	571	1.36
590	571	1.37
591	571	1.37
592	571	1.38
593	572	1.43
594	573	1.52
595	574	1.56
596	574	1.58
597	575	1.58
598	575	1.59
599	576	1.59
600	576	1.58
601	577	1.57
602	577	1.56
603	578	1.52
604	578	1.48
605	579	1.46
606	579	1.45
607	580	1.46
608	581	1.47
609	581	1.48
610	582	1.47
611	583	1.44
612	583	1.42
613	584	1.41
614	584	1.37
615	585	1.33
616	586	1.28
617	587	1.21
618	587	1.12
619	588	1.1
620	589	1.14
621	590	1.22
622	590	1.25
623	591	1.27

Table E 12 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 5

TN Scale	SS Scale	SEM
624	592	1.28
625	593	1.25
626	593	1.23
627	594	1.19
628	595	1.13
629	596	1.07
630	597	1.05
631	598	1.05
632	599	1.07
633	599	1.11
634	600	1.2
635	602	1.28
636	603	1.21
637	604	1.02
638	605	0.93
639	606	0.91
640	607	0.93
641	608	0.95
642	609	0.94
643	610	0.93
644	611	0.92
645	612	0.92
646	613	0.91
647	614	0.89
648	615	0.83
649	616	0.72
650	617	0.68
651	617	0.68
652	618	0.69
653	619	0.7
654	620	0.7
655	620	0.71
656	621	0.73
657	622	0.76
658	623	0.79
659	624	0.84

TN Scale	SS Scale	SEM
660	625	0.89
661	627	0.9
662	628	0.85
663	629	0.81
664	630	0.8
665	631	0.78
666	632	0.73
667	633	0.69
668	633	0.68
669	634	0.67
670	635	0.69
671	636	0.71
672	637	0.7
673	638	0.7
674	639	0.69
675	640	0.68
676	640	0.68
677	641	0.68
678	642	0.7
679	643	0.78
680	644	0.82
681	645	0.83
682	645	0.83
683	646	0.84
684	647	0.9
685	648	0.93
686	649	0.92
687	650	0.92
688	651	0.96
689	652	1.03
690	653	1.05
691	654	1.03
692	655	1.02
693	655	1.01
694	656	1.02
695	657	1.03

Table E 12 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 5

TN Scale	SS Scale	SEM
696	657	1.02
697	658	1
698	658	0.98
699	659	0.98
700	659	0.97
701	660	0.97
702	661	0.98
703	661	1
704	662	1.01
705	663	1.01
706	663	1
707	663	1
708	664	1
709	664	1.02
710	665	1.09
711	665	1.28
712	666	1.52
713	667	1.68
714	668	1.82
715	669	1.86
716	670	1.85
717	672	1.86
718	672	1.85
719	673	1.88
720	673	1.88
721	673	1.87
722	674	1.86
723	674	1.86
724	674	1.85
725	675	1.83
726	675	1.82
727	676	1.81
728	676	1.81
729	677	1.77
730	679	1.92
731	679	1.9

TN Scale	SS Scale	SEM
732	679	1.92
733	680	1.94
734	680	1.97
735	681	2.04
736	682	2.04
737	684	2.07
738	685	2.11
739	685	2.13
740	686	2.16
741	686	2.25
742	687	2.41
743	688	2.63
744	688	2.63
745	689	2.64
746	689	2.64
747	689	2.65
748	689	2.66
749	689	2.66
750	689	2.67
751	689	2.68
752	690	2.69
753	690	2.69
754	690	2.7
755	690	2.72
756	690	2.73
757	690	2.74
758	690	2.75
759	690	2.76
760	691	2.78
761	691	2.79
762	691	2.81
763	691	2.83
764	691	2.85
765	692	2.85
766	693	2.85
767	693	2.87

Table E 12 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 5

TN Scale	SS Scale	SEM
768	694	2.94
769	695	3.07
770	696	3.29
771	696	3.61
772	697	4.01
773	700	4.44
774	702	4.82
775	704	5.16
776	706	5.67
777	709	6.64
778	712	7.97
779	721	9.11
780	729	9.08
781	741	7.8
782	766	0

Table E 13
TN and Spring SAT/9 Linking Table—Language Grade 6

TN Scale	SS Scale	SEM
495	566	1.92
496	566	1.92
497	566	1.92
498	566	1.92
499	566	1.92
500	566	1.92
501	566	1.93
502	566	1.93
503	566	1.93
504	566	1.94
505	566	1.94
506	566	1.95
507	566	1.95
508	566	1.96
509	566	1.96
510	566	1.97
511	566	1.98
512	566	1.98
513	566	1.99
514	566	1.99
515	567	2
516	567	2.01
517	567	2.02
518	567	2.02
519	567	2.02
520	567	2.02
521	567	2.02
522	567	2.02
523	567	2.03
524	567	2.03
525	567	2.03
526	567	2.03
527	567	2.03
528	567	2.03
529	567	2.03
530	567	2.04

TN Scale	SS Scale	SEM
531	567	2.04
532	567	2.04
533	567	2.04
534	567	2.04
535	567	2.04
536	567	2.05
537	567	2.05
538	567	2.05
539	567	2.05
540	567	2.05
541	567	2.06
542	567	2.06
543	567	2.06
544	567	2.06
545	567	2.06
546	567	2.06
547	567	2.06
548	567	2.06
549	567	2.07
550	567	2.07
551	567	2.07
552	567	2.07
553	567	2.07
554	568	2.07
555	568	2.08
556	568	2.08
557	568	2.09
558	568	2.09
559	568	2.09
560	568	2.08
561	568	2.08
562	569	2.08
563	569	2.08
564	569	2.07
565	569	2.07
566	569	2.06

Table E 13 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 6

TN Scale	SS Scale	SEM
567	569	2.06
568	569	2.05
569	569	2.04
570	570	2.02
571	570	1.99
572	571	1.96
573	571	1.91
574	571	1.86
575	571	1.81
576	571	1.76
577	571	1.68
578	572	1.62
579	572	1.57
580	572	1.54
581	572	1.51
582	572	1.5
583	573	1.48
584	573	1.47
585	573	1.47
586	573	1.49
587	574	1.52
588	574	1.53
589	574	1.57
590	575	1.62
591	575	1.63
592	575	1.65
593	576	1.7
594	576	1.77
595	577	1.82
596	577	1.86
597	578	1.92
598	579	1.99
599	580	2.07
600	581	2.07
601	582	2.02
602	583	1.97

TN Scale	SS Scale	SEM
603	583	1.91
604	584	1.85
605	585	1.67
606	586	1.55
607	586	1.46
608	587	1.42
609	588	1.42
610	588	1.43
611	589	1.44
612	590	1.43
613	591	1.41
614	591	1.39
615	592	1.33
616	593	1.23
617	594	1.16
618	595	1.11
619	596	1.22
620	596	1.41
621	598	1.59
622	599	1.71
623	600	1.72
624	601	1.67
625	602	1.61
626	603	1.56
627	604	1.46
628	605	1.37
629	606	1.28
630	607	1.21
631	608	1.16
632	609	1.05
633	610	0.94
634	610	0.9
635	611	0.88
636	612	0.9
637	612	0.99
638	613	1.08

Table E 13 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 6

TN Scale	SS Scale	SEM
639	615	1.07
640	616	1
641	616	0.96
642	617	0.93
643	618	0.92
644	619	0.94
645	620	0.97
646	621	1
647	622	1.03
648	623	1.06
649	624	1.07
650	625	1.07
651	626	1.07
652	627	1.06
653	628	0.97
654	629	0.89
655	630	0.86
656	631	0.84
657	632	0.83
658	633	0.83
659	634	0.81
660	635	0.77
661	636	0.74
662	637	0.73
663	637	0.74
664	638	0.77
665	639	0.84
666	640	0.87
667	642	0.87
668	643	0.88
669	644	0.87
670	645	0.86
671	646	0.84
672	647	0.83
673	648	0.81
674	649	0.78

TN Scale	SS Scale	SEM
675	650	0.75
676	650	0.71
677	651	0.69
678	652	0.7
679	653	0.73
680	654	0.76
681	655	0.76
682	656	0.77
683	657	0.81
684	658	0.92
685	659	1.03
686	660	1.05
687	661	1.05
688	662	1.06
689	662	1.08
690	663	1.1
691	664	1.1
692	665	1.08
693	666	1.03
694	667	0.99
695	668	0.97
696	669	0.95
697	669	0.92
698	670	0.93
699	671	0.98
700	671	1.12
701	673	1.32
702	674	1.39
703	675	1.39
704	677	1.43
705	678	1.47
706	678	1.49
707	678	1.5
708	679	1.49
709	680	1.48
710	682	1.53

Table E 13 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 6

TN Scale	SS Scale	SEM
711	683	1.6
712	684	1.62
713	684	1.62
714	685	1.62
715	686	1.63
716	686	1.66
717	686	1.67
718	687	1.69
719	687	1.75
720	689	1.9
721	690	2.1
722	692	2.15
723	692	2.19
724	692	2.18
725	693	2.18
726	693	2.17
727	693	2.18
728	694	2.18
729	694	2.19
730	694	2.21
731	694	2.22
732	694	2.24
733	695	2.27
734	696	2.4
735	698	2.51
736	699	2.56
737	699	2.57
738	699	2.59
739	699	2.6
740	700	2.59
741	700	2.58
742	701	2.59
743	701	2.62
744	701	2.61
745	701	2.61
746	701	2.61

TN Scale	SS Scale	SEM
747	701	2.61
748	702	2.6
749	702	2.6
750	702	2.6
751	702	2.6
752	702	2.6
753	702	2.6
754	702	2.6
755	702	2.6
756	702	2.61
757	702	2.61
758	702	2.61
759	702	2.62
760	702	2.63
761	703	2.63
762	703	2.64
763	703	2.65
764	703	2.66
765	703	2.67
766	703	2.69
767	703	2.7
768	703	2.72
769	703	2.73
770	703	2.75
771	703	2.77
772	703	2.79
773	704	2.81
774	704	2.83
775	704	2.85
776	704	2.87
777	704	2.91
778	704	2.95
779	705	3.01
780	706	3.06
781	706	3.11
782	707	3.15

Table E 13 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 6

TN Scale	SS Scale	SEM
783	708	3.18
784	708	3.2
785	709	3.23
786	709	3.24
787	710	3.26
788	711	3.28
789	711	3.3
790	712	3.34
791	713	3.4
792	713	3.49
793	714	3.61
794	715	3.75
795	716	3.9
796	718	4.03
797	719	4.14
798	721	4.21
799	722	4.27
800	723	4.36
801	725	4.58
802	726	5.06
803	728	5.83
804	732	6.72
805	738	7.4
806	743	7.48
807	748	7.18
808	784	9.23

Table E 14
TN and Spring SAT/9 Linking Table—Language Grade 7

TN Scale	SS Scale	SEM
502	570	1.34
503	570	1.34
504	570	1.34
505	570	1.34
506	570	1.34
507	570	1.34
508	570	1.34
509	570	1.34
510	570	1.34
511	570	1.34
512	570	1.34
513	570	1.33
514	570	1.33
515	571	1.33
516	571	1.33
517	571	1.34
518	571	1.34
519	571	1.35
520	571	1.36
521	572	1.37
522	572	1.38
523	572	1.4
524	572	1.41
525	572	1.43
526	572	1.45
527	572	1.47
528	573	1.49
529	573	1.51
530	573	1.54
531	573	1.56
532	573	1.59
533	573	1.62
534	574	1.65
535	574	1.68
536	574	1.71
537	574	1.75

TN Scale	SS Scale	SEM
538	574	1.78
539	574	1.82
540	574	1.86
541	575	1.9
542	575	1.92
543	575	1.92
544	575	1.92
545	575	1.93
546	575	1.93
547	575	1.93
548	575	1.93
549	575	1.94
550	575	1.94
551	575	1.94
552	575	1.94
553	575	1.94
554	575	1.95
555	575	1.95
556	575	1.95
557	575	1.95
558	575	1.96
559	575	1.96
560	575	1.96
561	575	1.97
562	575	1.98
563	575	1.99
564	575	2.01
565	575	2.02
566	575	2.05
567	575	2.07
568	576	2.1
569	576	2.13
570	577	2.14
571	577	2.15
572	578	2.14
573	578	2.12

Table E 14 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 7

TN Scale	SS Scale	SEM
574	579	2.1
575	579	2.05
576	579	1.99
577	580	1.94
578	580	1.9
579	580	1.88
580	580	1.85
581	580	1.82
582	581	1.79
583	581	1.8
584	581	1.81
585	582	1.84
586	582	1.91
587	583	1.97
588	583	2.01
589	583	2.04
590	584	2.09
591	585	2.12
592	586	2.12
593	586	2.09
594	587	1.99
595	588	1.92
596	589	1.86
597	590	1.8
598	590	1.77
599	590	1.75
600	591	1.73
601	591	1.71
602	592	1.68
603	592	1.64
604	593	1.61
605	593	1.59
606	594	1.57
607	595	1.53
608	595	1.51
609	595	1.51

TN Scale	SS Scale	SEM
610	596	1.5
611	596	1.49
612	597	1.47
613	598	1.46
614	599	1.46
615	599	1.48
616	600	1.49
617	600	1.51
618	601	1.52
619	602	1.53
620	603	1.57
621	604	1.6
622	604	1.64
623	605	1.66
624	606	1.68
625	607	1.68
626	608	1.65
627	609	1.6
628	609	1.54
629	610	1.47
630	611	1.39
631	613	1.33
632	614	1.27
633	615	1.27
634	616	1.28
635	617	1.31
636	618	1.34
637	618	1.34
638	619	1.33
639	620	1.32
640	621	1.29
641	622	1.23
642	623	1.17
643	624	1.11
644	625	1.08
645	626	1.06

Table E 14 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 7

TN Scale	SS Scale	SEM
646	626	1.05
647	627	1.03
648	628	0.98
649	629	0.94
650	630	0.95
651	631	1.03
652	632	1.15
653	634	1.17
654	635	1.1
655	636	1.06
656	638	1.01
657	639	0.93
658	640	0.89
659	640	0.87
660	641	0.89
661	642	0.93
662	644	0.95
663	645	0.92
664	646	0.89
665	646	0.87
666	647	0.87
667	649	0.85
668	650	0.84
669	651	0.84
670	652	0.82
671	653	0.82
672	653	0.82
673	654	0.83
674	655	0.84
675	656	0.86
676	657	0.88
677	658	0.89
678	659	0.86
679	661	0.79
680	661	0.76
681	662	0.76

TN Scale	SS Scale	SEM
682	663	0.77
683	664	0.82
684	665	0.91
685	666	0.93
686	667	0.93
687	668	0.95
688	670	0.98
689	671	0.99
690	672	1.06
691	673	1.14
692	674	1.17
693	676	1.15
694	677	1.11
695	678	1.09
696	679	1.08
697	680	1.07
698	681	1.06
699	682	1.06
700	683	1.09
701	684	1.21
702	685	1.34
703	687	1.35
704	688	1.35
705	689	1.35
706	690	1.35
707	691	1.35
708	693	1.35
709	694	1.35
710	694	1.35
711	695	1.35
712	696	1.39
713	698	1.51
714	700	1.54
715	701	1.54
716	701	1.55
717	701	1.55

Table E 14 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 7

TN Scale	SS Scale	SEM
718	701	1.55
719	702	1.55
720	702	1.55
721	703	1.6
722	704	1.69
723	705	1.85
724	707	2.01
725	709	2.05
726	711	2.07
727	711	2.04
728	711	2.04
729	711	2.03
730	712	2.04
731	712	2.04
732	712	2.08
733	713	2.12
734	714	2.34
735	718	2.92
736	719	3.05
737	720	3.13
738	720	3.14
739	721	3.15
740	721	3.15
741	721	3.15
742	721	3.15
743	721	3.15
744	721	3.15
745	721	3.15
746	721	3.15
747	721	3.15
748	721	3.15
749	721	3.15
750	721	3.15
751	721	3.15
752	721	3.15
753	721	3.15

TN Scale	SS Scale	SEM
754	721	3.15
755	721	3.15
756	721	3.15
757	721	3.15
758	721	3.15
759	721	3.16
760	721	3.16
761	721	3.16
762	721	3.16
763	722	3.16
764	722	3.16
765	722	3.16
766	722	3.16
767	722	3.17
768	722	3.17
769	722	3.17
770	722	3.17
771	722	3.17
772	722	3.17
773	722	3.18
774	722	3.18
775	722	3.18
776	722	3.18
777	722	3.18
778	722	3.15
779	723	3.12
780	724	3.09
781	724	3.07
782	725	3.06
783	725	3.06
784	726	3.09
785	726	3.12
786	727	3.18
787	727	3.26
788	728	3.35
789	728	3.46

Table E 14 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 7

TN Scale	SS Scale	SEM
790	729	3.56
791	730	3.67
792	731	3.76
793	732	3.82
794	733	3.84
795	734	3.84
796	735	3.8
797	736	3.71
798	737	3.6
799	739	3.44
800	740	3.28
801	741	3.12
802	742	3.01
803	743	3
804	744	3.18
805	745	3.7
806	746	4.59
807	747	5.88
808	748	7.48
809	754	8.99
810	762	9.76
811	771	9.17
812	776	6.85
813	780	4.27
814	784	1.7

Table E 15
TN and Spring SAT/9 Linking Table—Language Grade 8

TN Scale	SS Scale	SEM
523	575	2.77
524	575	2.77
525	575	2.77
526	575	2.77
527	575	2.77
528	575	2.77
529	575	2.77
530	575	2.77
531	575	2.77
532	575	2.77
533	575	2.77
534	575	2.77
535	575	2.77
536	575	2.77
537	575	2.77
538	575	2.77
539	575	2.77
540	575	2.77
541	575	2.77
542	575	2.77
543	575	2.77
544	575	2.77
545	575	2.77
546	575	2.78
547	575	2.78
548	575	2.78
549	575	2.79
550	576	2.79
551	576	2.79
552	576	2.8
553	576	2.8
554	576	2.81
555	576	2.81
556	576	2.81
557	576	2.82
558	576	2.82

TN Scale	SS Scale	SEM
559	576	2.82
560	576	2.83
561	576	2.83
562	576	2.83
563	576	2.84
564	576	2.84
565	576	2.85
566	576	2.85
567	576	2.86
568	576	2.88
569	576	2.89
570	576	2.9
571	576	2.9
572	576	2.91
573	576	2.92
574	576	2.92
575	576	2.93
576	577	2.94
577	577	2.94
578	577	2.94
579	577	2.95
580	577	2.95
581	577	2.96
582	577	2.97
583	577	2.97
584	577	2.98
585	577	2.99
586	578	2.98
587	578	2.98
588	579	2.98
589	579	2.97
590	580	2.96
591	580	2.94
592	581	2.92
593	581	2.89
594	581	2.87

Table E 15 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 8

TN Scale	SS Scale	SEM
595	581	2.84
596	581	2.8
597	582	2.69
598	582	2.55
599	583	2.47
600	584	2.4
601	584	2.37
602	584	2.32
603	586	2.29
604	587	2.28
605	588	2.25
606	588	2.21
607	589	2.17
608	589	2.06
609	591	1.87
610	591	1.72
611	592	1.65
612	592	1.63
613	592	1.58
614	593	1.55
615	593	1.55
616	594	1.54
617	594	1.55
618	594	1.54
619	595	1.53
620	595	1.53
621	596	1.48
622	597	1.41
623	598	1.37
624	598	1.35
625	599	1.39
626	600	1.48
627	601	1.58
628	601	1.64
629	603	1.64
630	604	1.55

TN Scale	SS Scale	SEM
631	605	1.47
632	606	1.39
633	607	1.34
634	608	1.33
635	609	1.36
636	610	1.41
637	611	1.47
638	613	1.5
639	614	1.48
640	615	1.41
641	616	1.32
642	616	1.29
643	617	1.27
644	619	1.32
645	620	1.33
646	621	1.22
647	622	1.05
648	623	1.01
649	624	1.03
650	624	1.12
651	626	1.25
652	627	1.3
653	629	1.25
654	630	1.16
655	631	1.09
656	632	1.03
657	633	1.04
658	635	1.07
659	636	1.06
660	637	0.99
661	638	0.95
662	639	0.95
663	640	0.98
664	641	0.98
665	643	0.94
666	643	0.92

Table E 15 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 8

TN Scale	SS Scale	SEM
667	644	0.91
668	645	0.95
669	647	1.03
670	648	1.02
671	649	0.97
672	650	0.95
673	651	0.92
674	652	0.88
675	654	0.85
676	655	0.83
677	656	0.78
678	657	0.74
679	658	0.77
680	658	0.88
681	659	1.01
682	660	1.05
683	661	1.02
684	663	0.9
685	664	0.84
686	665	0.83
687	666	0.83
688	667	0.81
689	668	0.82
690	669	0.83
691	670	0.83
692	671	0.84
693	672	0.83
694	673	0.84
695	674	0.91
696	675	1.01
697	676	1.08
698	677	1.1
699	678	1.03
700	679	0.93
701	680	0.9
702	681	0.89

TN Scale	SS Scale	SEM
703	682	0.88
704	683	0.9
705	683	0.92
706	684	0.95
707	685	0.96
708	686	0.97
709	687	0.98
710	688	1.16
711	691	1.37
712	692	1.4
713	693	1.39
714	693	1.39
715	694	1.39
716	695	1.41
717	696	1.42
718	697	1.41
719	698	1.41
720	699	1.48
721	701	1.55
722	703	1.61
723	703	1.61
724	704	1.59
725	705	1.58
726	705	1.6
727	706	1.67
728	706	1.83
729	707	1.9
730	707	1.95
731	707	2.03
732	708	2.11
733	708	2.24
734	712	2.4
735	714	2.55
736	715	2.63
737	717	2.76
738	719	2.86

Table E 15 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 8

TN Scale	SS Scale	SEM
739	721	2.93
740	723	3.04
741	723	3.03
742	724	3.02
743	724	3.04
744	725	3.1
745	725	3.13
746	725	3.16
747	725	3.18
748	725	3.2
749	725	3.22
750	726	3.25
751	726	3.26
752	727	3.3
753	727	3.35
754	728	3.42
755	728	3.42
756	728	3.42
757	728	3.42
758	728	3.42
759	728	3.42
760	728	3.42
761	728	3.43
762	728	3.43
763	728	3.43
764	728	3.43
765	728	3.44
766	728	3.44
767	728	3.44
768	728	3.44
769	728	3.44
770	728	3.45
771	728	3.45
772	728	3.45
773	728	3.46
774	728	3.46

TN Scale	SS Scale	SEM
775	728	3.46
776	728	3.46
777	728	3.47
778	728	3.47
779	728	3.47
780	729	3.48
781	729	3.48
782	729	3.48
783	729	3.49
784	729	3.49
785	729	3.5
786	729	3.5
787	729	3.52
788	729	3.53
789	730	3.53
790	731	3.52
791	731	3.52
792	732	3.51
793	733	3.51
794	733	3.54
795	734	3.58
796	735	3.67
797	735	3.8
798	736	3.98
799	737	4.22
800	738	4.49
801	738	4.79
802	740	5.09
803	742	5.37
804	744	5.59
805	745	5.73
806	747	5.78
807	749	5.73
808	751	5.62
809	753	5.46
810	755	5.35

Table E 15 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 8

TN Scale	SS Scale	SEM
811	757	5.31
812	759	5.34
813	762	5.41
814	766	5.39
815	769	5.13
816	773	4.39
817	776	3.19
818	780	1.76
819	794	5.03

Table E 16
TN and Spring SAT/9 Linking Table—Language Grade 9

TN Scale	SS Scale	SEM
530	586	1.73
531	586	1.73
532	587	1.7
533	587	1.66
534	587	1.63
535	587	1.6
536	587	1.6
537	587	1.58
538	587	1.57
539	588	1.56
540	588	1.56
541	588	1.56
542	588	1.55
543	588	1.55
544	588	1.55
545	588	1.54
546	588	1.54
547	588	1.54
548	588	1.53
549	588	1.53
550	588	1.53
551	588	1.52
552	588	1.52
553	588	1.52
554	588	1.52
555	588	1.52
556	588	1.51
557	588	1.51
558	588	1.51
559	588	1.51
560	588	1.5
561	588	1.5
562	588	1.5
563	588	1.5
564	588	1.49
565	588	1.48

TN Scale	SS Scale	SEM
566	589	1.48
567	589	1.47
568	589	1.47
569	589	1.46
570	589	1.46
571	589	1.46
572	589	1.46
573	589	1.46
574	589	1.46
575	589	1.46
576	589	1.46
577	590	1.45
578	590	1.45
579	590	1.45
580	590	1.45
581	590	1.45
582	590	1.44
583	590	1.44
584	590	1.44
585	590	1.44
586	590	1.44
587	590	1.44
588	590	1.43
589	590	1.43
590	590	1.42
591	590	1.42
592	590	1.42
593	591	1.42
594	591	1.42
595	591	1.44
596	591	1.48
597	592	1.51
598	592	1.54
599	592	1.56
600	592	1.59
601	592	1.62

Table E 16 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 9

TN Scale	SS Scale	SEM
602	593	1.66
603	593	1.7
604	593	1.77
605	594	1.85
606	594	1.91
607	594	1.94
608	595	2
609	596	2.04
610	596	2.05
611	596	2.04
612	597	2.03
613	597	1.99
614	598	1.9
615	599	1.81
616	599	1.75
617	600	1.65
618	601	1.52
619	601	1.42
620	601	1.35
621	601	1.28
622	602	1.22
623	602	1.17
624	603	1.15
625	603	1.15
626	603	1.15
627	604	1.15
628	604	1.16
629	605	1.16
630	605	1.16
631	606	1.14
632	607	1.12
633	607	1.11
634	607	1.09
635	608	1.09
636	608	1.09
637	609	1.08

TN Scale	SS Scale	SEM
638	610	1.08
639	610	1.09
640	611	1.1
641	612	1.09
642	613	1.1
643	614	1.12
644	615	1.12
645	616	1.06
646	617	1.03
647	618	1.01
648	619	0.98
649	619	0.96
650	620	0.95
651	620	0.95
652	621	0.99
653	622	1.06
654	623	1.08
655	624	1.04
656	625	0.96
657	626	0.92
658	627	0.94
659	628	1.02
660	629	1.07
661	630	1.06
662	631	1.05
663	633	1.06
664	634	1.08
665	635	1.06
666	636	0.96
667	637	0.84
668	638	0.75
669	638	0.72
670	639	0.74
671	640	0.82
672	641	0.85
673	642	0.81

Table E 16 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 9

TN Scale	SS Scale	SEM
674	643	0.72
675	644	0.68
676	645	0.69
677	646	0.81
678	647	0.92
679	648	0.96
680	649	1.01
681	650	1.04
682	652	0.99
683	653	0.96
684	654	0.93
685	655	0.92
686	656	0.92
687	657	0.91
688	658	0.9
689	659	0.92
690	660	0.99
691	662	1.08
692	663	1.1
693	665	1.12
694	666	1.14
695	667	1.11
696	668	1.09
697	669	1.09
698	670	1.04
699	671	0.97
700	672	0.92
701	673	0.91
702	674	0.93
703	674	0.95
704	675	1
705	676	1.08
706	677	1.2
707	678	1.39
708	680	1.55
709	681	1.58

TN Scale	SS Scale	SEM
710	682	1.48
711	684	1.38
712	685	1.39
713	685	1.4
714	686	1.48
715	688	1.56
716	689	1.59
717	690	1.58
718	691	1.55
719	693	1.54
720	693	1.54
721	694	1.53
722	695	1.58
723	696	1.66
724	696	1.78
725	697	1.89
726	697	1.92
727	699	2.04
728	700	2.17
729	700	2.2
730	701	2.25
731	702	2.33
732	703	2.41
733	703	2.43
734	704	2.44
735	705	2.42
736	706	2.38
737	707	2.35
738	707	2.32
739	708	2.3
740	708	2.25
741	709	2.17
742	710	2.04
743	711	1.99
744	712	2.1
745	713	2.14

Table E 16 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 9

TN Scale	SS Scale	SEM
746	713	2.16
747	713	2.18
748	713	2.21
749	713	2.26
750	714	2.35
751	714	2.48
752	715	2.64
753	716	2.83
754	717	2.95
755	717	2.97
756	717	3
757	717	3.03
758	718	3.06
759	718	3.1
760	718	3.13
761	718	3.17
762	719	3.2
763	719	3.2
764	719	3.21
765	719	3.21
766	719	3.21
767	719	3.22
768	719	3.22
769	720	3.23
770	720	3.23
771	720	3.24
772	720	3.24
773	720	3.25
774	720	3.26
775	721	3.26
776	721	3.27
777	721	3.28
778	721	3.28
779	721	3.29
780	721	3.3
781	721	3.32

TN Scale	SS Scale	SEM
782	722	3.33
783	722	3.35
784	722	3.37
785	722	3.39
786	722	3.41
787	722	3.43
788	722	3.46
789	723	3.48
790	723	3.51
791	723	3.55
792	724	3.58
793	724	3.61
794	724	3.65
795	724	3.69
796	725	3.73
797	725	3.77
798	725	3.81
799	726	3.84
800	726	3.86
801	727	3.88
802	727	3.89
803	728	3.89
804	729	3.9
805	729	3.91
806	730	3.93
807	730	3.95
808	731	3.98
809	731	4.02
810	732	4.07
811	732	4.13
812	733	4.2
813	735	4.3
814	736	4.42
815	737	4.54
816	738	4.65
817	739	4.76

Table E 16 (cont.)
TN and Spring SAT/9 Linking Table—Language Grade 9

TN Scale	SS Scale	SEM
818	740	4.88
819	741	5.07
820	742	5.38
821	743	5.85
822	744	6.5
823	745	7.34
824	746	8.27
825	752	9.14
826	758	9.7
827	764	9.6
828	776	7.83
829	791	9.27

**Table E 17 TN and Spring SAT/9 Linking Table—
Mathematics Grade 2**

TN Scale	SS Scale	SEM
347	368	0
348	368	0
349	368	0
350	368	0
351	368	0
352	368	0
353	368	0
354	368	0
355	368	0
356	368	0
357	368	0
358	368	0
359	368	0
360	368	0
361	368	0
362	368	0
363	368	0
364	368	0
365	368	0
366	368	0
367	368	0
368	368	0
369	368	0
370	368	0
371	368	0
372	368	0
373	368	0
374	368	0
375	368	0
376	381	7.85
377	381	8.13
378	381	8.44
379	381	8.75
380	382	9.08
381	382	9.42
382	382	9.77

TN Scale	SS Scale	SEM
383	382	10.12
384	383	10.49
385	383	10.86
386	383	11.24
387	383	11.61
388	384	11.96
389	384	10.28
390	384	10.57
391	384	10.86
392	385	11.16
393	385	10.39
394	385	10.67
395	385	10.95
396	386	11.22
397	386	11.44
398	386	11.65
399	386	11.2
400	387	11.16
401	387	11.38
402	387	11.6
403	387	11.73
404	388	11.95
405	388	12.18
406	388	12.42
407	388	12.65
408	389	12.89
409	389	13.14
410	389	13.38
411	389	13.61
412	390	13.85
413	390	14.09
414	390	14.33
415	390	14.57
416	391	14.82
417	391	15.06
418	392	15.3

**Table E 17 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 2**

TN Scale	SS Scale	SEM
419	392	15.56
420	393	15.83
421	393	16.13
422	394	16.42
423	395	16.72
424	395	17.01
425	396	17.31
426	396	17.62
427	397	17.94
428	397	18.28
429	398	18.62
430	399	18.98
431	399	19.34
432	400	19.72
433	400	20.1
434	401	20.49
435	402	20.81
436	403	21.2
437	404	21.64
438	405	22.11
439	406	22.61
440	406	23.06
441	407	23.51
442	408	23.95
443	409	24.45
444	410	25
445	411	25.37
446	413	25.72
447	414	26.08
448	415	26.42
449	416	26.72
450	418	27.03
451	419	27.41
452	422	27.56
453	426	27.9
454	429	28.31

TN Scale	SS Scale	SEM
455	433	28.62
456	438	28.5
457	443	28.44
458	449	28.29
459	454	28.14
460	458	27.83
461	460	27.4
462	463	27.07
463	465	26.24
464	467	25.6
465	469	24.81
466	472	23.33
467	476	22.13
468	480	21.06
469	481	19.69
470	481	18.07
471	482	15.68
472	483	13.38
473	484	10.78
474	485	9
475	486	7.58
476	487	5.18
477	488	3.98
478	489	3.52
479	490	3.29
480	490	3.16
481	491	3.09
482	491	3.02
483	492	2.93
484	492	2.86
485	493	2.68
486	494	2.56
487	494	2.46
488	495	2.41
489	495	2.4
490	496	2.4

**Table E 17 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 2**

TN Scale	SS Scale	SEM
491	496	2.4
492	496	2.38
493	497	2.35
494	498	2.35
495	498	2.34
496	498	2.32
497	499	2.3
498	499	2.25
499	500	2.19
500	500	2.12
501	501	2.05
502	501	1.95
503	502	1.88
504	502	1.76
505	503	1.75
506	503	1.78
507	504	1.92
508	505	2.01
509	506	2.04
510	506	2.05
511	507	2.05
512	507	2.03
513	508	1.97
514	509	1.83
515	510	1.68
516	510	1.6
517	511	1.52
518	512	1.49
519	512	1.48
520	513	1.49
521	513	1.54
522	514	1.57
523	515	1.63
524	517	1.76
525	518	1.97
526	520	2.05

TN Scale	SS Scale	SEM
527	522	1.98
528	523	1.81
529	524	1.62
530	526	1.59
531	527	1.59
532	528	1.54
533	529	1.45
534	530	1.37
535	531	1.27
536	532	1.26
537	534	1.43
538	535	1.49
539	537	1.5
540	538	1.44
541	539	1.41
542	540	1.44
543	541	1.52
544	543	1.51
545	544	1.29
546	546	1.02
547	546	0.96
548	547	1.1
549	548	1.25
550	549	1.29
551	550	1.22
552	551	1.15
553	552	1.19
554	553	1.24
555	555	1.21
556	556	1.13
557	558	1
558	559	1.06
559	560	1.26
560	561	1.42
561	563	1.49
562	564	1.46

**Table E 17 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 2**

TN Scale	SS Scale	SEM
563	566	1.35
564	568	1.3
565	569	1.4
566	571	1.47
567	572	1.4
568	574	1.26
569	575	1.16
570	576	1.08
571	577	1.12
572	579	1.29
573	581	1.25
574	582	1.19
575	583	1.18
576	584	1.17
577	585	1.17
578	585	1.17
579	587	1.22
580	588	1.3
581	590	1.43
582	592	1.51
583	594	1.54
584	596	1.58
585	597	1.61
586	597	1.62
587	597	1.62
588	598	1.63
589	599	1.64
590	601	1.64
591	604	1.68
592	605	1.7
593	607	1.66
594	609	1.59
595	610	1.53
596	611	1.52
597	611	1.52
598	612	1.52

TN Scale	SS Scale	SEM
599	612	1.52
600	612	1.53
601	613	1.55
602	614	1.58
603	615	1.59
604	616	1.54
605	618	1.4
606	620	1.34
607	622	1.5
608	624	1.68
609	625	1.78
610	627	1.82
611	627	1.83
612	628	1.86
613	629	1.9
614	630	1.9
615	630	1.89
616	630	1.9
617	630	1.9
618	630	1.9
619	630	1.9
620	631	1.91
621	631	1.91
622	631	1.98
623	633	2.1
624	637	2.32
625	637	2.27
626	637	2.28
627	637	2.3
628	639	2.25
629	641	2.16
630	642	2.11
631	642	2.09
632	643	2.09
633	646	2
634	647	2.06

**Table E 17 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 2**

TN Scale	SS Scale	SEM
635	649	2.2
636	650	2.49
637	651	2.66
638	651	2.66
639	651	2.65
640	651	2.65
641	651	2.64
642	651	2.64
643	651	2.64
644	651	2.63
645	651	2.63
646	651	2.63
647	651	2.63
648	651	2.62
649	651	2.62
650	651	2.62
651	652	2.62
652	652	2.61
653	652	2.61
654	652	2.61
655	652	2.61
656	652	2.61
657	652	2.6
658	652	2.6
659	652	2.6
660	652	2.6
661	652	2.6
662	652	2.6
663	652	2.6
664	652	2.6
665	652	2.6
666	652	2.6
667	652	2.6
668	652	2.6
669	652	2.6
670	652	2.6

TN Scale	SS Scale	SEM
671	652	2.6
672	652	2.6
673	652	2.6
674	652	2.6
675	652	2.6
676	652	2.6
677	652	2.61
678	652	2.61
679	652	2.62
680	652	2.63
681	653	2.63
682	653	2.63
683	654	2.63
684	654	2.63
685	655	2.62
686	656	2.63
687	656	2.65
688	657	2.69
689	657	2.75
690	658	2.85
691	658	2.99
692	659	3.17
693	659	3.38
694	660	3.6
695	661	3.82
696	662	4.03
697	664	4.21
698	665	4.34
699	667	4.43
700	668	4.48
701	669	4.49
702	671	4.48
703	672	4.47
704	674	4.49
705	675	4.52
706	677	4.55

**Table E 17 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 2**

TN Scale	SS Scale	SEM
707	679	4.53
708	681	4.45
709	683	4.3
710	685	4.12
711	687	3.93
712	689	3.79
713	691	3.86
714	693	4.36
715	695	5.19
716	701	6.01
717	707	6.23
718	713	5.45
719	719	4.44
720	731	3.17

**Table E 18 TN and Spring SAT/9 Linking Table—
Mathematics Grade 3**

TN Scale	SS Scale	SEM
385	508	28.06
386	508	28.06
387	508	28.06
388	508	28.06
389	508	28.06
390	508	28.06
391	508	28.06
392	508	28.06
393	508	28.06
394	508	28.06
395	508	28.06
396	508	28.06
397	508	28.06
398	508	28.06
399	508	28.06
400	508	28.06
401	508	28.06
402	508	28.06
403	508	28.06
404	508	28.06
405	508	28.06
406	508	28.06
407	508	28.06
408	508	28.06
409	508	28.06
410	508	28.06
411	508	28.06
412	508	28.06
413	508	28.06
414	508	28.06
415	508	28.06
416	508	28.06
417	508	28.06
418	508	28.06
419	508	28.06
420	508	23.39

TN Scale	SS Scale	SEM
421	508	23.13
422	508	22.87
423	508	22.63
424	508	22.4
425	508	20.84
426	508	20.51
427	508	20.19
428	508	19.88
429	508	19.58
430	508	19.29
431	509	19.01
432	509	18.73
433	509	18.47
434	509	18.21
435	509	17.96
436	509	17.72
437	509	17.48
438	509	17.26
439	509	17.03
440	509	16.83
441	509	16.63
442	509	16.43
443	509	16.24
444	509	16.05
445	509	15.87
446	509	15.68
447	509	15.5
448	509	15.32
449	509	15.14
450	509	14.96
451	509	14.79
452	509	14.62
453	510	14.45
454	510	14.28
455	510	14.12
456	510	13.96

**Table E 18 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 3**

TN Scale	SS Scale	SEM
457	510	13.8
458	510	13.65
459	510	13.34
460	510	12.82
461	511	12.38
462	511	11.98
463	511	11.61
464	512	11.1
465	512	10.5
466	512	10
467	512	9.58
468	512	9.1
469	512	8.64
470	512	8.19
471	512	7.71
472	513	7.25
473	513	6.83
474	513	6.35
475	513	5.81
476	513	5.4
477	514	4.92
478	514	4.59
479	514	4.33
480	514	4.12
481	515	3.96
482	515	3.81
483	515	3.67
484	515	3.54
485	515	3.43
486	515	3.32
487	515	3.19
488	515	3.08
489	515	2.97
490	515	2.89
491	515	2.81
492	515	2.77

TN Scale	SS Scale	SEM
493	515	2.73
494	516	2.7
495	516	2.66
496	516	2.63
497	516	2.6
498	516	2.57
499	516	2.55
500	516	2.54
501	516	2.53
502	516	2.54
503	516	2.55
504	516	2.56
505	516	2.6
506	517	2.65
507	518	2.72
508	518	2.74
509	519	2.76
510	519	2.77
511	520	2.8
512	520	2.82
513	521	2.83
514	521	2.82
515	522	2.81
516	522	2.8
517	522	2.8
518	522	2.78
519	522	2.77
520	523	2.77
521	523	2.76
522	523	2.75
523	523	2.73
524	524	2.71
525	524	2.72
526	525	2.67
527	525	2.66
528	525	2.65

**Table E 18 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 3**

TN Scale	SS Scale	SEM
529	525	2.66
530	526	2.68
531	526	2.71
532	526	2.76
533	527	2.78
534	528	2.77
535	530	2.75
536	530	2.65
537	531	2.52
538	531	2.39
539	532	2.26
540	532	2
541	533	1.69
542	534	1.5
543	534	1.43
544	535	1.34
545	535	1.3
546	536	1.3
547	536	1.32
548	537	1.42
549	538	1.61
550	539	1.74
551	540	1.86
552	540	1.92
553	541	1.95
554	541	1.96
555	542	1.93
556	543	1.84
557	544	1.67
558	545	1.56
559	545	1.52
560	546	1.46
561	547	1.35
562	548	1.25
563	549	1.16
564	549	1.11

TN Scale	SS Scale	SEM
565	550	1.09
566	550	1.08
567	551	1.08
568	551	1.1
569	552	1.1
570	553	1.12
571	553	1.14
572	554	1.16
573	555	1.19
574	556	1.29
575	557	1.39
576	558	1.46
577	559	1.5
578	561	1.42
579	562	1.24
580	563	1.17
581	564	1.22
582	565	1.24
583	567	1.21
584	567	1.22
585	568	1.23
586	569	1.27
587	570	1.28
588	571	1.2
589	572	1.1
590	573	1.13
591	574	1.2
592	575	1.29
593	576	1.36
594	578	1.33
595	579	1.28
596	580	1.38
597	582	1.51
598	584	1.51
599	586	1.38
600	587	1.23

**Table E 18 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 3**

TN Scale	SS Scale	SEM
601	588	1.12
602	589	1.02
603	590	0.95
604	591	0.96
605	592	1.03
606	593	1.1
607	595	1.19
608	596	1.25
609	597	1.27
610	598	1.27
611	599	1.25
612	601	1.23
613	602	1.19
614	603	1.16
615	604	1.08
616	605	0.94
617	606	0.93
618	607	1.1
619	609	1.29
620	611	1.25
621	612	1.17
622	614	1.13
623	615	1.11
624	616	1.12
625	617	1.13
626	619	1.09
627	620	1.05
628	621	1.07
629	622	1.16
630	623	1.31
631	625	1.52
632	627	1.66
633	629	1.51
634	630	1.24
635	632	1.21
636	633	1.29

TN Scale	SS Scale	SEM
637	634	1.33
638	635	1.29
639	637	1.2
640	638	1.16
641	639	1.21
642	640	1.31
643	641	1.39
644	642	1.42
645	644	1.39
646	645	1.35
647	646	1.35
648	647	1.35
649	648	1.34
650	649	1.36
651	650	1.38
652	652	1.35
653	654	1.4
654	655	1.43
655	656	1.46
656	657	1.45
657	658	1.42
658	658	1.42
659	659	1.39
660	659	1.38
661	660	1.37
662	662	1.38
663	665	1.76
664	665	1.79
665	666	1.83
666	666	1.87
667	667	1.89
668	667	1.92
669	668	1.96
670	668	1.97
671	668	1.97
672	669	2

**Table E 18 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 3**

TN Scale	SS Scale	SEM
673	669	2.03
674	670	2.11
675	670	2.18
676	671	2.22
677	671	2.27
678	673	2.36
679	673	2.44
680	674	2.5
681	676	2.46
682	677	2.44
683	678	2.41
684	678	2.39
685	678	2.37
686	679	2.36
687	679	2.35
688	679	2.35
689	679	2.35
690	679	2.34
691	679	2.34
692	679	2.34
693	680	2.34
694	680	2.33
695	680	2.32
696	680	2.32
697	680	2.31
698	680	2.31
699	680	2.3
700	680	2.3
701	680	2.3
702	680	2.29
703	680	2.29
704	680	2.28
705	680	2.28
706	681	2.28
707	681	2.28
708	681	2.27

TN Scale	SS Scale	SEM
709	681	2.27
710	681	2.27
711	681	2.27
712	681	2.27
713	681	2.27
714	681	2.27
715	681	2.27
716	681	2.27
717	681	2.27
718	681	2.27
719	682	2.22
720	683	2.18
721	684	2.15
722	684	2.18
723	685	2.26
724	686	2.39
725	686	2.57
726	688	2.75
727	689	2.89
728	691	2.97
729	692	3.01
730	694	3.13
731	695	3.4
732	697	3.81
733	700	4.22
734	704	4.58
735	707	5.05
736	710	6.02
737	718	7.1
738	727	7.05
739	739	6.65
740	756	5.7

**Table E 19 TN and Spring SAT/9 Linking Table—
Mathematics Grade 4**

TN Scale	SS Scale	SEM
403	552	2.27
404	552	2.27
405	552	2.27
406	552	2.27
407	552	2.27
408	552	2.27
409	552	2.27
410	552	2.27
411	552	2.27
412	552	2.26
413	552	2.26
414	552	2.25
415	552	2.25
416	552	2.24
417	552	2.23
418	552	2.21
419	552	2.19
420	552	2.19
421	552	2.19
422	553	2.21
423	553	2.24
424	553	2.27
425	553	2.15
426	554	2.09
427	555	2.09
428	555	2.15
429	555	2.25
430	556	2.4
431	556	2.56
432	556	2.64
433	556	2.6
434	556	2.57
435	556	2.55
436	556	2.52
437	556	2.5
438	556	2.48

TN Scale	SS Scale	SEM
439	556	2.46
440	556	2.45
441	556	2.44
442	556	2.44
443	556	2.43
444	556	2.43
445	556	2.43
446	556	2.43
447	556	2.43
448	556	2.44
449	556	2.44
450	556	2.45
451	556	2.46
452	556	2.47
453	556	2.48
454	556	2.48
455	556	2.49
456	556	2.49
457	556	2.49
458	556	2.5
459	556	2.5
460	556	2.5
461	556	2.51
462	556	2.51
463	556	2.51
464	556	2.52
465	556	2.52
466	556	2.52
467	556	2.53
468	556	2.53
469	556	2.53
470	556	2.54
471	556	2.54
472	556	2.54
473	556	2.55
474	556	2.55

**Table E 19 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 4**

TN Scale	SS Scale	SEM
475	557	2.55
476	557	2.56
477	557	2.57
478	557	2.58
479	558	2.59
480	558	2.6
481	558	2.61
482	558	2.62
483	558	2.62
484	558	2.63
485	558	2.64
486	559	2.65
487	559	2.66
488	559	2.66
489	559	2.68
490	559	2.68
491	559	2.69
492	559	2.69
493	560	2.7
494	560	2.69
495	560	2.69
496	560	2.69
497	560	2.69
498	560	2.69
499	560	2.69
500	560	2.68
501	560	2.68
502	560	2.67
503	560	2.67
504	560	2.67
505	561	2.66
506	561	2.65
507	561	2.64
508	562	2.59
509	563	2.57
510	564	2.59

TN Scale	SS Scale	SEM
511	567	2.5
512	570	2.22
513	570	2.15
514	570	2.11
515	570	2.07
516	571	2.03
517	571	2.01
518	571	1.97
519	571	1.93
520	572	1.91
521	572	1.88
522	572	1.86
523	573	1.84
524	573	1.84
525	574	1.82
526	574	1.81
527	574	1.79
528	575	1.77
529	575	1.76
530	575	1.75
531	576	1.73
532	576	1.73
533	576	1.71
534	577	1.69
535	577	1.67
536	577	1.64
537	578	1.59
538	578	1.57
539	578	1.54
540	579	1.51
541	579	1.49
542	579	1.48
543	579	1.46
544	579	1.44
545	579	1.42
546	580	1.41

**Table E 19 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 4**

TN Scale	SS Scale	SEM
547	580	1.4
548	580	1.38
549	580	1.36
550	580	1.35
551	581	1.34
552	581	1.33
553	581	1.33
554	581	1.32
555	581	1.31
556	581	1.3
557	581	1.28
558	582	1.28
559	582	1.28
560	582	1.27
561	582	1.26
562	582	1.25
563	582	1.25
564	583	1.26
565	583	1.28
566	583	1.3
567	583	1.34
568	583	1.38
569	584	1.42
570	584	1.52
571	584	1.62
572	585	1.66
573	585	1.71
574	585	1.78
575	586	1.89
576	586	2.04
577	588	2.17
578	588	2.22
579	590	2.15
580	591	1.99
581	591	1.87
582	591	1.78

TN Scale	SS Scale	SEM
583	592	1.58
584	592	1.42
585	593	1.38
586	593	1.37
587	594	1.37
588	595	1.34
589	596	1.29
590	596	1.16
591	597	1.05
592	597	0.97
593	598	0.9
594	598	0.89
595	599	0.93
596	599	1.04
597	600	1.21
598	601	1.33
599	601	1.4
600	602	1.46
601	604	1.49
602	605	1.51
603	606	1.51
604	608	1.39
605	609	1.22
606	610	1.14
607	610	1.08
608	611	1.1
609	612	1.16
610	613	1.18
611	614	1.14
612	614	1.08
613	615	1.02
614	616	0.98
615	616	0.96
616	617	0.94
617	618	0.89
618	618	0.81

**Table E 19 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 4**

TN Scale	SS Scale	SEM
619	619	0.87
620	620	1.09
621	621	1.22
622	623	1.15
623	623	1
624	624	0.93
625	625	0.94
626	626	0.99
627	627	1.1
628	628	1.22
629	629	1.19
630	630	1.07
631	631	0.95
632	631	0.91
633	632	0.92
634	633	0.94
635	634	0.99
636	635	1.08
637	636	1.11
638	637	1.05
639	638	0.99
640	639	1.01
641	640	1.05
642	641	1.02
643	642	0.93
644	643	0.86
645	644	0.85
646	645	0.99
647	646	1.08
648	647	1.1
649	648	1.11
650	650	1.11
651	651	1.06
652	652	1.05
653	653	1.06
654	654	1.13

TN Scale	SS Scale	SEM
655	655	1.2
656	656	1.23
657	657	1.26
658	659	1.26
659	660	1.22
660	660	1.17
661	661	1.11
662	662	1.09
663	663	1.13
664	665	1.23
665	666	1.3
666	667	1.31
667	668	1.29
668	668	1.28
669	669	1.27
670	670	1.26
671	671	1.24
672	672	1.2
673	672	1.17
674	673	1.15
675	674	1.15
676	675	1.19
677	676	1.28
678	678	1.39
679	678	1.46
680	679	1.58
681	680	1.87
682	682	2.14
683	684	2.2
684	685	2.1
685	686	2.03
686	686	1.97
687	687	1.85
688	688	1.51
689	690	1.48
690	691	1.51

**Table E 19 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 4**

TN Scale	SS Scale	SEM
691	692	1.6
692	693	1.64
693	693	1.66
694	694	1.69
695	694	1.7
696	694	1.72
697	695	1.75
698	695	1.77
699	696	1.86
700	696	2
701	697	2.1
702	697	2.22
703	698	2.52
704	698	2.84
705	699	3
706	699	3.08
707	700	3.16
708	700	3.26
709	700	3.31
710	701	3.37
711	701	3.44
712	702	3.51
713	703	3.57
714	704	3.61
715	704	3.63
716	704	3.63
717	704	3.62
718	705	3.6
719	705	3.58
720	705	3.56
721	706	3.53
722	706	3.51
723	706	3.49
724	706	3.46
725	707	3.44
726	707	3.42

TN Scale	SS Scale	SEM
727	707	3.39
728	707	3.37
729	707	3.35
730	707	3.32
731	707	3.3
732	708	3.28
733	708	3.26
734	708	3.24
735	708	3.22
736	708	3.2
737	708	3.18
738	708	3.16
739	708	3.14
740	709	3.13
741	709	3.11
742	709	3.1
743	709	3.09
744	709	3.08
745	709	3.07
746	709	3.06
747	710	3.05
748	710	3.05
749	710	2.98
750	711	2.88
751	712	2.79
752	713	2.74
753	714	2.72
754	714	2.75
755	715	2.84
756	716	2.98
757	717	3.16
758	719	3.33
759	721	3.45
760	722	3.52
761	724	3.61
762	726	3.88

**Table E 19 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 4**

TN Scale	SS Scale	SEM
763	727	4.52
764	729	5.72
765	734	7.15
766	741	8.33
767	748	8.94
768	759	9.03
769	771	7.32
770	784	2.71

**Table E 20 TN and Spring SAT/9 Linking Table—
Mathematics Grade 5**

TN Scale	SS Scale	SEM
430	567	10.13
431	567	10.13
432	567	10.13
433	567	10.13
434	567	10.13
435	567	10.13
436	567	10.13
437	567	10.13
438	567	10.13
439	567	10.13
440	567	10.13
441	567	10.06
442	567	9.99
443	567	9.92
444	567	9.86
445	567	9.8
446	567	9.75
447	567	9.7
448	567	9.65
449	567	9.62
450	567	9.58
451	567	9.55
452	567	9.52
453	567	9.5
454	567	7.21
455	567	6.53
456	568	6
457	568	5.64
458	568	5.38
459	568	5.19
460	568	5.03
461	568	4.9
462	568	4.81
463	568	4.73
464	568	4.61
465	569	4.45

TN Scale	SS Scale	SEM
466	569	4.31
467	570	4.17
468	570	4.04
469	571	3.92
470	571	3.82
471	572	3.72
472	572	3.61
473	573	3.51
474	573	3.41
475	573	3.3
476	574	3.21
477	574	3.13
478	574	3.06
479	575	3
480	575	2.93
481	575	2.87
482	575	2.81
483	575	2.76
484	575	2.71
485	576	2.67
486	576	2.62
487	576	2.58
488	576	2.55
489	576	2.52
490	576	2.49
491	576	2.46
492	576	2.44
493	576	2.42
494	576	2.4
495	576	2.39
496	577	2.37
497	577	2.35
498	577	2.34
499	577	2.32
500	577	2.3
501	577	2.28

**Table E 20 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 5**

TN Scale	SS Scale	SEM
502	577	2.26
503	577	2.24
504	577	2.22
505	577	2.21
506	577	2.19
507	577	2.18
508	577	2.17
509	577	2.14
510	577	2.11
511	577	2.08
512	577	2.05
513	577	2.02
514	577	1.99
515	578	1.96
516	578	1.94
517	578	1.92
518	578	1.89
519	578	1.86
520	578	1.84
521	578	1.82
522	578	1.8
523	579	1.79
524	579	1.79
525	579	1.78
526	579	1.79
527	580	1.81
528	580	1.83
529	580	1.83
530	580	1.84
531	580	1.84
532	580	1.85
533	580	1.86
534	581	1.87
535	581	1.89
536	581	1.93
537	582	1.99

TN Scale	SS Scale	SEM
538	582	2.01
539	582	2.03
540	582	2.05
541	583	2.06
542	583	2.09
543	584	2.13
544	584	2.16
545	585	2.17
546	585	2.17
547	585	2.18
548	586	2.19
549	586	2.18
550	587	2.18
551	587	2.16
552	588	2.13
553	589	2.11
554	589	2.1
555	589	2.1
556	591	2.17
557	593	2.29
558	593	2.31
559	595	2.27
560	596	2.22
561	597	2.18
562	598	2.16
563	599	2.11
564	600	2.02
565	600	1.91
566	601	1.81
567	602	1.71
568	602	1.61
569	603	1.41
570	604	1.24
571	604	1.18
572	604	1.15
573	605	1.12

**Table E 20 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 5**

TN Scale	SS Scale	SEM
574	605	1.1
575	605	1.09
576	606	1.07
577	606	1.04
578	607	1.03
579	607	1.02
580	607	1.02
581	607	1.03
582	607	1.05
583	608	1.09
584	608	1.14
585	609	1.18
586	609	1.24
587	610	1.3
588	610	1.33
589	611	1.31
590	612	1.24
591	612	1.16
592	613	1.1
593	613	1.08
594	614	1.11
595	614	1.14
596	614	1.21
597	615	1.27
598	616	1.29
599	617	1.27
600	618	1.23
601	618	1.18
602	619	1.11
603	620	1.08
604	620	1.08
605	620	1.09
606	621	1.11
607	622	1.11
608	622	1.11
609	623	1.12

TN Scale	SS Scale	SEM
610	623	1.13
611	623	1.15
612	624	1.17
613	625	1.19
614	625	1.19
615	626	1.17
616	626	1.15
617	627	1.14
618	627	1.15
619	628	1.2
620	629	1.28
621	630	1.34
622	631	1.36
623	632	1.31
624	633	1.22
625	634	1.11
626	635	1
627	636	0.92
628	636	0.9
629	637	0.89
630	637	0.92
631	639	0.9
632	639	0.82
633	640	0.75
634	641	0.71
635	642	0.69
636	642	0.68
637	643	0.68
638	643	0.68
639	644	0.73
640	645	0.82
641	646	0.93
642	647	0.98
643	648	0.98
644	648	0.96
645	649	0.93

**Table E 20 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 5**

TN Scale	SS Scale	SEM
646	650	0.86
647	651	0.8
648	652	0.84
649	652	0.92
650	653	1.01
651	654	1.09
652	656	1.13
653	657	1
654	658	0.87
655	659	0.9
656	660	0.98
657	661	1
658	662	0.96
659	662	0.88
660	663	0.82
661	664	0.86
662	665	0.97
663	666	1.04
664	667	0.95
665	668	0.8
666	669	0.72
667	670	0.76
668	671	0.86
669	671	0.91
670	672	0.93
671	673	0.95
672	675	0.99
673	675	1.09
674	676	1.18
675	677	1.22
676	679	1.17
677	680	1.09
678	680	1.02
679	682	0.98
680	683	0.95
681	683	0.94

TN Scale	SS Scale	SEM
682	684	0.93
683	685	0.94
684	685	0.96
685	686	1.01
686	687	1.05
687	688	1.06
688	688	1.05
689	689	1.1
690	690	1.14
691	691	1.17
692	692	1.2
693	693	1.27
694	694	1.36
695	695	1.4
696	696	1.44
697	697	1.43
698	698	1.39
699	699	1.38
700	700	1.41
701	702	1.61
702	703	1.86
703	704	2
704	706	2.11
705	707	2.08
706	708	1.99
707	709	1.92
708	710	1.92
709	711	1.92
710	711	1.94
711	712	1.98
712	712	2.07
713	713	2.2
714	714	2.39
715	714	2.41
716	714	2.44
717	715	2.52

**Table E 20 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 5**

TN Scale	SS Scale	SEM
718	716	2.67
719	718	2.86
720	719	3
721	720	3.25
722	722	3.4
723	723	3.47
724	724	3.52
725	724	3.53
726	725	3.53
727	725	3.52
728	725	3.52
729	726	3.46
730	727	3.4
731	728	3.35
732	728	3.31
733	729	3.19
734	729	3.06
735	730	2.99
736	730	2.97
737	730	2.94
738	730	2.89
739	730	2.85
740	731	2.81
741	731	2.78
742	731	2.76
743	731	2.73
744	731	2.7
745	732	2.69
746	732	2.67
747	732	2.66
748	732	2.66
749	732	2.65
750	733	2.63
751	733	2.63
752	733	2.66
753	734	2.71

TN Scale	SS Scale	SEM
754	734	2.79
755	734	2.79
756	734	2.8
757	734	2.81
758	734	2.81
759	734	2.82
760	735	2.83
761	735	2.84
762	735	2.85
763	735	2.86
764	735	2.87
765	735	2.89
766	735	2.91
767	735	2.92
768	735	2.94
769	735	2.96
770	735	2.98
771	735	3
772	735	3.03
773	735	3.05
774	735	3.08
775	735	3.1
776	736	3.14
777	736	3.27
778	737	3.56
779	737	3.88
780	738	4.21
781	740	4.52
782	742	4.76
783	744	4.92
784	746	5.01
785	748	5.04
786	750	5.05
787	752	5.06
788	755	5.02
789	758	4.91

**Table E 20 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 5**

TN Scale	SS Scale	SEM
790	761	4.7
791	763	4.42
792	766	4.62
793	769	6.43
794	776	8.84
795	790	8.87
796	799	5.16
797	805	0.92

**Table E 21 TN and Spring SAT/9 Linking Table—
Mathematics Grade 6**

TN Scale	SS Scale	SEM
477	590	3.72
478	590	3.72
479	590	3.72
480	590	3.72
481	590	3.72
482	590	3.72
483	590	3.73
484	590	3.74
485	590	3.76
486	590	3.78
487	590	3.79
488	591	3.79
489	591	3.81
490	591	3.82
491	591	3.84
492	591	3.86
493	591	3.88
494	592	3.91
495	592	3.92
496	592	3.92
497	592	3.92
498	592	3.93
499	592	3.93
500	592	3.93
501	592	3.94
502	592	3.94
503	592	3.94
504	592	3.95
505	592	3.95
506	593	3.96
507	593	3.96
508	593	3.96
509	593	3.97
510	593	3.97
511	593	3.98
512	593	3.98

TN Scale	SS Scale	SEM
513	593	3.98
514	594	3.98
515	594	3.97
516	594	3.97
517	594	3.97
518	594	3.97
519	595	3.97
520	595	3.96
521	595	3.95
522	595	3.95
523	595	3.94
524	596	3.94
525	596	3.93
526	596	3.92
527	596	3.91
528	596	3.9
529	596	3.89
530	596	3.87
531	596	3.86
532	596	3.84
533	596	3.81
534	597	3.8
535	597	3.78
536	597	3.77
537	597	3.76
538	598	3.73
539	598	3.7
540	598	3.67
541	598	3.64
542	598	3.6
543	598	3.58
544	599	3.55
545	599	3.51
546	599	3.48
547	599	3.44
548	599	3.39

**Table E 21 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 6**

TN Scale	SS Scale	SEM
549	599	3.32
550	600	3.21
551	600	3.11
552	601	3.03
553	602	2.88
554	602	2.77
555	602	2.66
556	602	2.58
557	602	2.5
558	602	2.42
559	603	2.28
560	603	2.16
561	603	2.04
562	604	1.92
563	604	1.77
564	604	1.68
565	605	1.65
566	605	1.62
567	605	1.6
568	606	1.61
569	606	1.64
570	607	1.66
571	607	1.68
572	607	1.69
573	608	1.68
574	608	1.68
575	609	1.67
576	609	1.66
577	609	1.66
578	609	1.64
579	610	1.59
580	611	1.55
581	611	1.52
582	612	1.51
583	613	1.45
584	614	1.38

TN Scale	SS Scale	SEM
585	614	1.33
586	614	1.31
587	614	1.29
588	615	1.26
589	615	1.24
590	615	1.24
591	616	1.29
592	616	1.34
593	617	1.39
594	617	1.43
595	617	1.48
596	618	1.55
597	618	1.62
598	618	1.66
599	619	1.71
600	619	1.82
601	619	1.99
602	620	2.15
603	620	2.25
604	621	2.33
605	621	2.38
606	622	2.41
607	623	2.41
608	624	2.3
609	625	2.14
610	626	1.99
611	626	1.82
612	627	1.62
613	627	1.39
614	628	1.27
615	628	1.24
616	628	1.17
617	629	1.14
618	630	1.18
619	630	1.2
620	631	1.19

**Table E 21 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 6**

TN Scale	SS Scale	SEM
621	631	1.17
622	631	1.16
623	632	1.2
624	633	1.28
625	633	1.37
626	634	1.5
627	635	1.58
628	636	1.58
629	637	1.53
630	637	1.49
631	638	1.43
632	639	1.33
633	640	1.21
634	641	1.12
635	642	1.07
636	643	1.06
637	643	1.03
638	644	1
639	644	0.97
640	645	0.94
641	646	0.88
642	646	0.86
643	647	0.84
644	648	0.84
645	648	0.85
646	649	0.88
647	650	0.99
648	651	1.09
649	652	1.09
650	653	0.99
651	654	0.89
652	655	0.83
653	655	0.86
654	656	0.95
655	657	1.04
656	658	1.14

TN Scale	SS Scale	SEM
657	660	1.23
658	661	1.14
659	662	1.05
660	663	1.03
661	664	1.01
662	665	0.93
663	666	0.86
664	667	0.85
665	668	0.86
666	668	0.94
667	669	1.06
668	670	1.2
669	672	1.22
670	673	1.08
671	675	0.82
672	675	0.71
673	676	0.71
674	677	0.75
675	678	0.78
676	679	0.79
677	680	0.82
678	681	0.82
679	682	0.82
680	682	0.81
681	683	0.8
682	685	0.83
683	686	0.91
684	687	1.07
685	688	1.2
686	689	1.28
687	690	1.32
688	692	1.29
689	693	1.23
690	694	1.14
691	695	1.05
692	696	1.02

**Table E 21 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 6**

TN Scale	SS Scale	SEM
693	697	1.03
694	699	1.07
695	700	1.03
696	701	0.95
697	702	0.92
698	703	1.02
699	705	1.12
700	706	1.13
701	707	1.09
702	708	1.06
703	709	1.05
704	710	1.03
705	711	1
706	712	0.99
707	712	1.01
708	713	1.05
709	714	1.13
710	715	1.24
711	716	1.31
712	718	1.37
713	719	1.46
714	721	1.46
715	722	1.43
716	723	1.38
717	725	1.35
718	726	1.35
719	727	1.37
720	727	1.38
721	727	1.39
722	728	1.41
723	729	1.45
724	730	1.49
725	732	1.45
726	734	1.49
727	734	1.5
728	735	1.51

TN Scale	SS Scale	SEM
729	735	1.51
730	736	1.52
731	736	1.55
732	737	1.58
733	737	1.65
734	738	1.87
735	742	2.25
736	744	2.41
737	745	2.43
738	745	2.44
739	746	2.47
740	747	2.45
741	748	2.46
742	748	2.46
743	748	2.46
744	748	2.46
745	749	2.47
746	749	2.49
747	749	2.51
748	751	2.58
749	752	2.74
750	753	3.01
751	753	3.09
752	753	3.32
753	758	3.54
754	761	3.73
755	763	3.82
756	764	3.88
757	764	3.92
758	765	3.91
759	765	3.9
760	766	3.91
761	766	3.92
762	767	3.94
763	767	3.94
764	767	3.93

**Table E 21 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 6**

TN Scale	SS Scale	SEM
765	767	3.93
766	767	3.93
767	767	3.92
768	767	3.92
769	767	3.91
770	767	3.91
771	767	3.91
772	767	3.9
773	767	3.9
774	768	3.9
775	768	3.9
776	768	3.9
777	768	3.89
778	768	3.89
779	768	3.89
780	768	3.89
781	768	3.89
782	768	3.89
783	768	3.89
784	768	3.89
785	768	3.9
786	768	3.9
787	769	3.9
788	769	3.9
789	769	3.91
790	769	3.91
791	769	3.91
792	769	3.91
793	769	3.92
794	770	3.87
795	770	3.84
796	771	3.8
797	771	3.79
798	772	3.81
799	773	3.86
800	773	3.94

TN Scale	SS Scale	SEM
801	774	4.07
802	774	4.23
803	775	4.42
804	776	4.65
805	777	4.88
806	779	5.09
807	781	5.26
808	782	5.33
809	784	5.34
810	786	5.31
811	787	5.24
812	789	5.34
813	791	6.19
814	792	7.11
815	794	8.4
816	796	9.65
817	808	10.43
818	820	9.69
819	825	7.32
820	831	3.38

**Table E 22 TN and Spring SAT/9 Linking Table—
Mathematics Grade 7**

TN Scale	SS Scale	SEM
487	616	1.78
488	616	1.78
489	616	1.78
490	616	1.78
491	616	1.78
492	616	1.78
493	616	1.78
494	616	1.78
495	616	1.78
496	616	1.78
497	616	1.77
498	616	1.77
499	616	1.77
500	616	1.77
501	617	1.77
502	617	1.77
503	617	1.77
504	617	1.77
505	617	1.76
506	617	1.76
507	617	1.76
508	617	1.76
509	618	1.76
510	618	1.76
511	618	1.75
512	618	1.75
513	618	1.75
514	618	1.75
515	618	1.75
516	618	1.74
517	618	1.73
518	618	1.73
519	618	1.72
520	618	1.71
521	618	1.71
522	618	1.7

TN Scale	SS Scale	SEM
523	618	1.7
524	618	1.7
525	618	1.69
526	618	1.69
527	618	1.69
528	618	1.68
529	618	1.68
530	618	1.68
531	618	1.67
532	618	1.67
533	618	1.67
534	619	1.67
535	619	1.67
536	619	1.66
537	619	1.66
538	619	1.66
539	619	1.65
540	619	1.65
541	619	1.65
542	619	1.64
543	619	1.64
544	619	1.64
545	619	1.64
546	619	1.63
547	619	1.62
548	619	1.62
549	619	1.62
550	619	1.61
551	619	1.61
552	619	1.6
553	619	1.6
554	619	1.59
555	619	1.59
556	619	1.58
557	619	1.58
558	619	1.57

**Table E 22 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 7**

TN Scale	SS Scale	SEM
559	619	1.57
560	619	1.56
561	619	1.55
562	620	1.53
563	620	1.52
564	620	1.49
565	620	1.48
566	620	1.46
567	621	1.47
568	621	1.47
569	621	1.47
570	621	1.48
571	622	1.49
572	622	1.5
573	622	1.51
574	622	1.51
575	622	1.52
576	623	1.52
577	623	1.52
578	623	1.53
579	624	1.53
580	624	1.53
581	624	1.53
582	624	1.54
583	625	1.53
584	625	1.52
585	626	1.5
586	626	1.48
587	626	1.47
588	627	1.45
589	627	1.44
590	627	1.43
591	627	1.39
592	628	1.36
593	629	1.33
594	629	1.31

TN Scale	SS Scale	SEM
595	630	1.29
596	630	1.27
597	631	1.26
598	631	1.24
599	631	1.21
600	632	1.19
601	632	1.16
602	632	1.13
603	633	1.11
604	633	1.08
605	634	1.06
606	635	1.04
607	635	1.05
608	635	1.05
609	636	1.06
610	636	1.08
611	636	1.11
612	637	1.15
613	637	1.18
614	638	1.22
615	638	1.25
616	639	1.26
617	639	1.27
618	640	1.2
619	641	1.1
620	641	1.02
621	642	0.97
622	642	0.93
623	642	0.91
624	643	0.91
625	643	0.92
626	644	0.93
627	644	0.94
628	645	0.94
629	645	0.95
630	646	0.96

**Table E 22 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 7**

TN Scale	SS Scale	SEM
631	646	1.01
632	647	1.07
633	647	1.11
634	648	1.15
635	648	1.18
636	649	1.18
637	650	1.13
638	651	1.03
639	651	0.93
640	652	0.87
641	652	0.85
642	653	0.87
643	653	0.91
644	654	0.93
645	654	0.94
646	654	0.94
647	655	0.92
648	655	0.91
649	656	0.9
650	657	0.88
651	658	0.9
652	658	0.9
653	659	0.89
654	659	0.88
655	660	0.89
656	661	0.92
657	662	0.95
658	662	0.95
659	663	0.93
660	664	0.89
661	665	0.87
662	666	0.88
663	667	0.88
664	667	0.86
665	668	0.85
666	669	0.85

TN Scale	SS Scale	SEM
667	670	0.86
668	671	0.91
669	672	0.96
670	673	0.89
671	674	0.74
672	674	0.72
673	675	0.81
674	676	0.9
675	677	0.93
676	678	0.92
677	679	0.94
678	680	0.93
679	681	0.85
680	682	0.75
681	683	0.79
682	684	0.89
683	685	0.91
684	686	0.9
685	687	0.89
686	688	0.89
687	689	0.96
688	689	1.12
689	691	1.19
690	692	1.09
691	693	0.93
692	694	0.88
693	695	0.88
694	696	0.81
695	697	0.73
696	697	0.79
697	698	1
698	699	1.13
699	701	1.08
700	702	1.03
701	703	1.07
702	704	1.15

**Table E 22 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 7**

TN Scale	SS Scale	SEM
703	706	1.22
704	708	1.2
705	709	1.13
706	710	1.07
707	712	1.07
708	713	1.12
709	714	1.14
710	715	1.08
711	716	0.98
712	717	1.01
713	718	1.23
714	719	1.34
715	721	1.32
716	722	1.27
717	723	1.29
718	724	1.4
719	725	1.48
720	726	1.49
721	727	1.43
722	728	1.35
723	729	1.28
724	731	1.28
725	732	1.34
726	733	1.43
727	734	1.5
728	734	1.57
729	735	1.62
730	736	1.68
731	737	1.7
732	738	1.68
733	739	1.62
734	740	1.56
735	741	1.53
736	742	1.51
737	743	1.52
738	744	1.56

TN Scale	SS Scale	SEM
739	745	1.62
740	746	1.77
741	746	1.88
742	747	2.04
743	748	2.2
744	748	2.42
745	749	2.52
746	749	2.65
747	749	2.81
748	750	2.94
749	752	3.22
750	756	3.28
751	757	3.21
752	758	3.13
753	759	3.11
754	759	3.1
755	760	3.12
756	760	3.21
757	761	3.34
758	763	3.5
759	764	3.56
760	766	3.6
761	768	3.55
762	769	3.47
763	770	3.38
764	771	3.3
765	772	3.25
766	773	3.24
767	774	3.28
768	775	3.32
769	775	3.31
770	775	3.3
771	775	3.3
772	775	3.29
773	775	3.28
774	775	3.28

**Table E 22 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 7**

TN Scale	SS Scale	SEM
775	775	3.27
776	775	3.27
777	775	3.26
778	775	3.26
779	775	3.25
780	775	3.25
781	775	3.24
782	775	3.24
783	776	3.23
784	776	3.23
785	776	3.23
786	776	3.22
787	776	3.22
788	776	3.22
789	776	3.21
790	776	3.21
791	776	3.21
792	776	3.21
793	776	3.2
794	776	3.2
795	776	3.2
796	776	3.2
797	776	3.2
798	776	3.2
799	776	3.2
800	776	3.2
801	776	3.2
802	776	3.2
803	776	3.2
804	776	3.2
805	777	3.2
806	777	3.2
807	777	3.2
808	777	3.2
809	777	3.2
810	777	3.2

TN Scale	SS Scale	SEM
811	777	3.21
812	777	3.2
813	778	3.18
814	778	3.16
815	779	3.15
816	779	3.13
817	780	3.12
818	780	3.11
819	781	3.09
820	782	3.09
821	782	3.1
822	783	3.13
823	783	3.17
824	784	3.24
825	784	3.32
826	785	3.43
827	785	3.55
828	786	3.68
829	787	3.82
830	789	4
831	790	4.24
832	791	4.52
833	792	4.82
834	793	5.11
835	794	5.47
836	795	5.99
837	796	6.65
838	797	7.53
839	798	8.4
840	804	9.21
841	809	9.68
842	814	9.69
843	819	9.18
844	822	8.26
845	826	7.2
846	829	6.1

**Table E 22 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 7**

TN Scale	SS Scale	SEM
847	832	4.85
848	836	3.51
849	839	1.8
850	843	5.69

**Table E 23 TN and Spring SAT/9 Linking Table—
Mathematics Grade 8**

TN Scale	SS Scale	SEM
502	623	2.66
503	623	2.66
504	623	2.66
505	623	2.66
506	623	2.66
507	623	2.66
508	623	2.66
509	623	2.66
510	623	2.66
511	623	2.66
512	623	2.66
513	623	2.66
514	623	2.66
515	623	2.66
516	623	2.63
517	623	2.6
518	623	2.56
519	623	2.51
520	623	2.47
521	623	2.43
522	623	2.39
523	623	2.36
524	623	2.33
525	623	2.3
526	623	2.27
527	623	2.25
528	623	2.23
529	623	2.21
530	623	2.2
531	623	2.18
532	623	2.17
533	624	2.16
534	624	2.15
535	624	2.15
536	624	2.15
537	624	2.14

TN Scale	SS Scale	SEM
538	624	2.14
539	624	2.15
540	624	2.17
541	624	2.21
542	624	2.27
543	625	2.33
544	625	2.38
545	625	2.44
546	625	2.5
547	625	2.57
548	625	2.61
549	626	2.63
550	626	2.67
551	626	2.7
552	626	2.72
553	626	2.74
554	626	2.76
555	626	2.78
556	626	2.8
557	626	2.82
558	626	2.84
559	626	2.85
560	626	2.87
561	626	2.88
562	626	2.89
563	627	2.91
564	627	2.92
565	627	2.94
566	627	2.95
567	627	2.97
568	627	2.99
569	627	3.02
570	627	3.03
571	627	3.04
572	628	3.06
573	628	3.07

**Table E 23 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 8**

TN Scale	SS Scale	SEM
574	629	3.07
575	630	3.03
576	631	2.99
577	631	2.96
578	631	2.92
579	631	2.88
580	631	2.83
581	632	2.79
582	632	2.74
583	632	2.7
584	632	2.64
585	632	2.58
586	633	2.52
587	633	2.44
588	633	2.37
589	633	2.31
590	633	2.28
591	633	2.25
592	634	2.21
593	634	2.16
594	634	2.13
595	634	2.11
596	634	2.09
597	634	2.03
598	634	1.98
599	635	1.96
600	635	1.94
601	635	1.91
602	635	1.87
603	636	1.79
604	637	1.71
605	637	1.64
606	637	1.58
607	638	1.52
608	638	1.44
609	638	1.36

TN Scale	SS Scale	SEM
610	638	1.31
611	638	1.27
612	638	1.2
613	638	1.12
614	638	1.05
615	639	0.98
616	639	0.91
617	639	0.86
618	639	0.82
619	639	0.8
620	639	0.78
621	639	0.77
622	639	0.74
623	640	0.78
624	640	0.82
625	640	0.87
626	640	0.9
627	640	0.95
628	641	1
629	641	1.04
630	641	1.05
631	642	1.08
632	642	1.1
633	642	1.12
634	643	1.14
635	643	1.14
636	644	1.11
637	644	1.07
638	645	1
639	645	0.9
640	646	0.83
641	646	0.82
642	646	0.83
643	647	0.88
644	647	0.94
645	647	0.99

**Table E 23 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 8**

TN Scale	SS Scale	SEM
646	648	1.06
647	648	1.13
648	648	1.19
649	649	1.23
650	650	1.21
651	651	1.13
652	652	1.04
653	652	0.99
654	653	0.94
655	653	0.92
656	654	0.94
657	655	0.97
658	655	1.04
659	656	1.08
660	657	1.09
661	658	1.08
662	659	1.01
663	659	0.9
664	660	0.81
665	660	0.75
666	661	0.79
667	662	0.87
668	662	0.91
669	663	0.92
670	664	0.91
671	664	0.89
672	665	0.88
673	666	0.87
674	666	0.87
675	667	0.85
676	668	0.84
677	669	0.85
678	669	0.86
679	670	0.88
680	671	0.93
681	672	0.99

TN Scale	SS Scale	SEM
682	673	0.96
683	674	0.9
684	675	0.85
685	675	0.77
686	676	0.72
687	677	0.7
688	677	0.68
689	678	0.72
690	679	0.81
691	679	0.95
692	680	1.13
693	682	1.31
694	683	1.33
695	685	1.11
696	686	1.04
697	687	1.03
698	688	1.03
699	689	1.01
700	690	0.93
701	691	0.8
702	691	0.83
703	692	0.95
704	693	1.01
705	694	0.97
706	695	0.89
707	696	0.92
708	697	1.19
709	699	1.34
710	700	1.25
711	701	1.08
712	702	0.99
713	703	1.02
714	704	1.06
715	705	1.08
716	706	1.04
717	707	0.94

**Table E 23 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 8**

TN Scale	SS Scale	SEM
718	708	0.9
719	708	0.91
720	709	1.01
721	710	1.14
722	712	1.13
723	712	1.06
724	713	0.96
725	714	0.85
726	715	0.84
727	715	0.95
728	717	1.15
729	718	1.26
730	719	1.28
731	720	1.27
732	722	1.28
733	723	1.27
734	724	1.25
735	724	1.26
736	725	1.29
737	726	1.32
738	728	1.27
739	729	1.11
740	729	0.96
741	730	0.96
742	731	1.08
743	732	1.25
744	733	1.36
745	734	1.38
746	735	1.38
747	736	1.38
748	737	1.42
749	739	1.5
750	740	1.55
751	741	1.55
752	742	1.54
753	743	1.5

TN Scale	SS Scale	SEM
754	743	1.43
755	744	1.35
756	745	1.3
757	746	1.38
758	747	1.52
759	748	1.63
760	749	1.72
761	749	1.76
762	750	1.77
763	751	1.79
764	753	1.88
765	754	2.21
766	755	2.42
767	756	2.51
768	757	2.55
769	759	2.42
770	760	2.23
771	761	2.03
772	762	1.92
773	763	1.93
774	763	1.94
775	763	1.95
776	763	1.95
777	763	1.97
778	763	2
779	764	2.03
780	764	2.09
781	764	2.17
782	765	2.29
783	766	2.45
784	768	2.68
785	770	2.99
786	773	3.19
787	776	3.13
788	777	3.13
789	778	3.12

**Table E 23 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 8**

TN Scale	SS Scale	SEM
790	779	3.11
791	780	3.35
792	781	3.5
793	781	3.62
794	781	3.71
795	781	3.82
796	782	3.98
797	782	4.21
798	782	4.45
799	783	4.62
800	783	4.79
801	783	4.92
802	783	5.07
803	783	5.19
804	784	5.32
805	784	5.47
806	784	5.56
807	784	5.58
808	784	5.59
809	784	5.6
810	784	5.62
811	784	5.63
812	784	5.65
813	784	5.66
814	784	5.68
815	784	5.69
816	784	5.71
817	784	5.73
818	784	5.74
819	784	5.76
820	784	5.78
821	784	5.79
822	784	5.81
823	785	5.82
824	785	5.84
825	785	5.86

TN Scale	SS Scale	SEM
826	785	5.87
827	785	5.89
828	785	5.91
829	785	5.92
830	785	5.94
831	785	5.95
832	785	5.97
833	786	5.99
834	786	6
835	786	6.02
836	786	6.04
837	786	6.06
838	786	6.08
839	786	6.12
840	787	6.19
841	788	6.3
842	789	6.39
843	791	6.44
844	792	6.47
845	793	6.45
846	794	6.41
847	795	6.37
848	796	6.35
849	797	6.36
850	798	6.42
851	799	6.52
852	800	6.65
853	801	6.88
854	802	7.18
855	803	7.5
856	804	7.89
857	805	8.39
858	806	8.93
859	807	9.52
860	811	10.11
861	814	10.63

**Table E 23 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 8**

TN Scale	SS Scale	SEM
862	818	10.97
863	822	11.25
864	826	11.41
865	830	11.32
866	835	10.98
867	839	10.41
868	844	9.38
869	848	8.03
870	853	6.44
871	857	4.96
872	861	2.44

**Table E 24 TN and Spring SAT/9 Linking Table—
Mathematics Grade 9**

TN Scale	SS Scale	SEM
513	633	2.22
514	633	2.22
515	633	2.21
516	633	2.21
517	633	2.21
518	633	2.21
519	633	2.21
520	633	2.21
521	633	2.21
522	634	2.2
523	634	2.18
524	635	2.18
525	635	2.19
526	635	2.21
527	636	2.24
528	636	2.27
529	637	2.31
530	637	2.35
531	638	2.39
532	638	2.42
533	639	2.43
534	639	2.43
535	639	2.43
536	639	2.43
537	639	2.42
538	639	2.41
539	639	2.41
540	639	2.4
541	639	2.4
542	639	2.39
543	639	2.39
544	639	2.38
545	639	2.38
546	639	2.37
547	639	2.35
548	640	2.34

TN Scale	SS Scale	SEM
549	640	2.34
550	640	2.31
551	641	2.3
552	641	2.28
553	641	2.26
554	641	2.25
555	641	2.23
556	641	2.22
557	642	2.21
558	642	2.2
559	642	2.19
560	642	2.19
561	642	2.18
562	642	2.17
563	642	2.16
564	642	2.16
565	642	2.15
566	642	2.15
567	642	2.14
568	642	2.14
569	642	2.14
570	642	2.14
571	642	2.14
572	642	2.13
573	642	2.13
574	642	2.13
575	643	2.13
576	643	2.12
577	643	2.12
578	643	2.12
579	643	2.11
580	643	2.11
581	643	2.1
582	643	2.09
583	643	2.08
584	643	2.08

**Table E 24 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 9**

TN Scale	SS Scale	SEM
585	644	2.08
586	644	2.06
587	644	2.06
588	644	2.05
589	644	2.05
590	645	2.03
591	645	2.01
592	645	1.98
593	646	1.95
594	646	1.93
595	646	1.9
596	646	1.87
597	647	1.86
598	647	1.83
599	647	1.81
600	647	1.8
601	648	1.78
602	648	1.75
603	648	1.72
604	649	1.71
605	649	1.68
606	649	1.66
607	649	1.64
608	649	1.63
609	650	1.6
610	650	1.57
611	650	1.52
612	651	1.49
613	651	1.47
614	652	1.45
615	652	1.44
616	652	1.43
617	652	1.42
618	653	1.39
619	653	1.36
620	654	1.33

TN Scale	SS Scale	SEM
621	654	1.31
622	654	1.29
623	654	1.24
624	655	1.2
625	655	1.19
626	655	1.17
627	655	1.16
628	656	1.14
629	656	1.13
630	656	1.14
631	657	1.16
632	657	1.19
633	658	1.24
634	658	1.3
635	659	1.35
636	659	1.36
637	659	1.37
638	660	1.36
639	661	1.34
640	661	1.29
641	662	1.19
642	662	1.1
643	662	1.06
644	663	1.01
645	663	0.97
646	663	0.94
647	664	0.91
648	664	0.91
649	664	0.91
650	665	0.91
651	665	0.92
652	666	0.93
653	666	0.95
654	667	0.96
655	668	0.97
656	668	0.96

**Table E 24 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 9**

TN Scale	SS Scale	SEM
657	669	0.95
658	669	0.94
659	670	0.93
660	670	0.92
661	671	0.93
662	671	0.93
663	672	0.93
664	673	0.92
665	673	0.92
666	673	0.92
667	674	0.92
668	675	0.92
669	675	0.92
670	676	0.93
671	677	0.94
672	677	0.93
673	678	0.9
674	679	0.86
675	680	0.85
676	680	0.84
677	681	0.84
678	682	0.84
679	682	0.81
680	683	0.79
681	684	0.78
682	685	0.79
683	685	0.8
684	686	0.85
685	687	0.89
686	688	0.93
687	688	1.01
688	689	1.11
689	690	1.17
690	691	1.19
691	692	1.17
692	693	1.17

TN Scale	SS Scale	SEM
693	694	1.13
694	695	1.04
695	696	0.88
696	697	0.79
697	697	0.77
698	698	0.77
699	699	0.77
700	699	0.78
701	700	0.79
702	701	0.81
703	702	0.84
704	703	0.88
705	704	0.91
706	704	1
707	705	1.17
708	707	1.31
709	708	1.23
710	709	1.11
711	710	1.06
712	711	1.09
713	712	1.15
714	713	1.19
715	714	1.2
716	715	1.21
717	716	1.24
718	717	1.25
719	718	1.22
720	720	1.2
721	721	1.15
722	722	1.07
723	723	1
724	723	0.97
725	724	0.94
726	724	0.95
727	725	1
728	726	1.11

**Table E 24 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 9**

TN Scale	SS Scale	SEM
729	727	1.24
730	727	1.33
731	728	1.38
732	729	1.42
733	731	1.46
734	732	1.46
735	733	1.42
736	734	1.37
737	735	1.32
738	736	1.29
739	736	1.29
740	737	1.31
741	737	1.34
742	738	1.39
743	739	1.45
744	740	1.53
745	741	1.56
746	743	1.56
747	744	1.58
748	745	1.6
749	746	1.6
750	746	1.62
751	747	1.65
752	748	1.71
753	749	1.74
754	750	1.77
755	750	1.78
756	751	1.79
757	752	1.8
758	753	1.81
759	754	1.82
760	755	1.82
761	756	1.86
762	756	1.89
763	757	1.92
764	758	2

TN Scale	SS Scale	SEM
765	758	2.07
766	758	2.11
767	759	2.14
768	760	2.19
769	760	2.23
770	760	2.24
771	761	2.26
772	762	2.27
773	762	2.3
774	763	2.33
775	763	2.35
776	764	2.39
777	764	2.46
778	765	2.49
779	766	2.56
780	766	2.6
781	767	2.62
782	768	2.63
783	768	2.64
784	769	2.65
785	769	2.65
786	769	2.63
787	770	2.62
788	771	2.59
789	772	2.62
790	772	2.65
791	773	2.65
792	773	2.67
793	773	2.67
794	774	2.7
795	775	2.59
796	776	2.55
797	777	2.53
798	777	2.53
799	777	2.55
800	778	2.57

**Table E 24 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 9**

TN Scale	SS Scale	SEM
801	778	2.6
802	778	2.67
803	779	2.7
804	779	2.72
805	779	2.73
806	779	2.75
807	779	2.76
808	779	2.77
809	780	2.79
810	780	2.82
811	780	2.85
812	781	2.88
813	781	2.88
814	781	2.89
815	782	2.91
816	782	2.94
817	783	2.96
818	783	2.98
819	784	3.03
820	784	3.11
821	785	3.17
822	785	3.17
823	785	3.17
824	785	3.17
825	785	3.18
826	785	3.18
827	785	3.19
828	785	3.19
829	785	3.2
830	785	3.2
831	785	3.21
832	785	3.21
833	785	3.22
834	785	3.23
835	785	3.24
836	785	3.25

TN Scale	SS Scale	SEM
837	785	3.26
838	785	3.28
839	786	3.29
840	786	3.3
841	786	3.32
842	786	3.34
843	786	3.36
844	786	3.37
845	786	3.39
846	786	3.42
847	786	3.44
848	786	3.47
849	786	3.49
850	787	3.53
851	787	3.58
852	787	3.66
853	788	3.76
854	788	3.9
855	788	4.06
856	789	4.24
857	789	4.5
858	790	4.78
859	790	5.08
860	792	5.41
861	793	5.78
862	794	6.19
863	796	6.65
864	797	7.13
865	799	7.71
866	800	8.38
867	801	9.08
868	803	9.8
869	805	10.57
870	810	11.4
871	815	12.15
872	820	12.61

**Table E 24 (cont.) TN and Spring SAT/9 Linking Table—
Mathematics Grade 9**

TN Scale	SS Scale	SEM
873	826	13
874	834	12.62
875	843	11.34
876	852	9.32
877	860	6.11

Appendix F

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Figure F 1
TN and Fall SAT/9 scale score differences and frequency proportion
Reading Grades 2 - 3

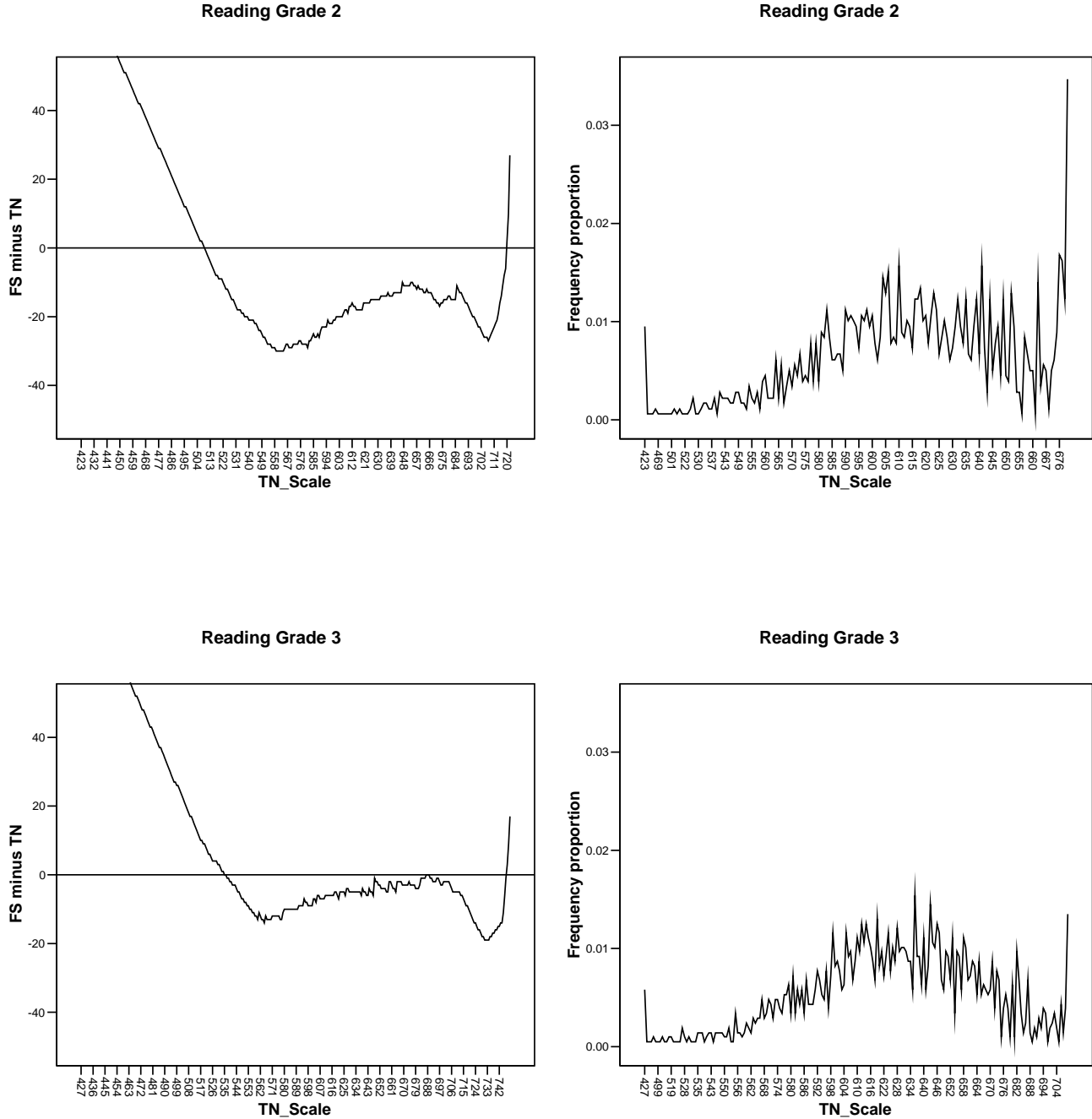


Figure F 2
TN and Fall SAT/9 scale score differences and frequency proportion
Reading Grades 4 - 5

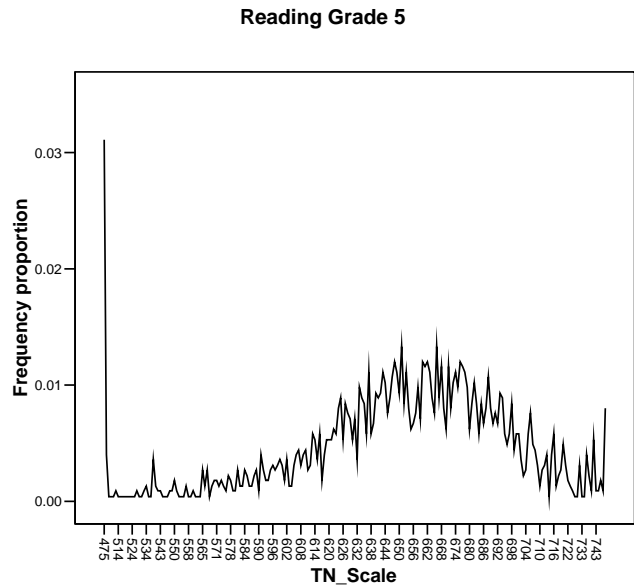
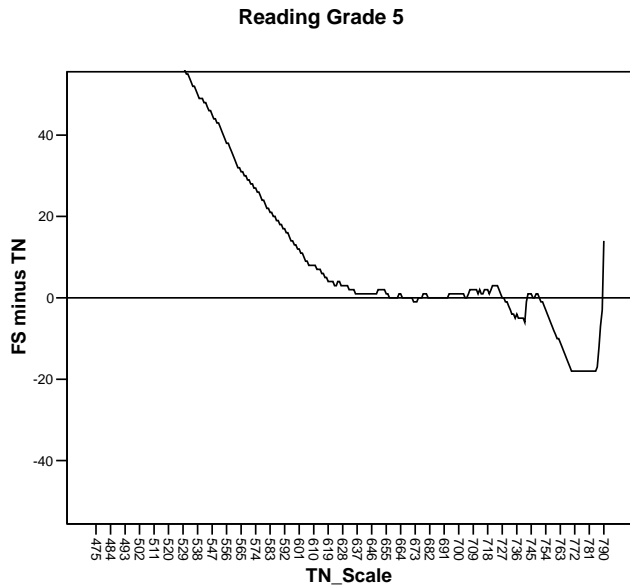
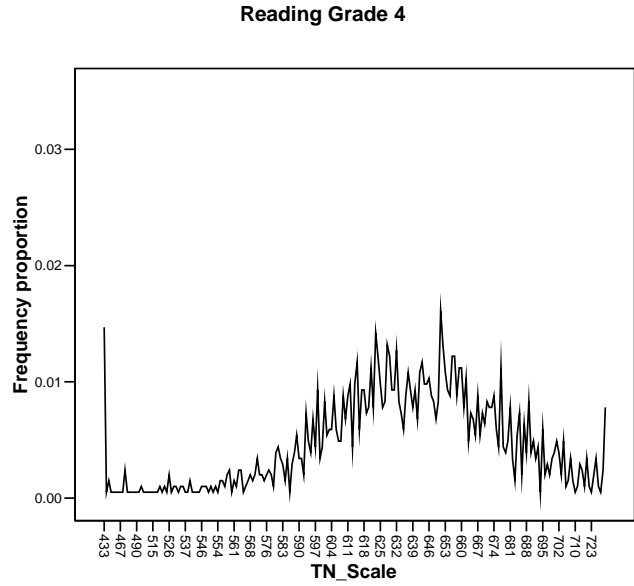
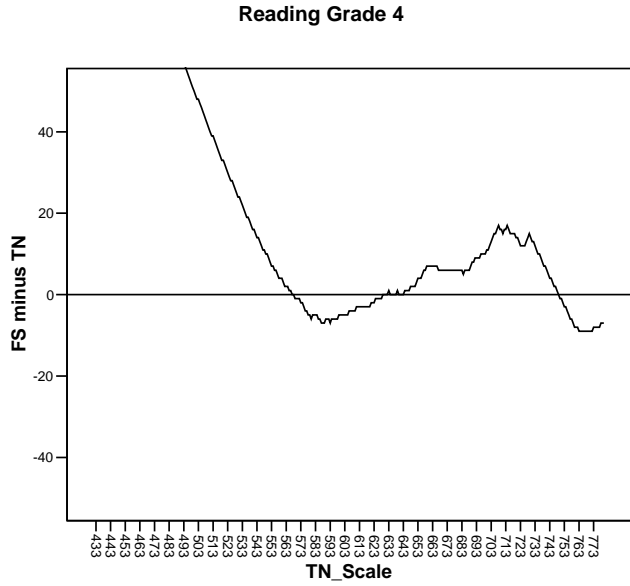


Figure F 3
TN and Fall SAT/9 scale score differences and frequency proportion
Reading Grades 6 - 7

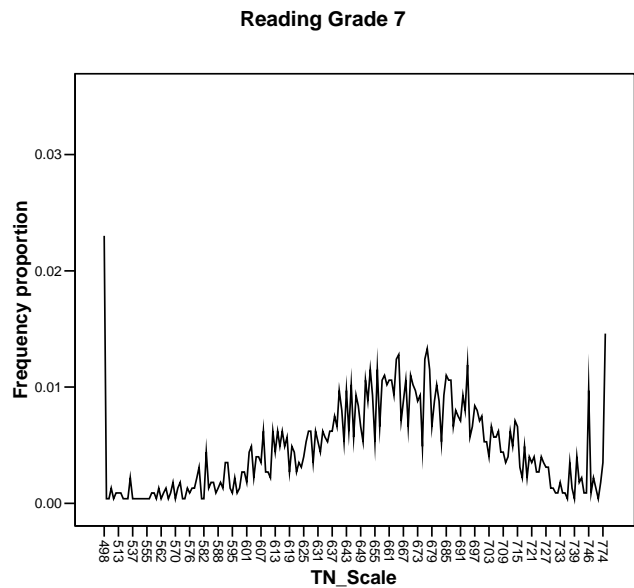
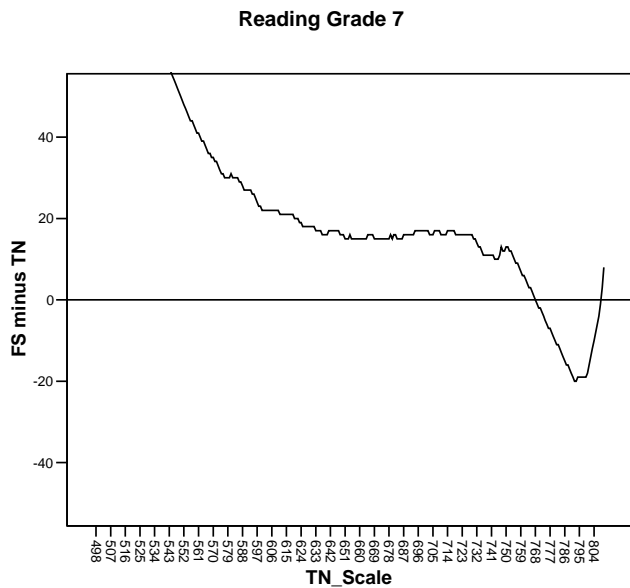
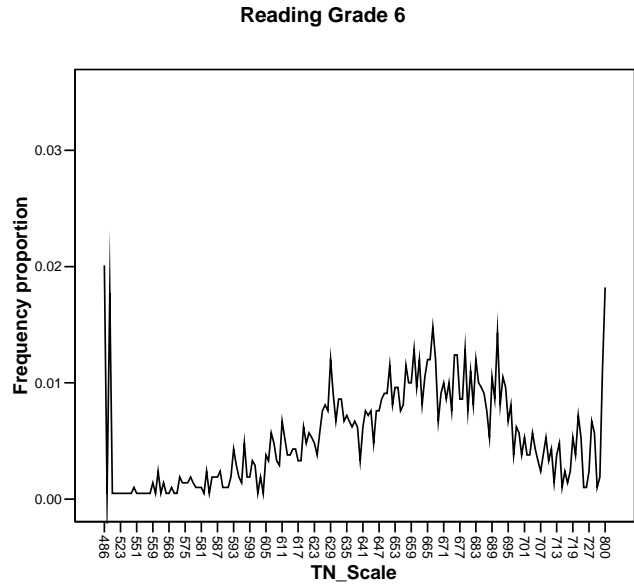
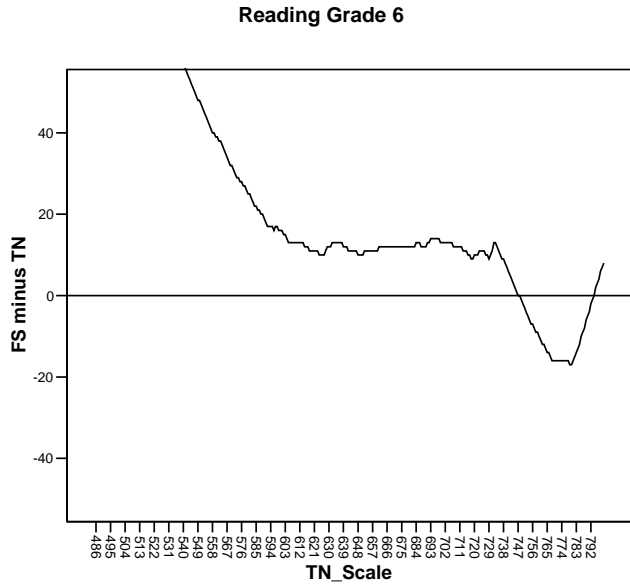


Figure F 4
TN and Fall SAT/9 scale score differences and frequency proportion
Reading Grades 8 - 9

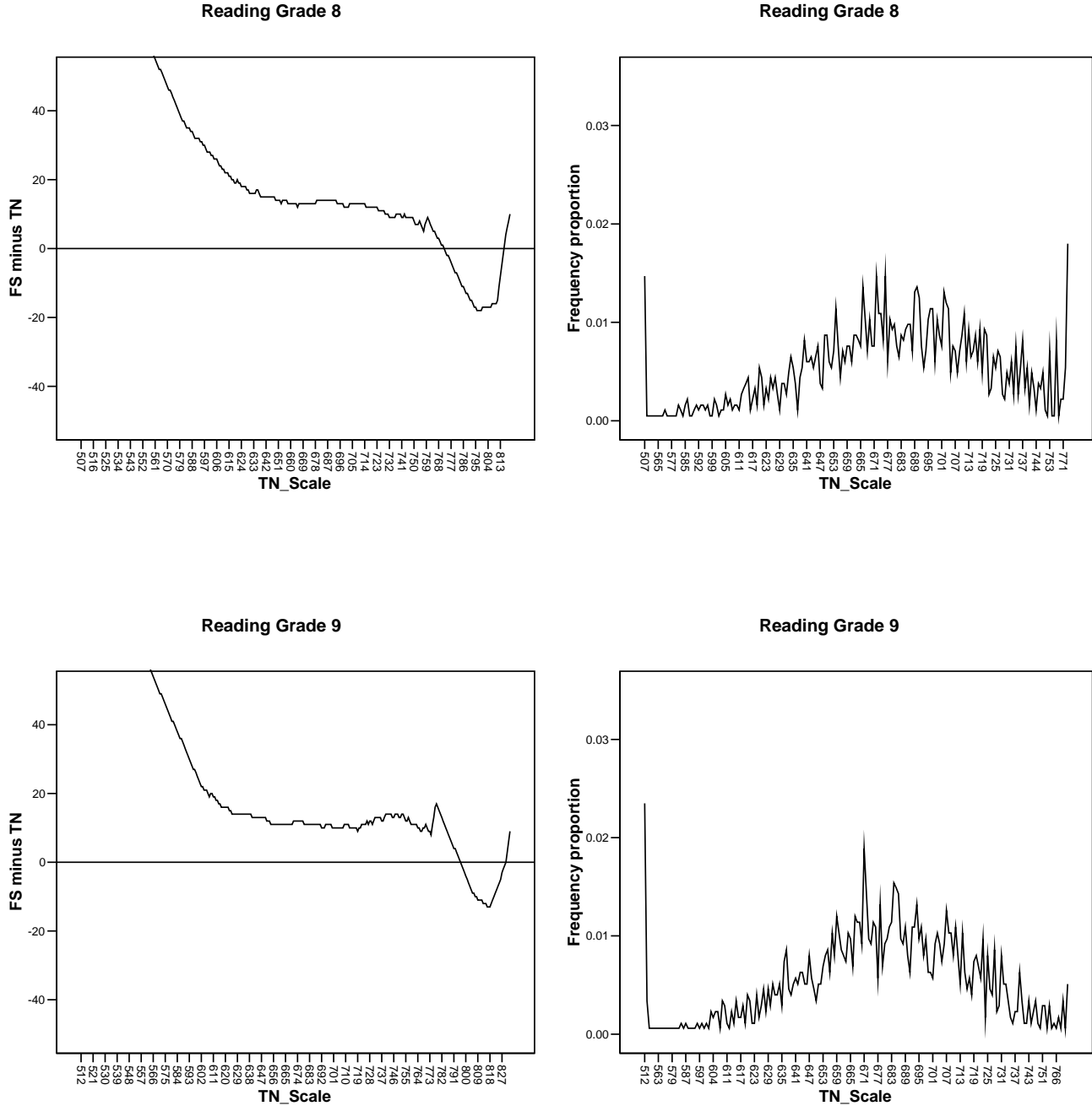


Figure F 5
TN and Fall SAT/9 scale score differences and frequency proportion
Language Grades 2 - 3

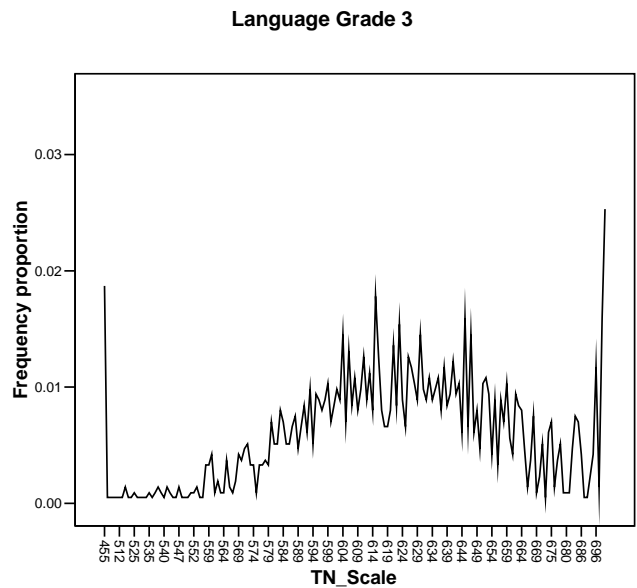
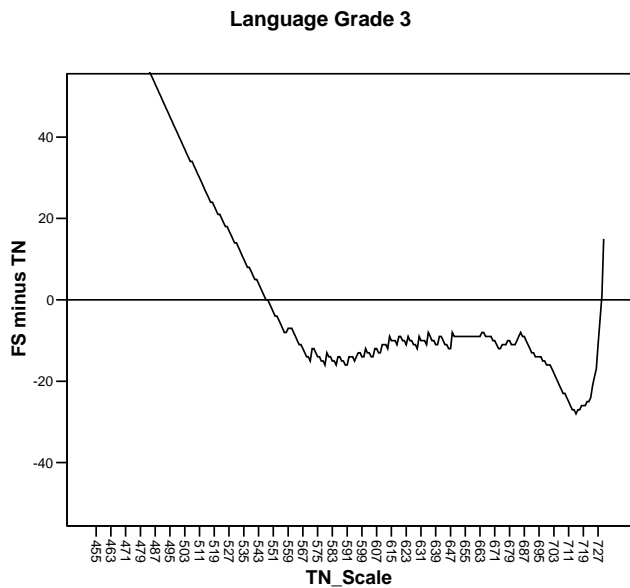
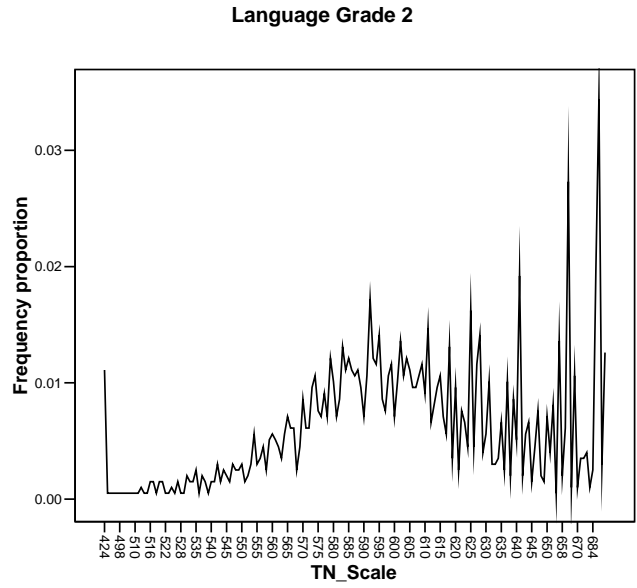
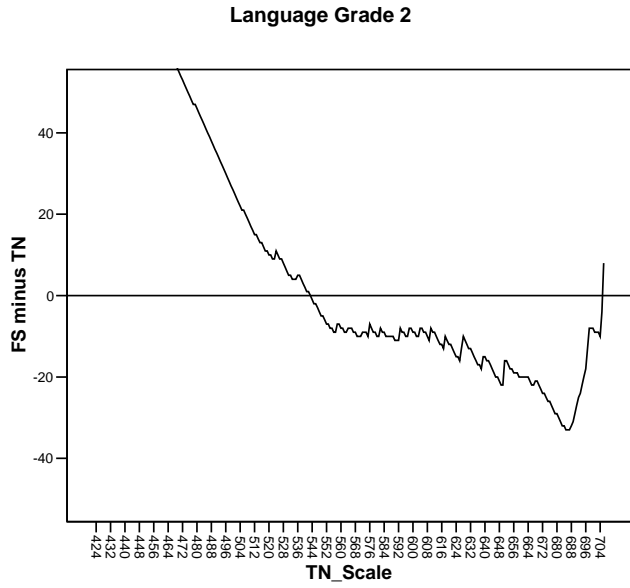


Figure F 6
TN and Fall SAT/9 scale score differences and frequency proportion
Language Grades 4 - 5

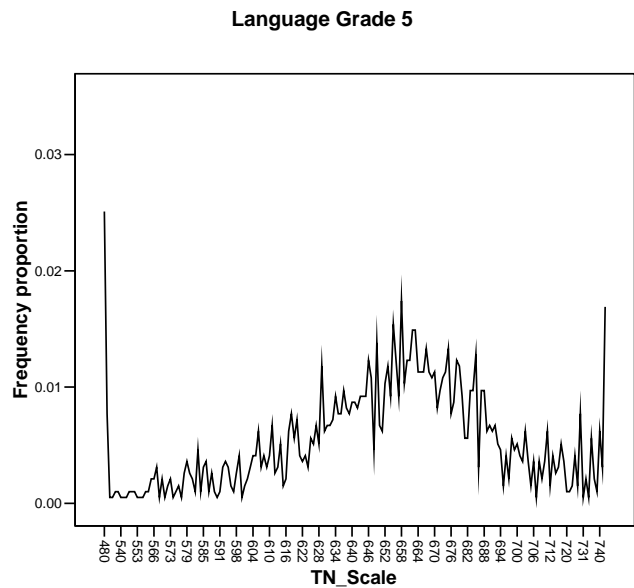
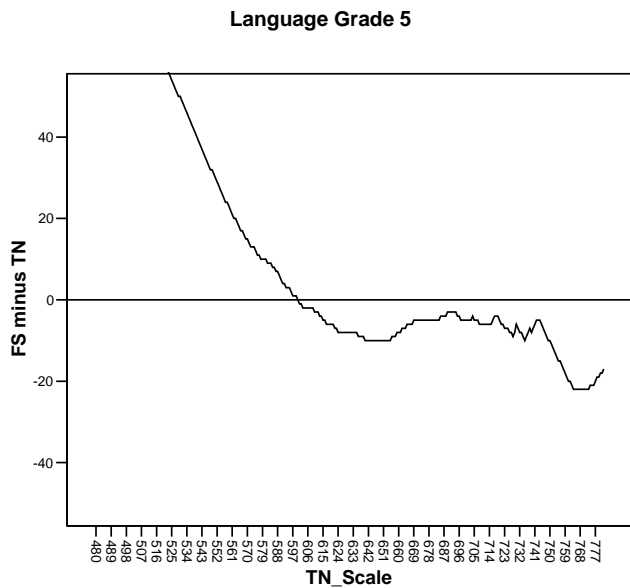
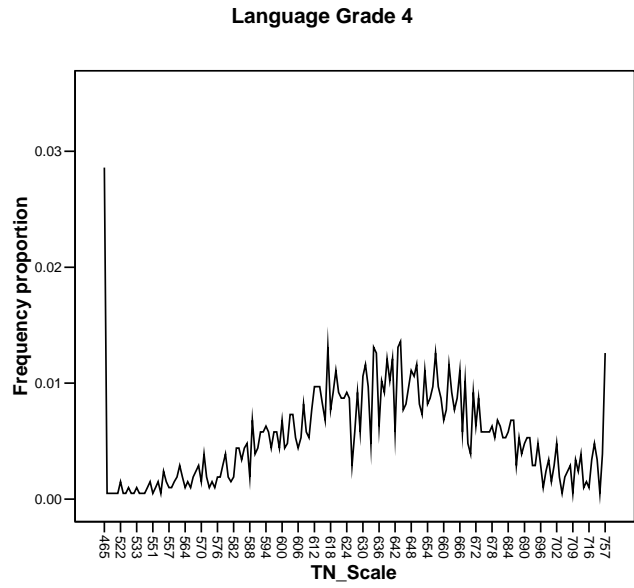
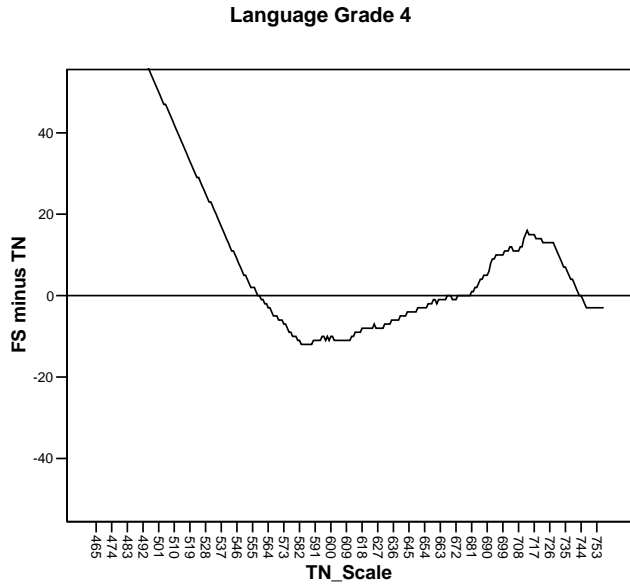
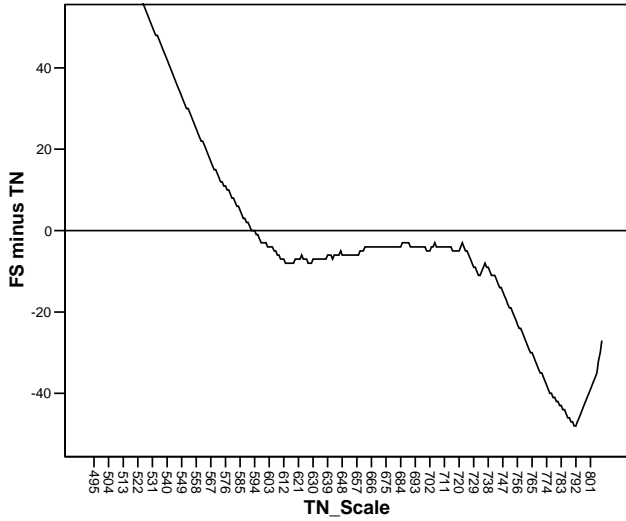
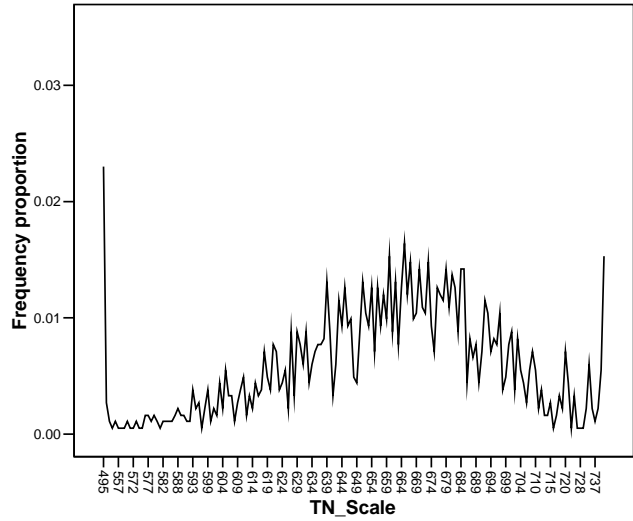


Figure F 7
TN and Fall SAT/9 scale score differences and frequency proportion
Language Grades 6 - 7

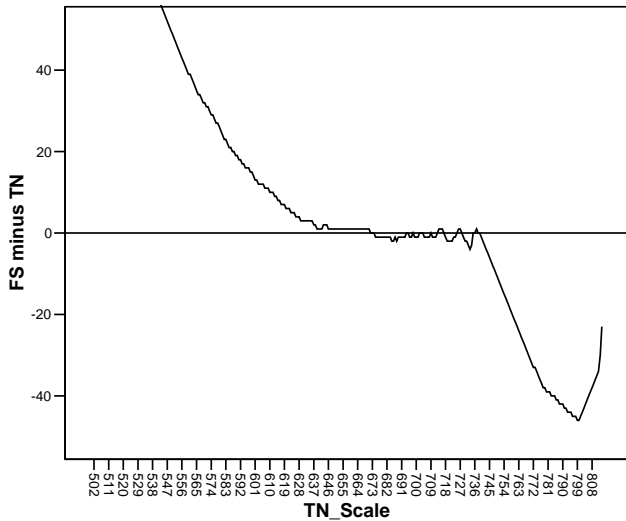
Language Grade 6



Language Grade 6



Language Grade 7



Language Grade 7

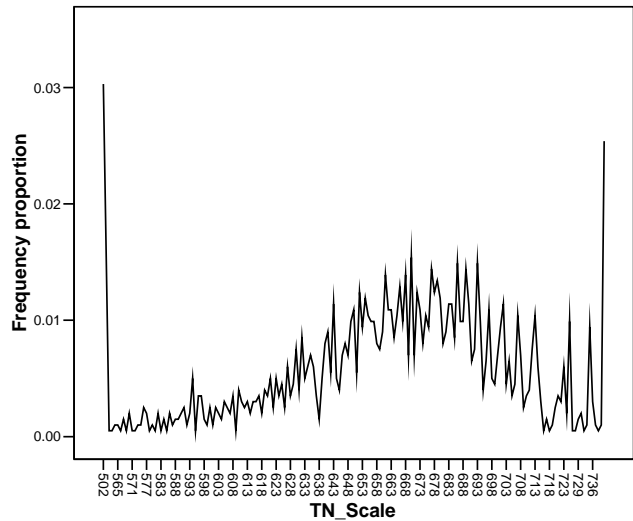


Figure F 8
TN and Fall SAT/9 scale score differences and frequency proportion
Language Grades 8 - 9

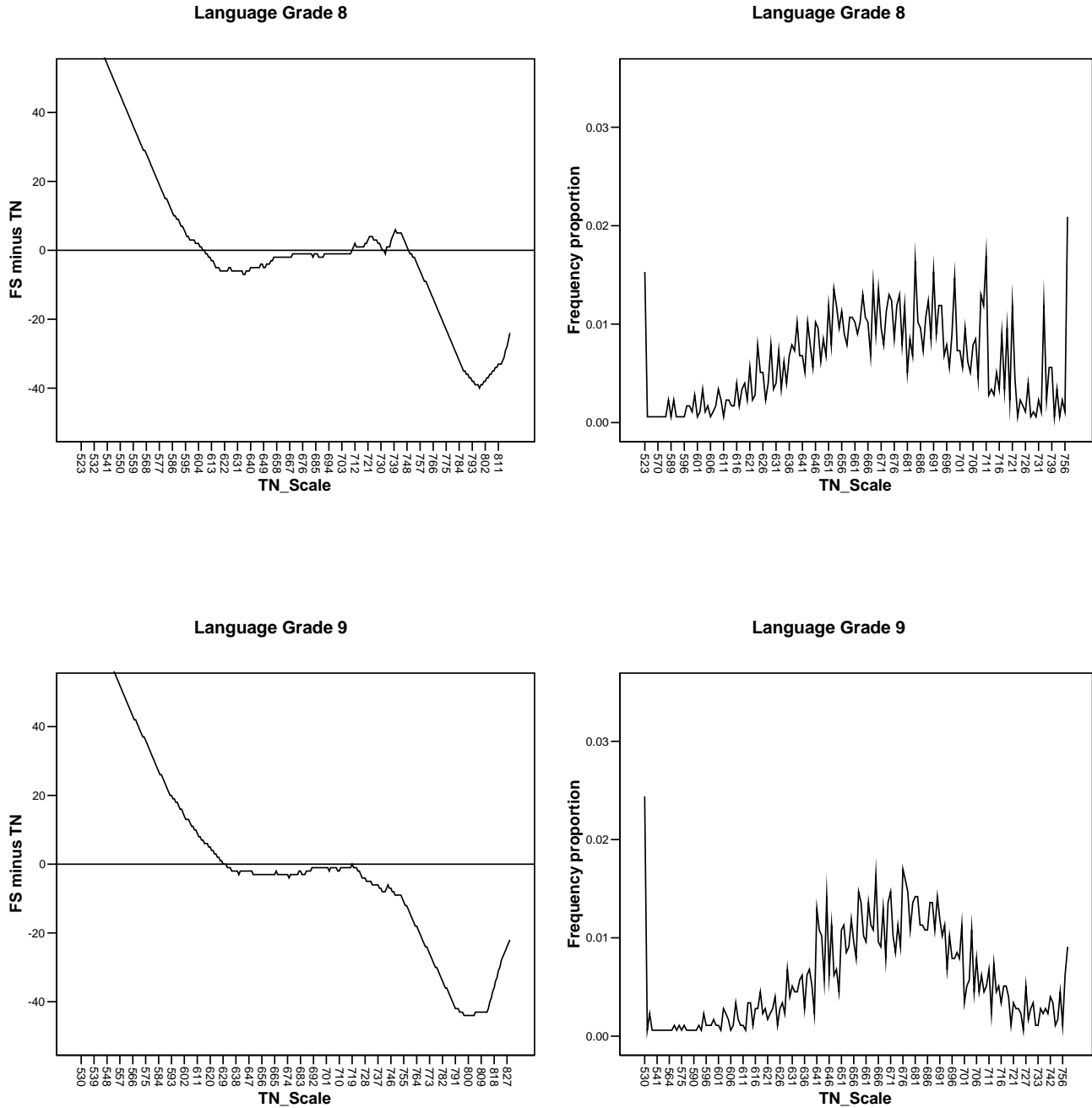


Figure F 9
TN and Fall SAT/9 scale score differences and frequency proportion
Mathematics Grades 2 - 3

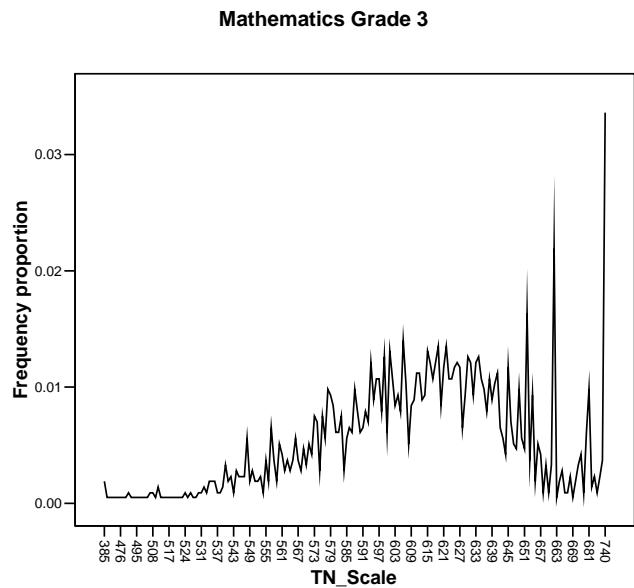
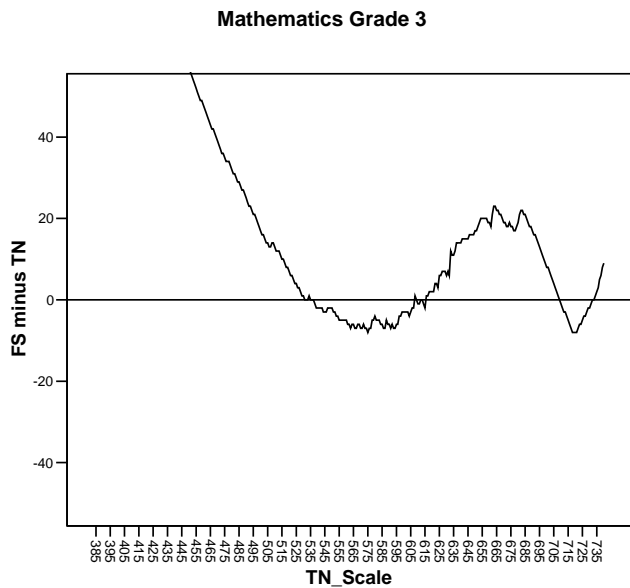
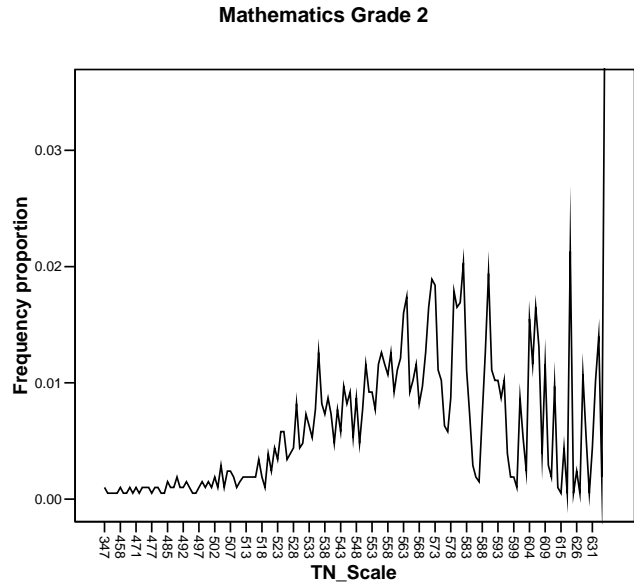
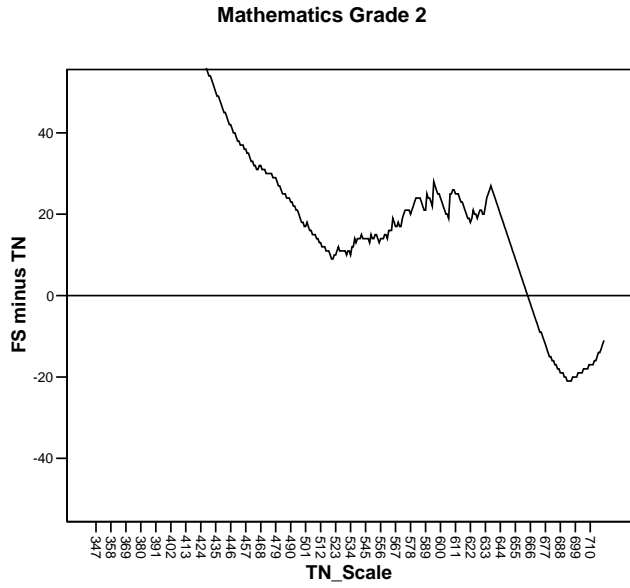


Figure F 10
TN and Fall SAT/9 scale score differences and frequency proportion
Mathematics Grades 4 - 5

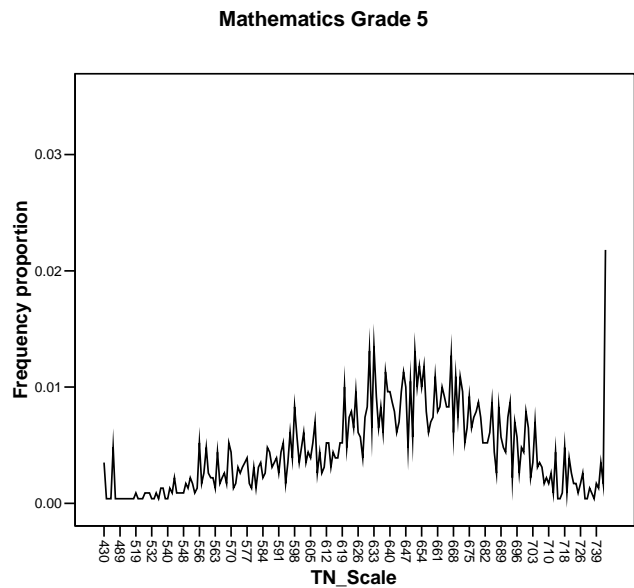
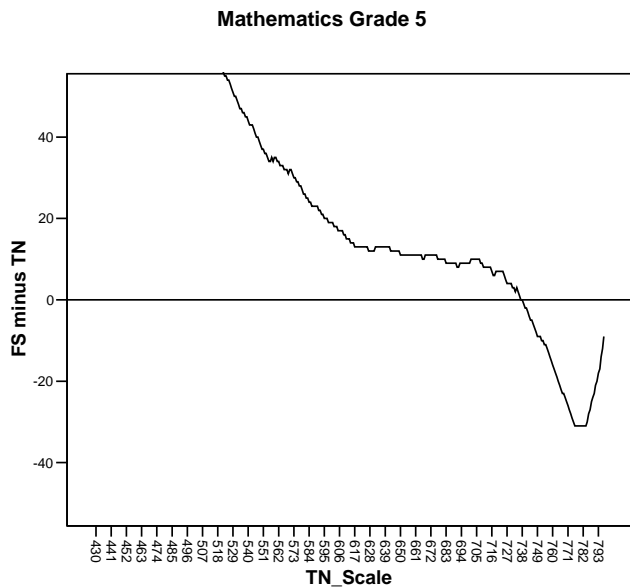
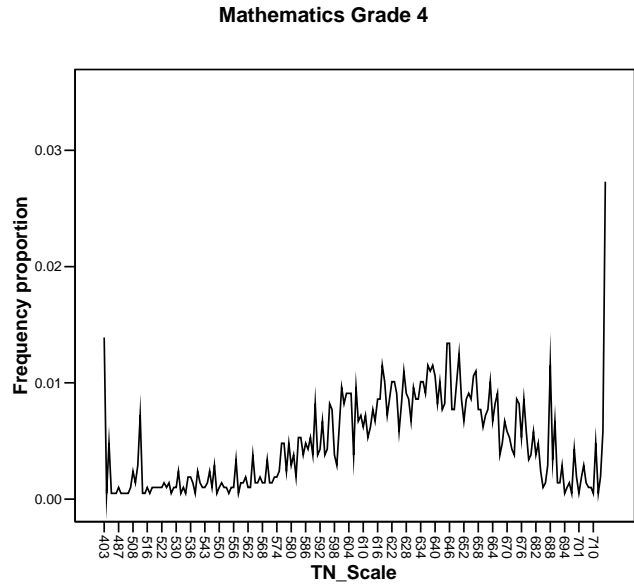
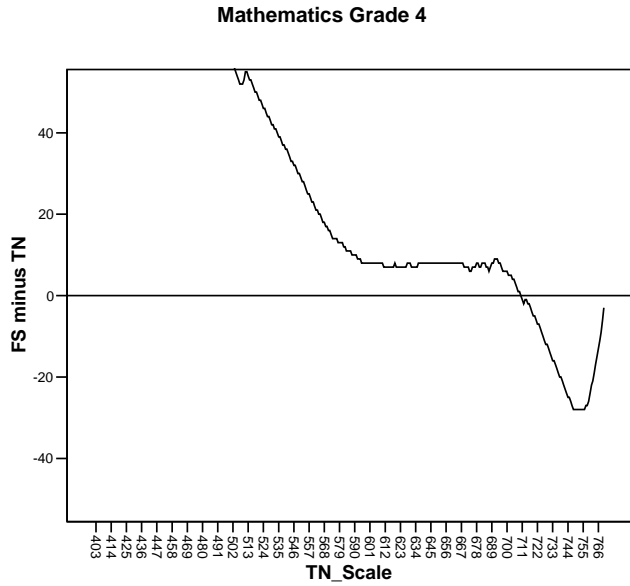


Figure F 11
TN and Fall SAT/9 scale score differences and frequency proportion
Mathematics Grades 6 - 7

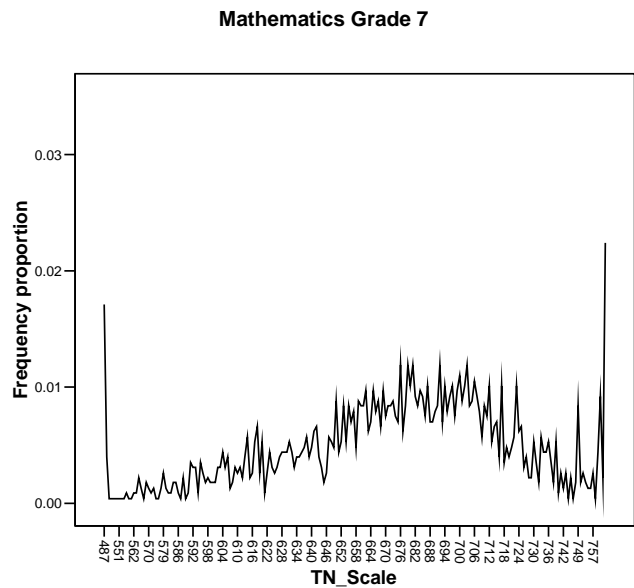
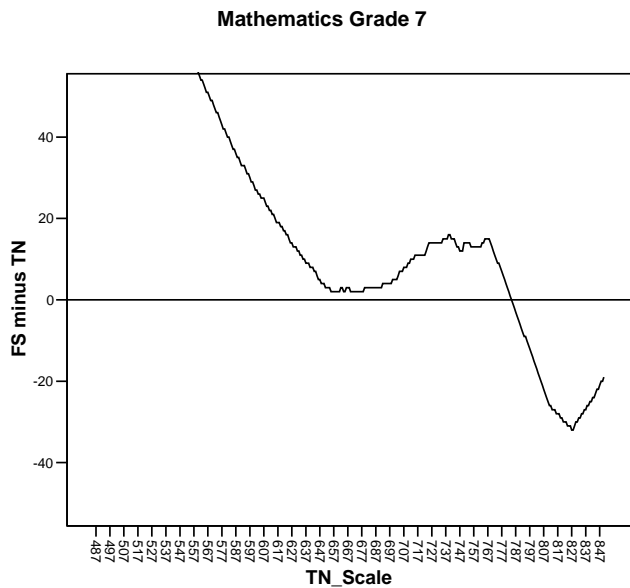
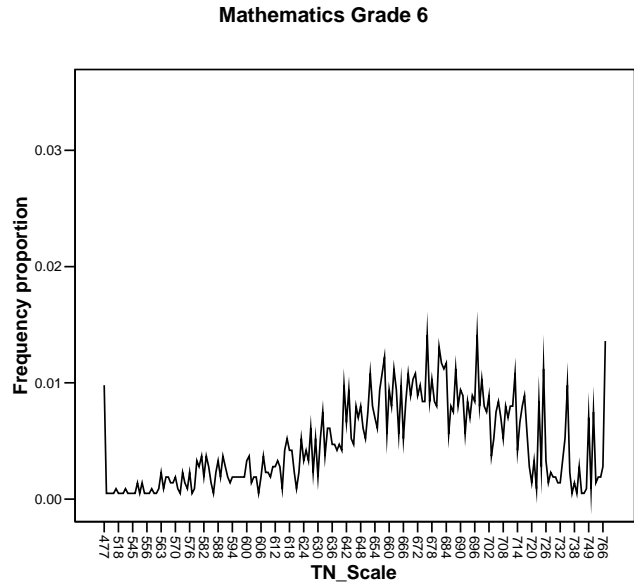
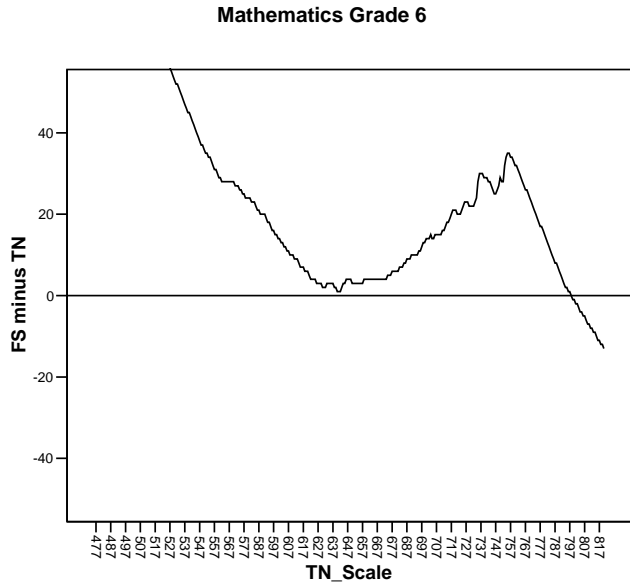
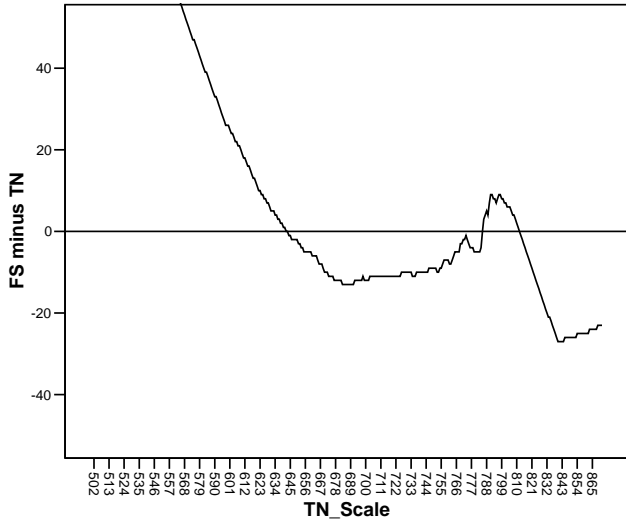
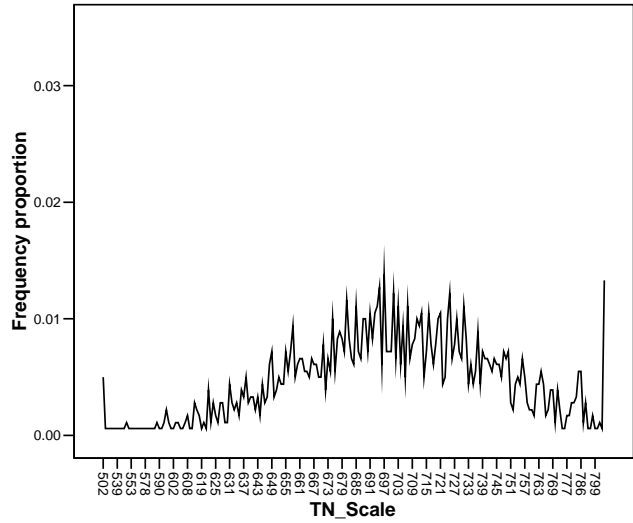


Figure F 12
TN and Fall SAT/9 scale score differences and frequency proportion
Mathematics Grades 8 - 9

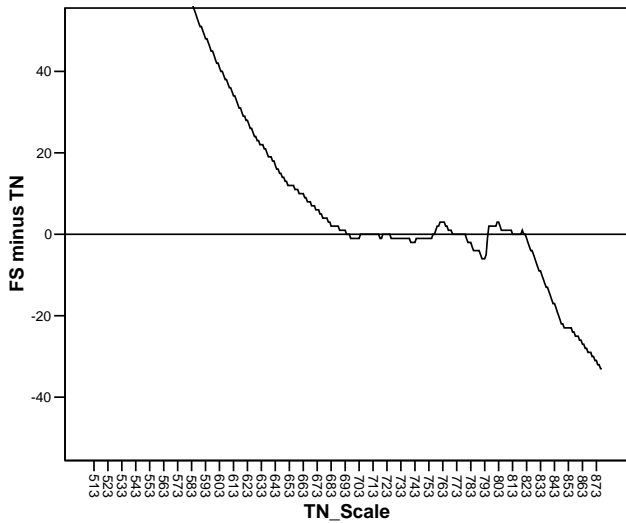
Mathematics Grade 8



Mathematics Grade 8



Mathematics Grade 9



Mathematics Grade 9

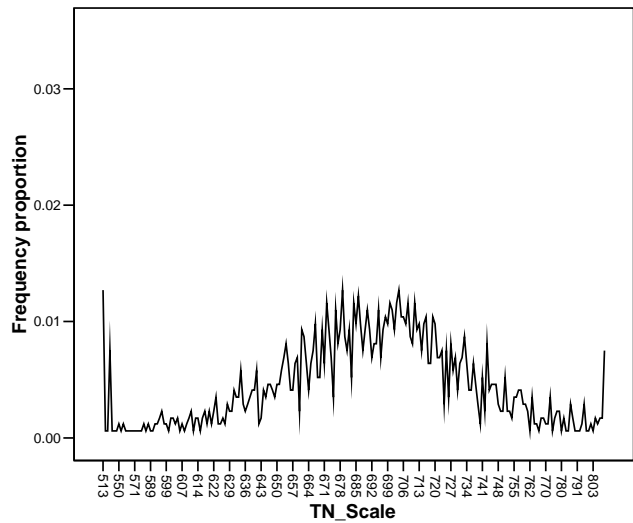


Figure F 13
Fall and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 2 - 3

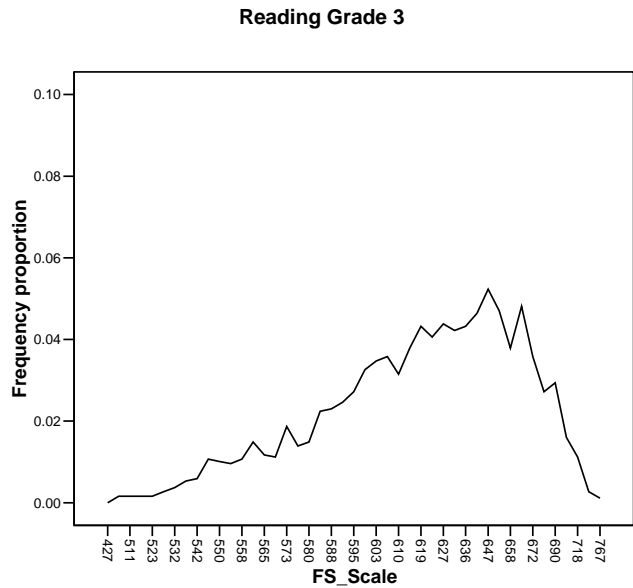
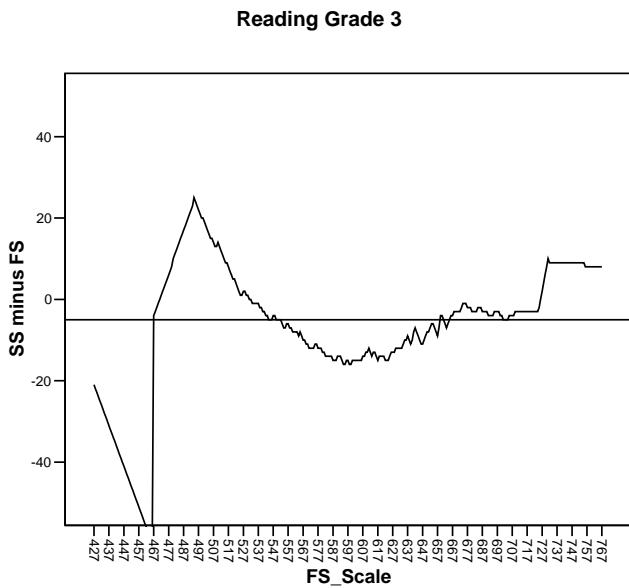
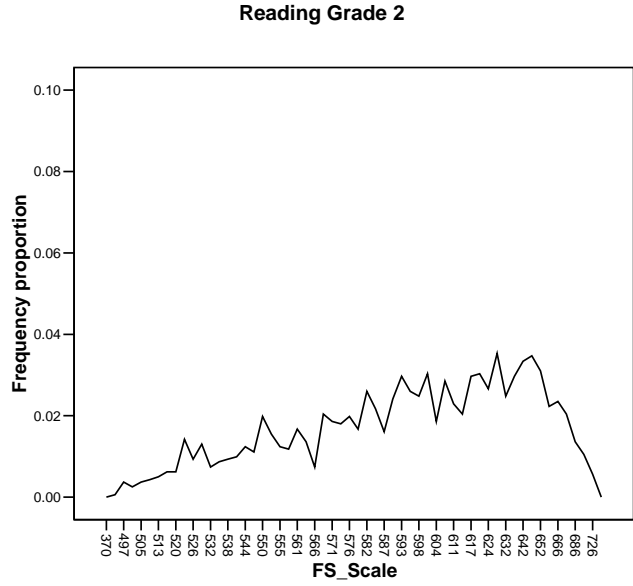
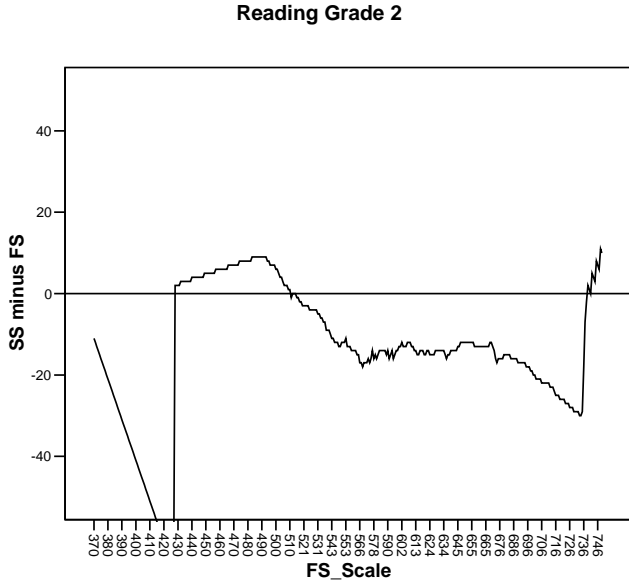


Figure F 14
Fall and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 4 - 5

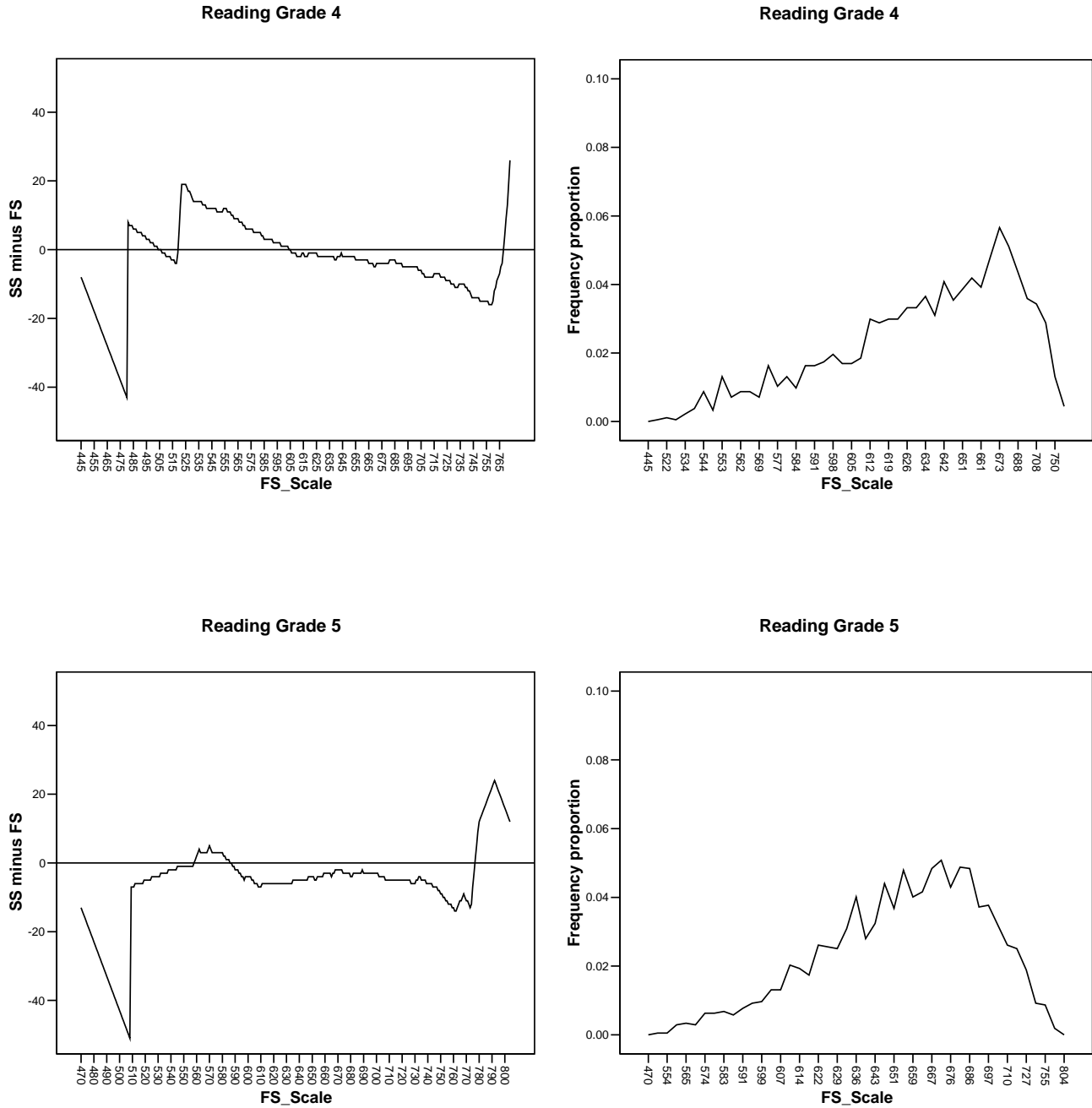
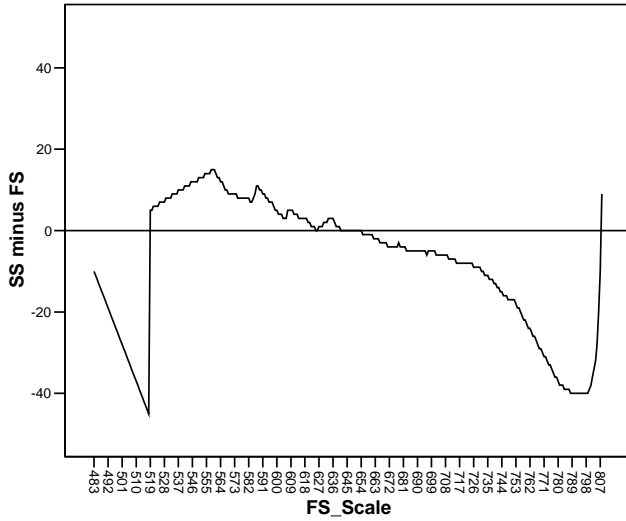
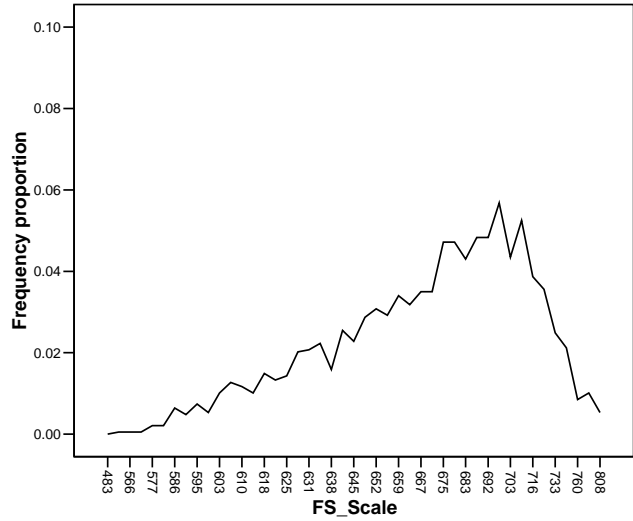


Figure F 15
Fall and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 6 - 7

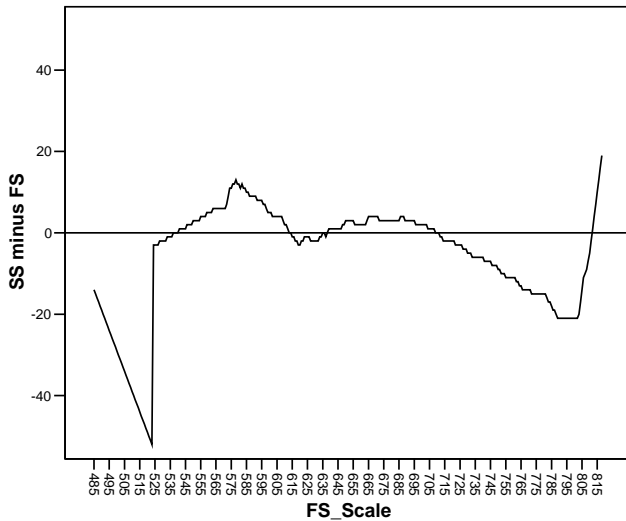
Reading Grade 6



Reading Grade 6



Reading Grade 7



Reading Grade 7

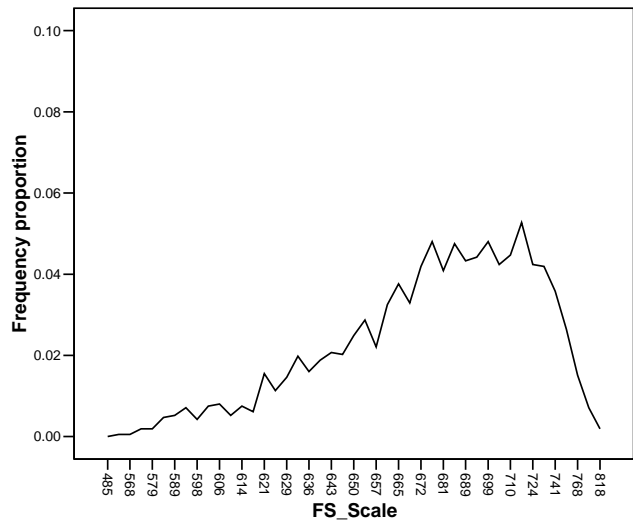


Figure F 16
Fall and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 8 - 9

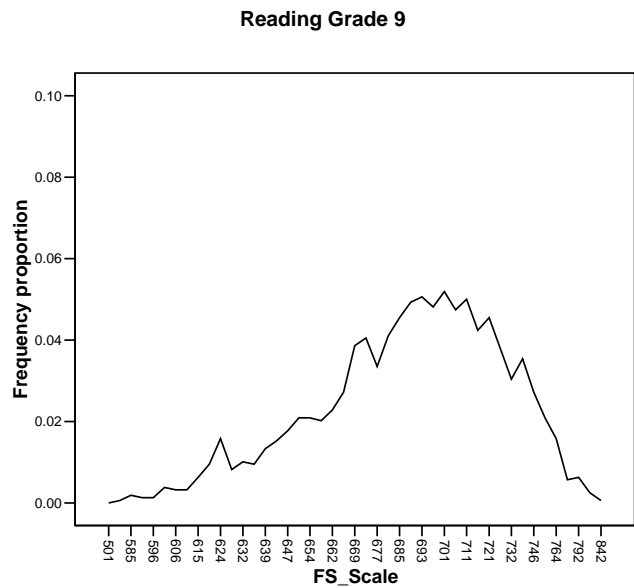
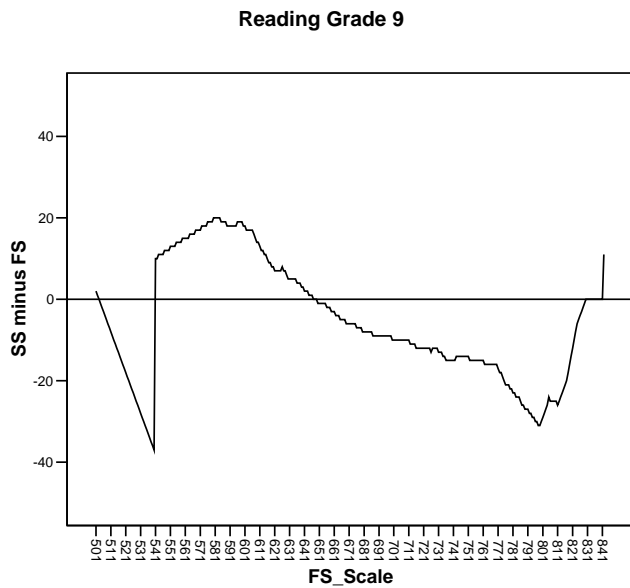
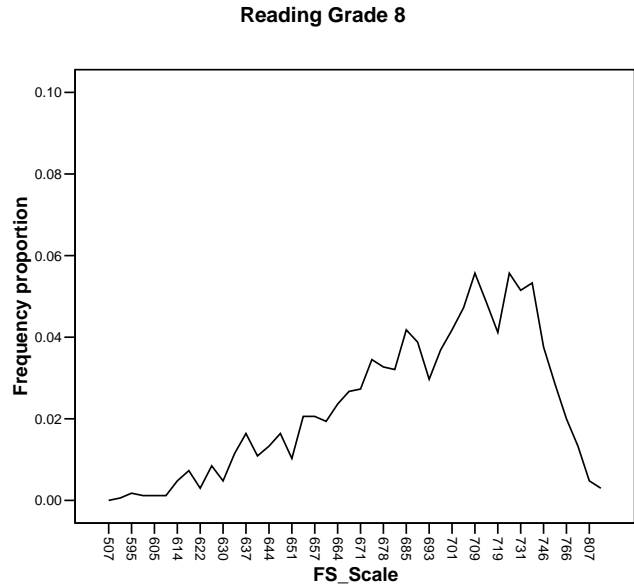
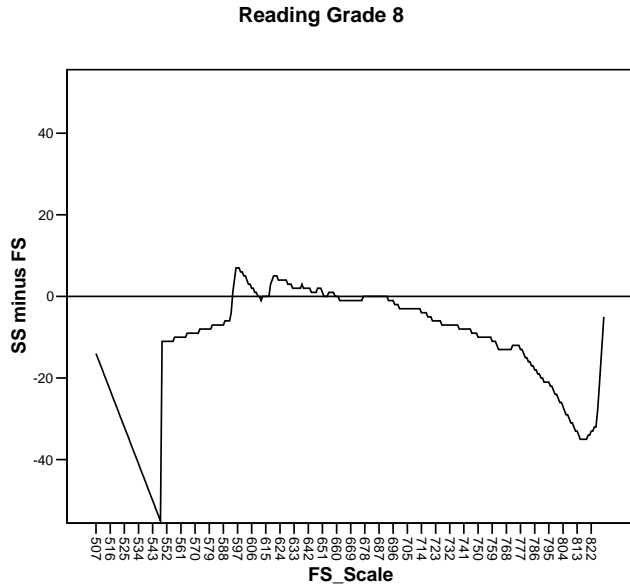


Figure F 17
Fall and Spring SAT/9 scale score differences and frequency proportion
Language Grades 2 - 3

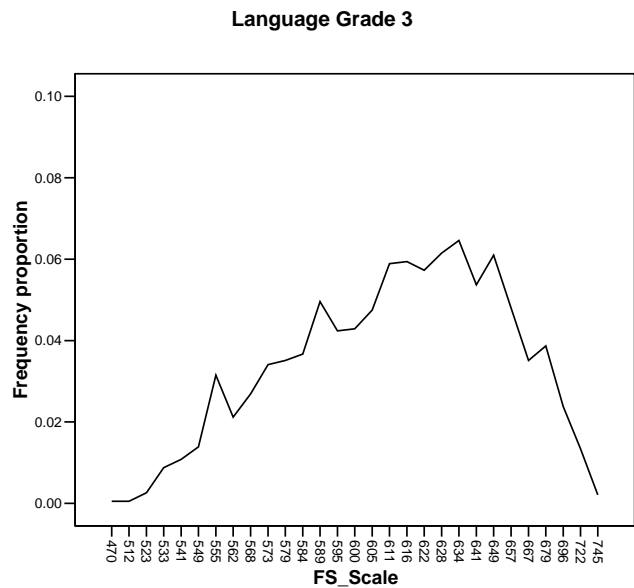
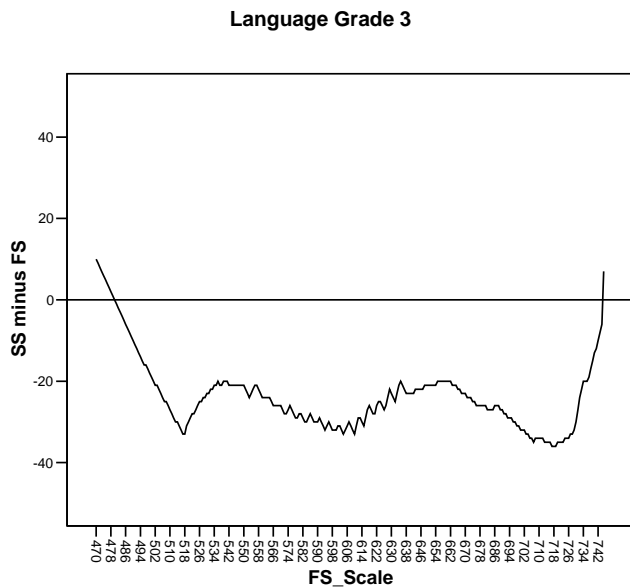
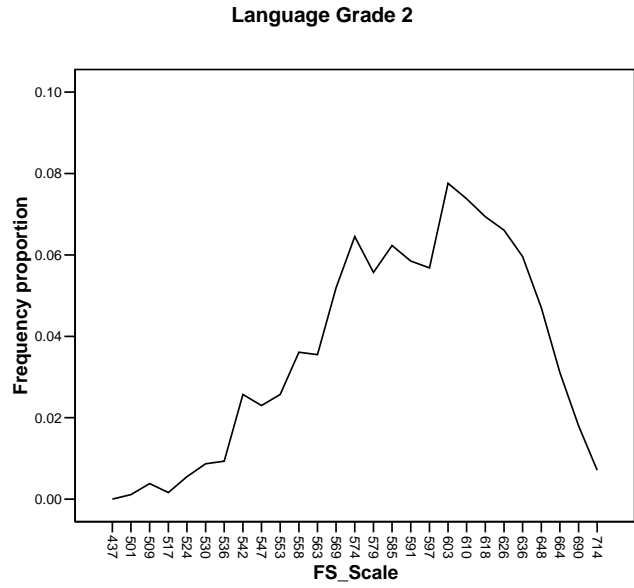
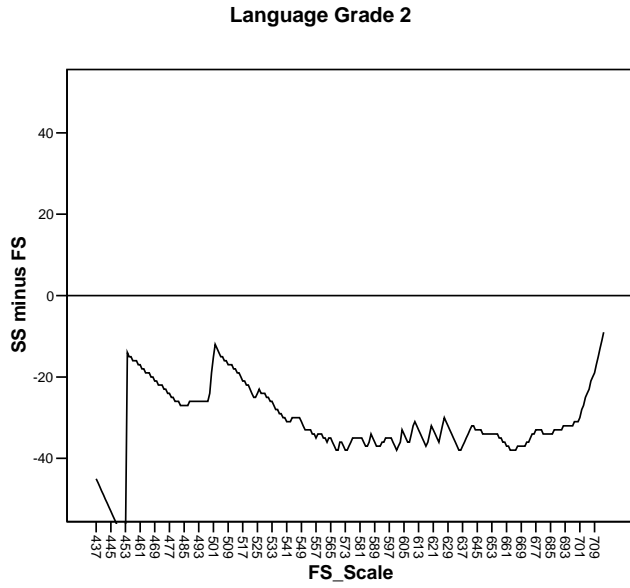
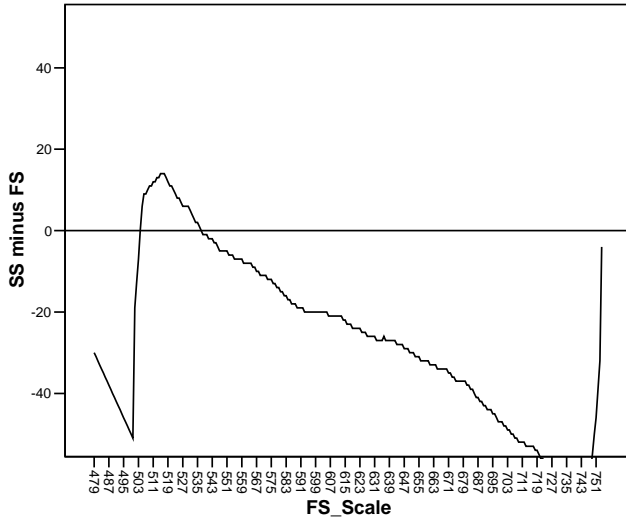


Figure F 18
Fall and Spring SAT/9 scale score differences and frequency proportion
Language Grades 4 - 5

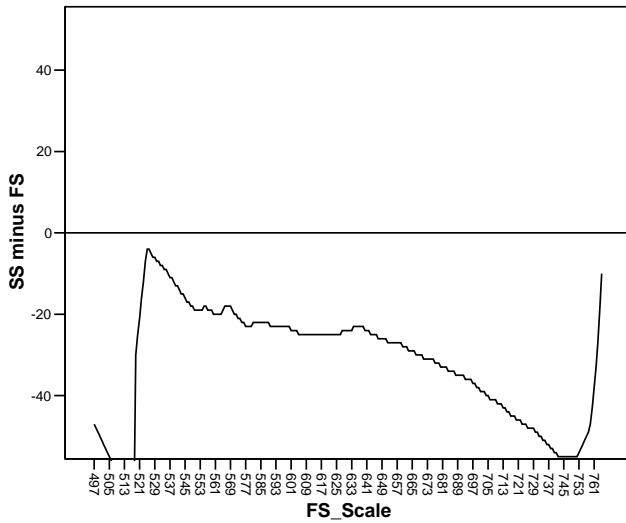
Language Grade 4



Language Grade 4



Language Grade 5



Language Grade 5

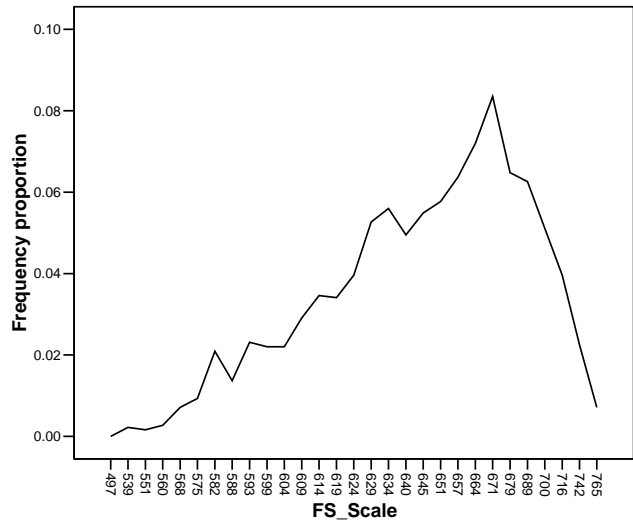
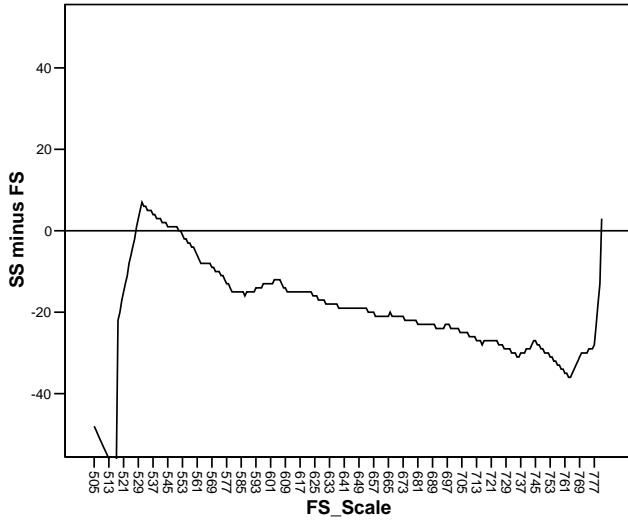
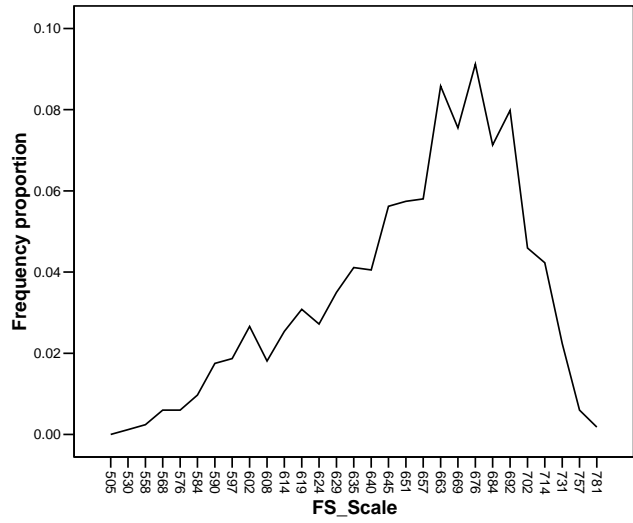


Figure F 19
Fall and Spring SAT/9 scale score differences and frequency proportion
Language Grades 6 - 7

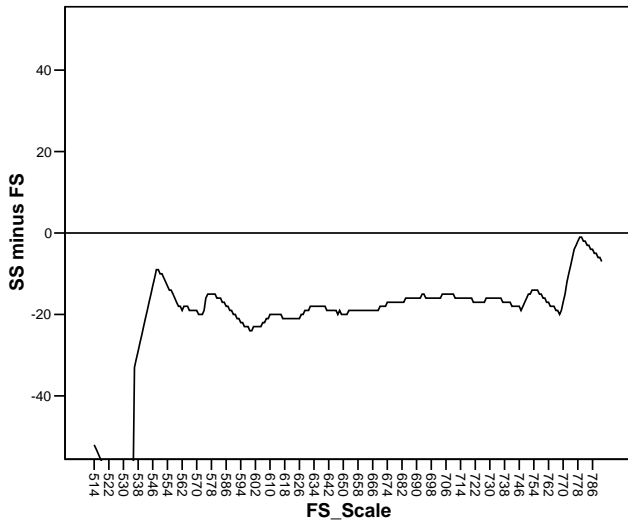
Language Grade 6



Language Grade 6



Language Grade 7



Language Grade 7

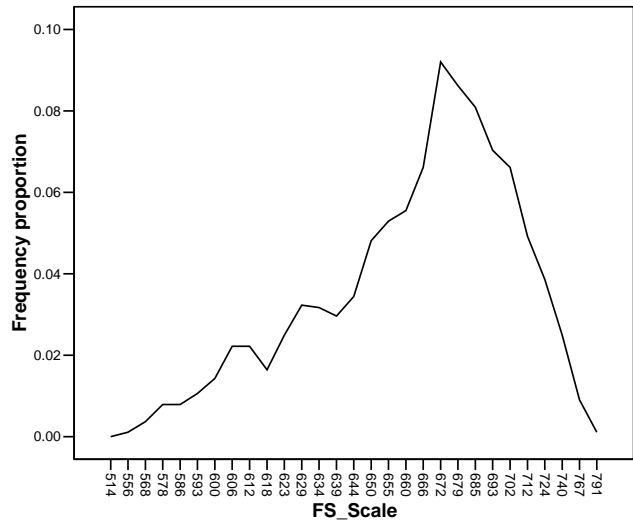
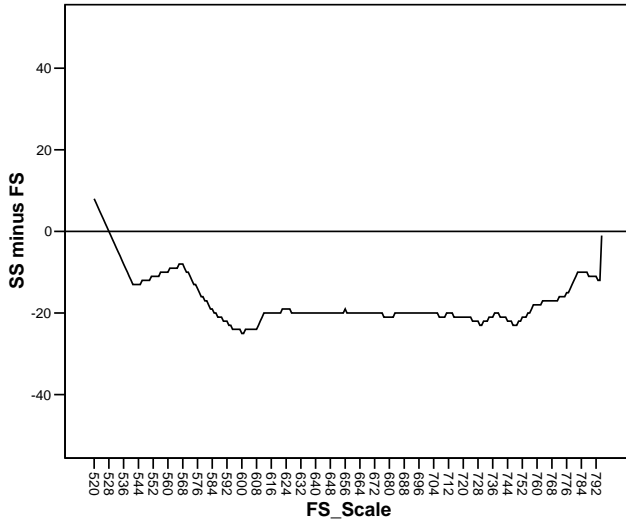
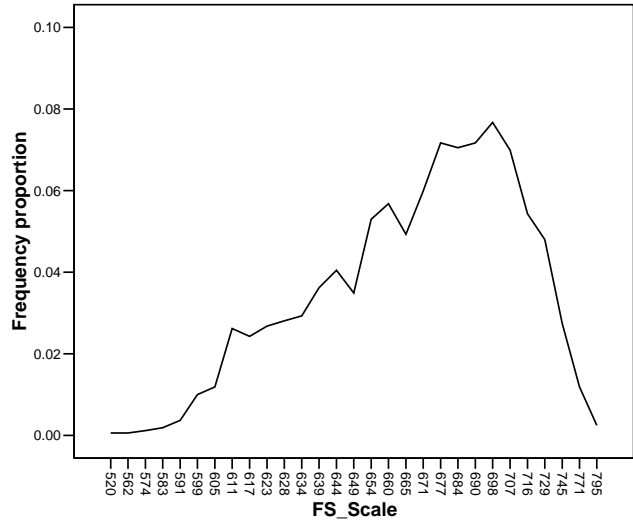


Figure F 20
Fall and Spring SAT/9 scale score differences and frequency proportion
Language Grades 8 - 9

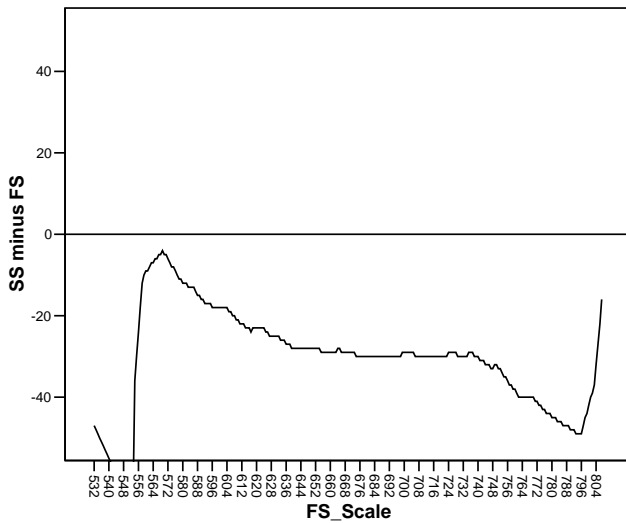
Language Grade 8



Language Grade 8



Language Grade 9



Language Grade 9

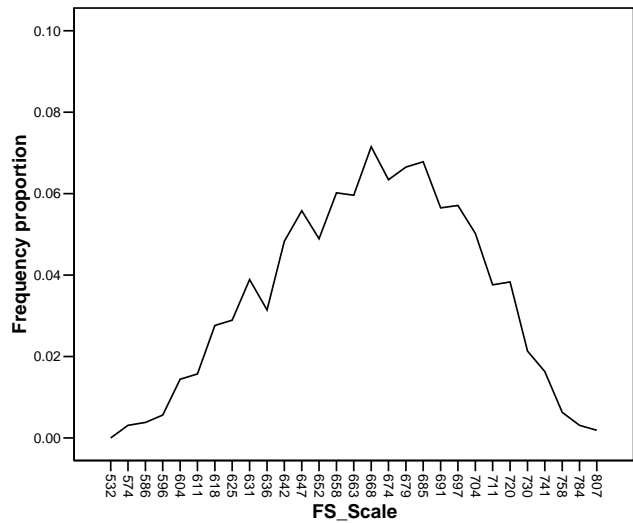
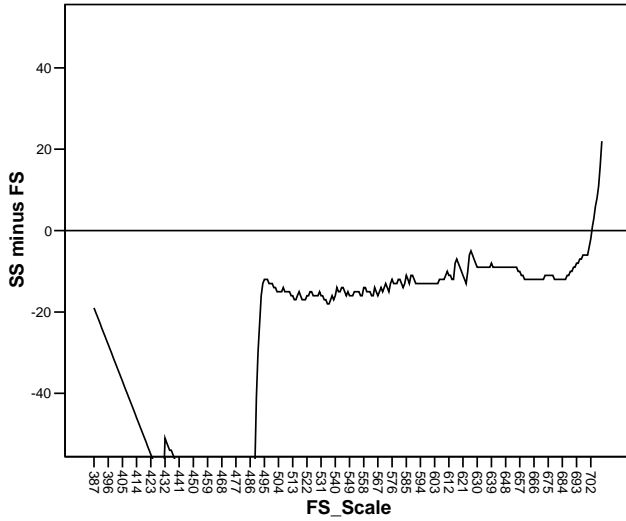
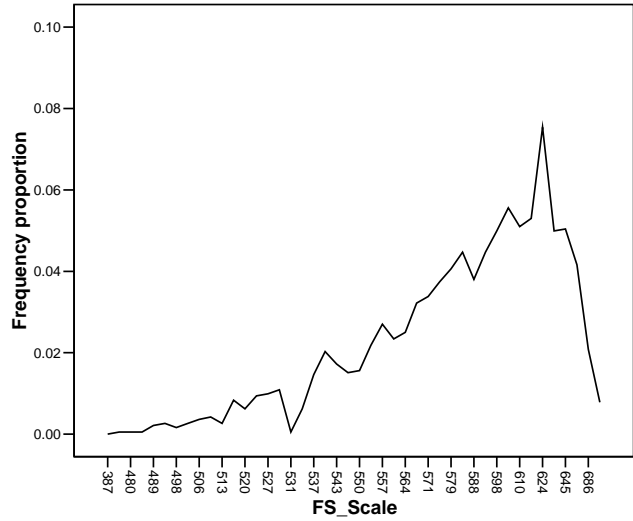


Figure F 21
Fall and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 2 - 3

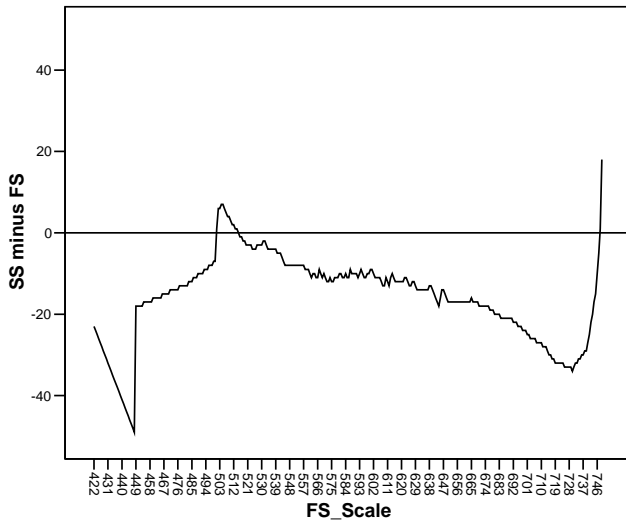
Mathematics Grade 2



Mathematics Grade 2



Mathematics Grade 3



Mathematics Grade 3

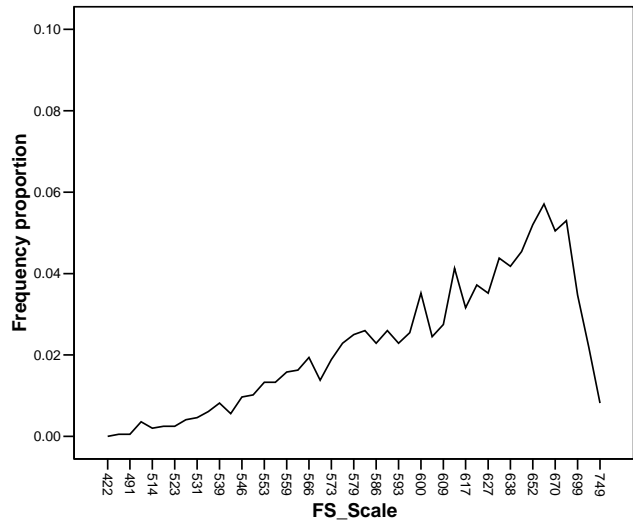
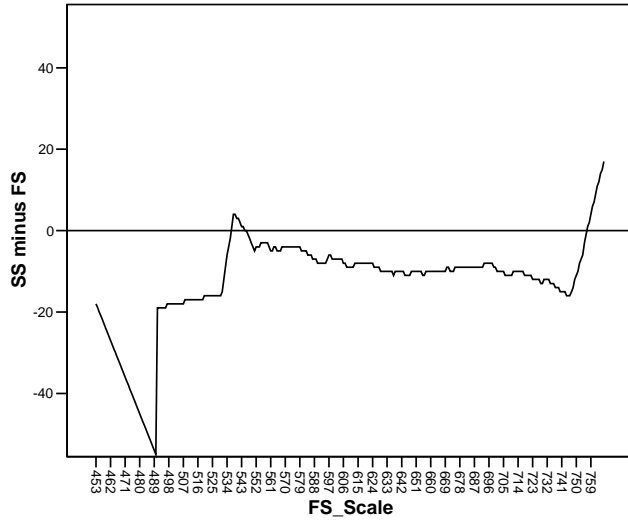
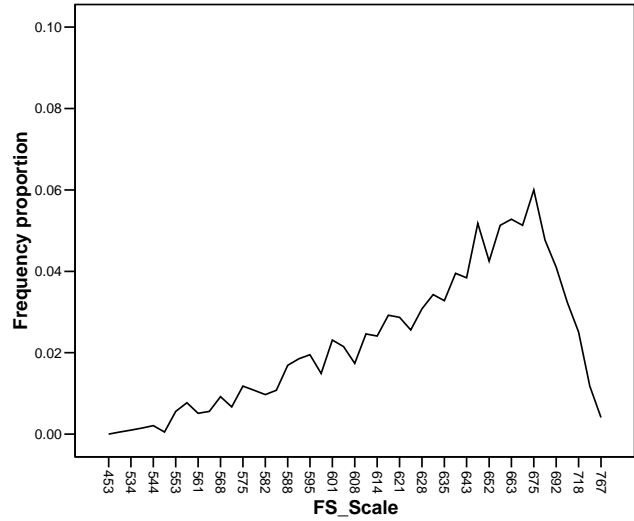


Figure F 22
Fall and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 4 - 5

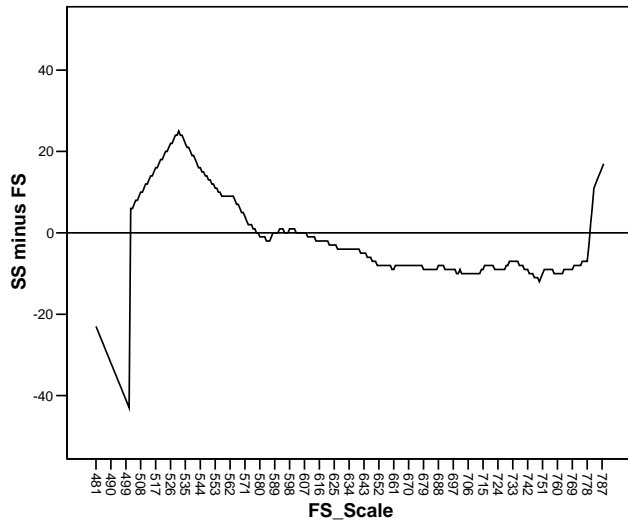
Mathematics Grade 4



Mathematics Grade 4



Mathematics Grade 5



Mathematics Grade 5

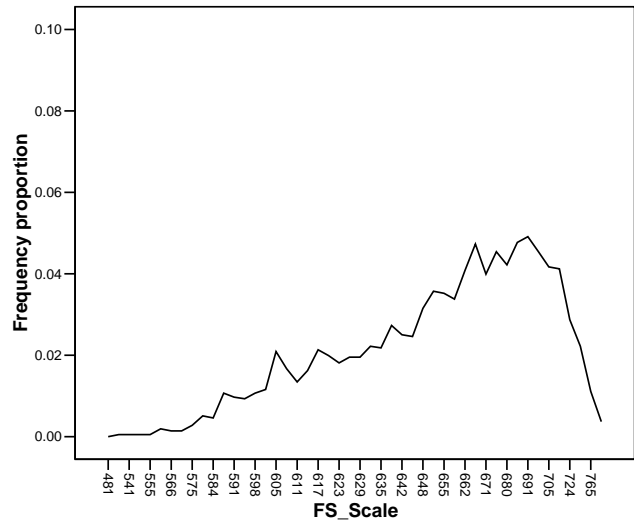
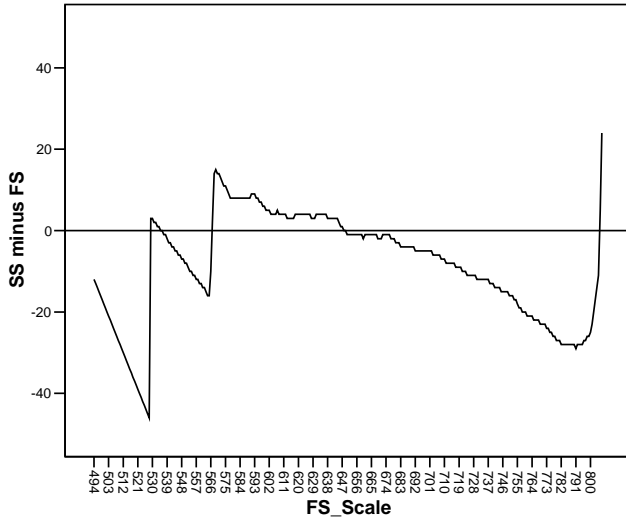
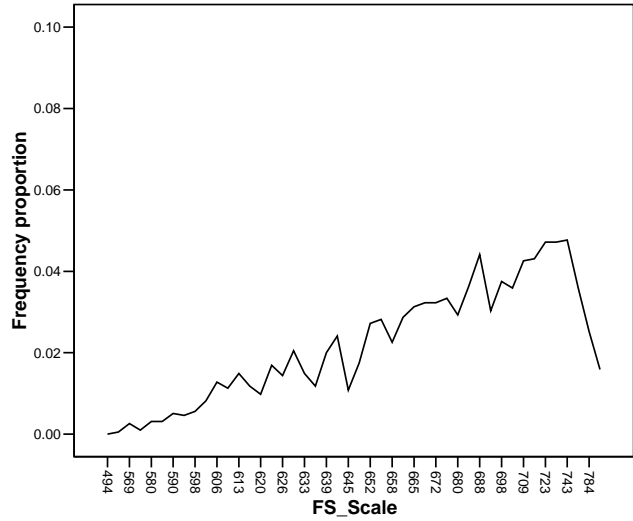


Figure F 23
Fall and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 6 - 7

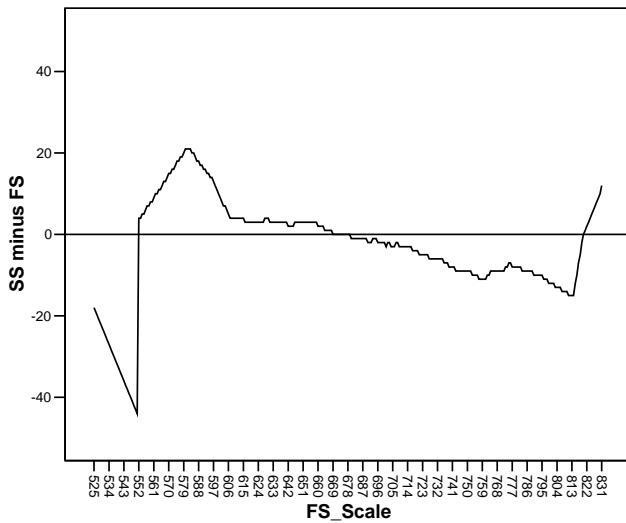
Mathematics Grade 6



Mathematics Grade 6



Mathematics Grade 7



Mathematics Grade 7

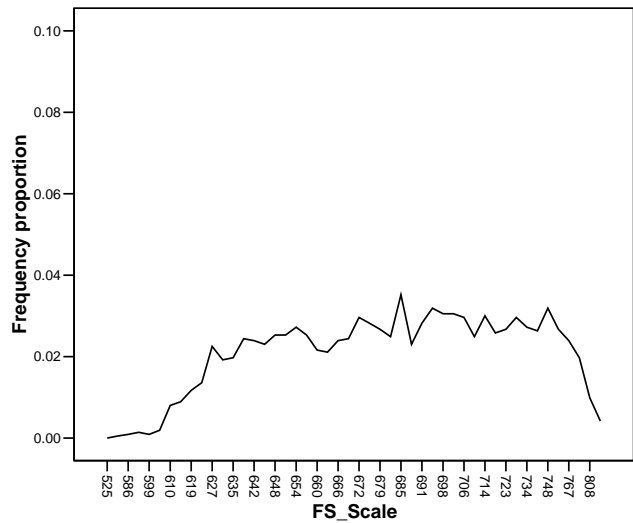
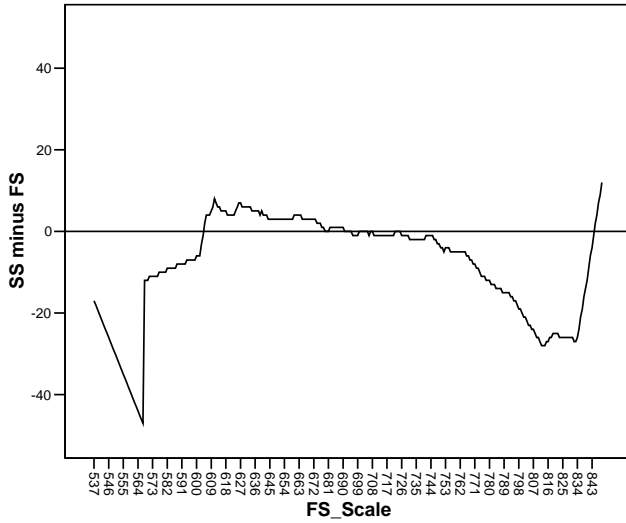
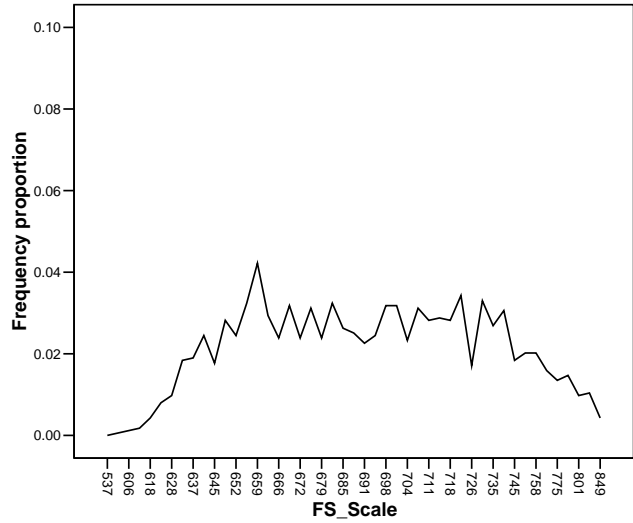


Figure F 24
Fall and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 8 - 9

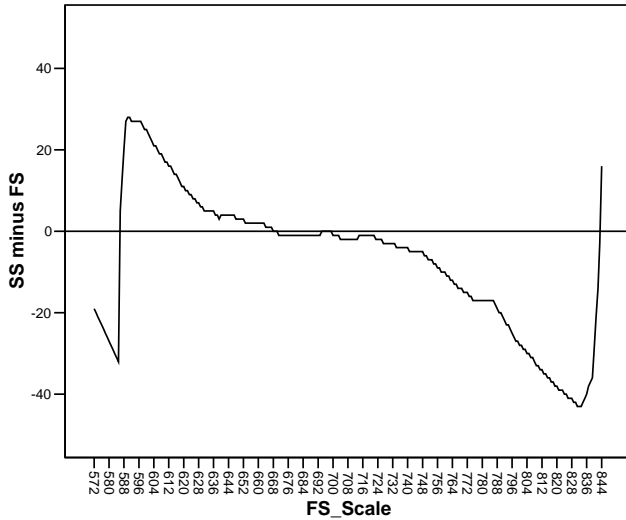
Mathematics Grade 8



Mathematics Grade 8



Mathematics Grade 9



Mathematics Grade 9

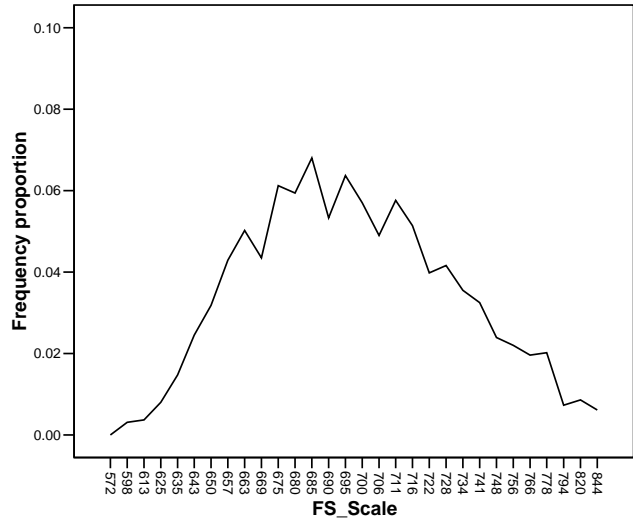


Figure F 25
TN and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 2 - 3

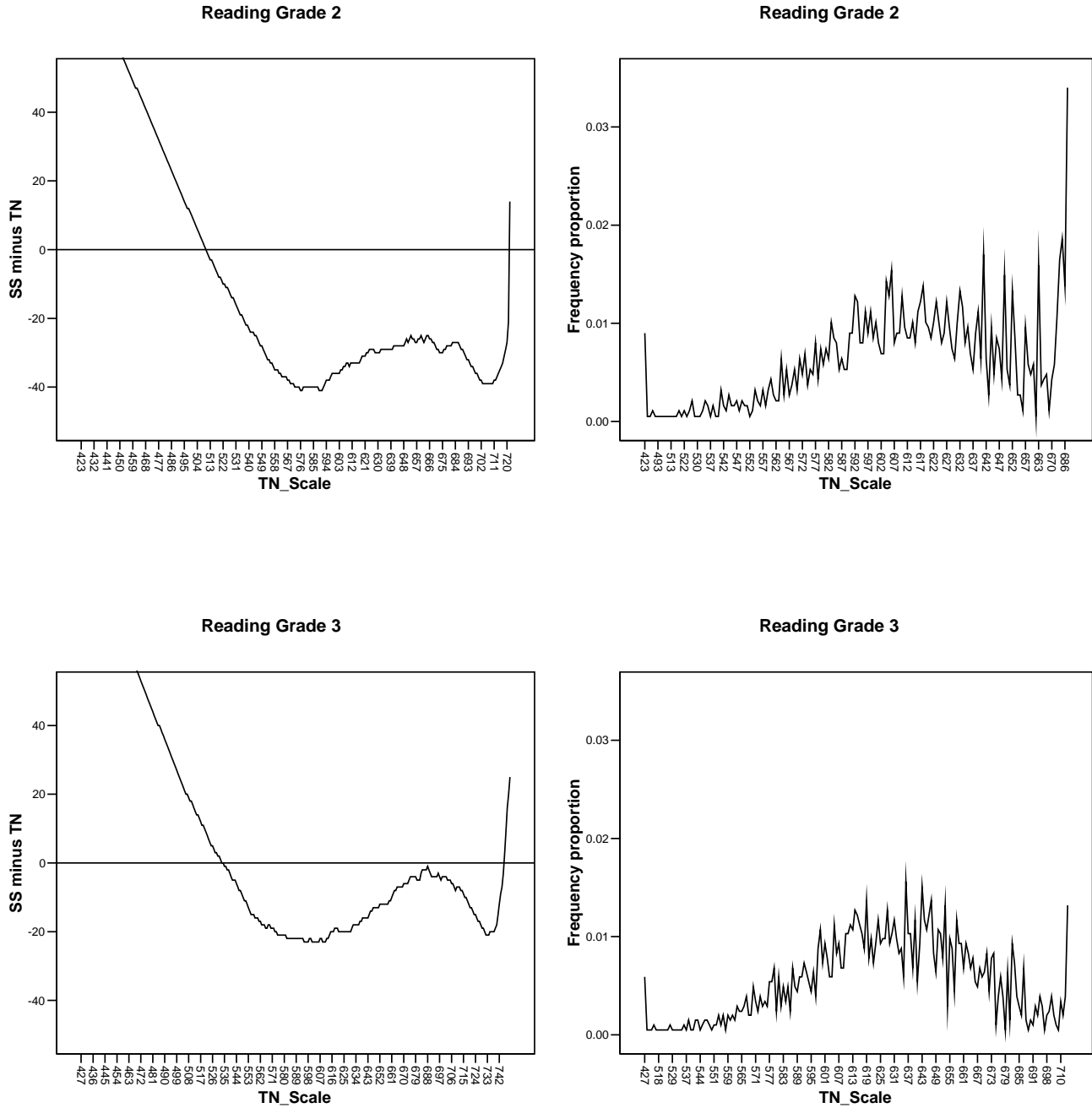


Figure F 26
TN and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 4 - 5

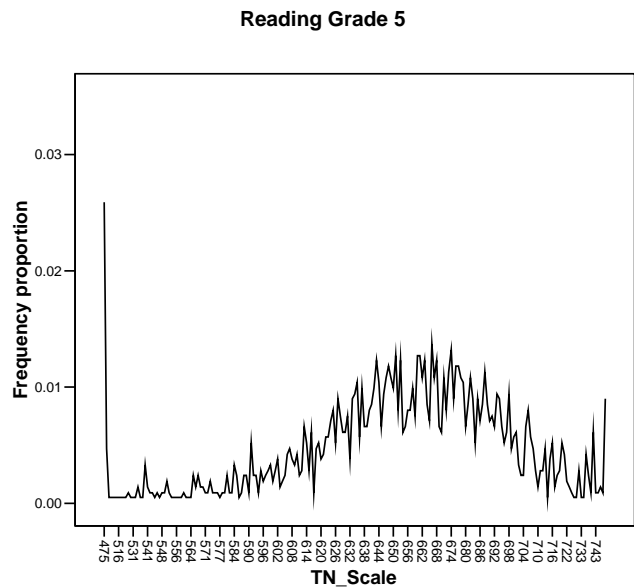
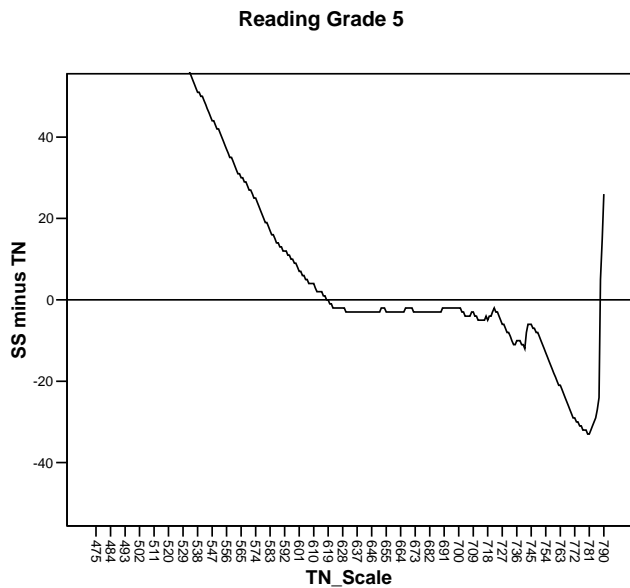
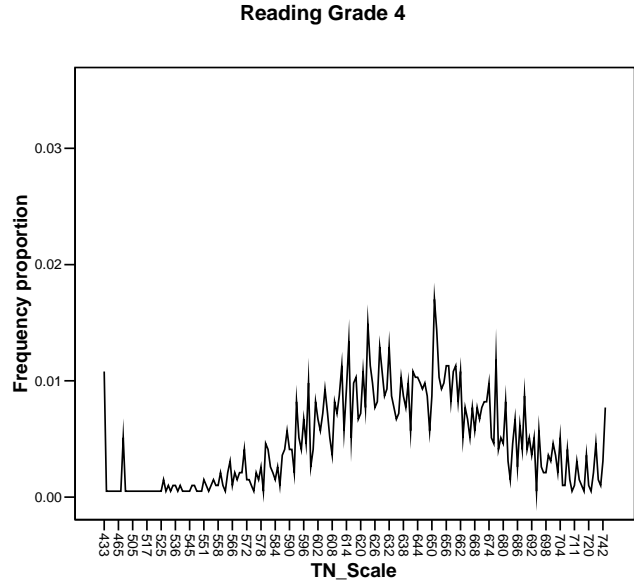
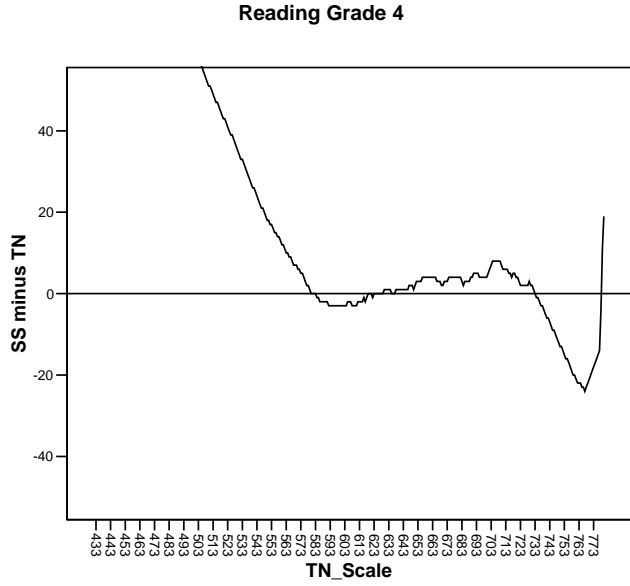


Figure F 27
TN and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 6 - 7

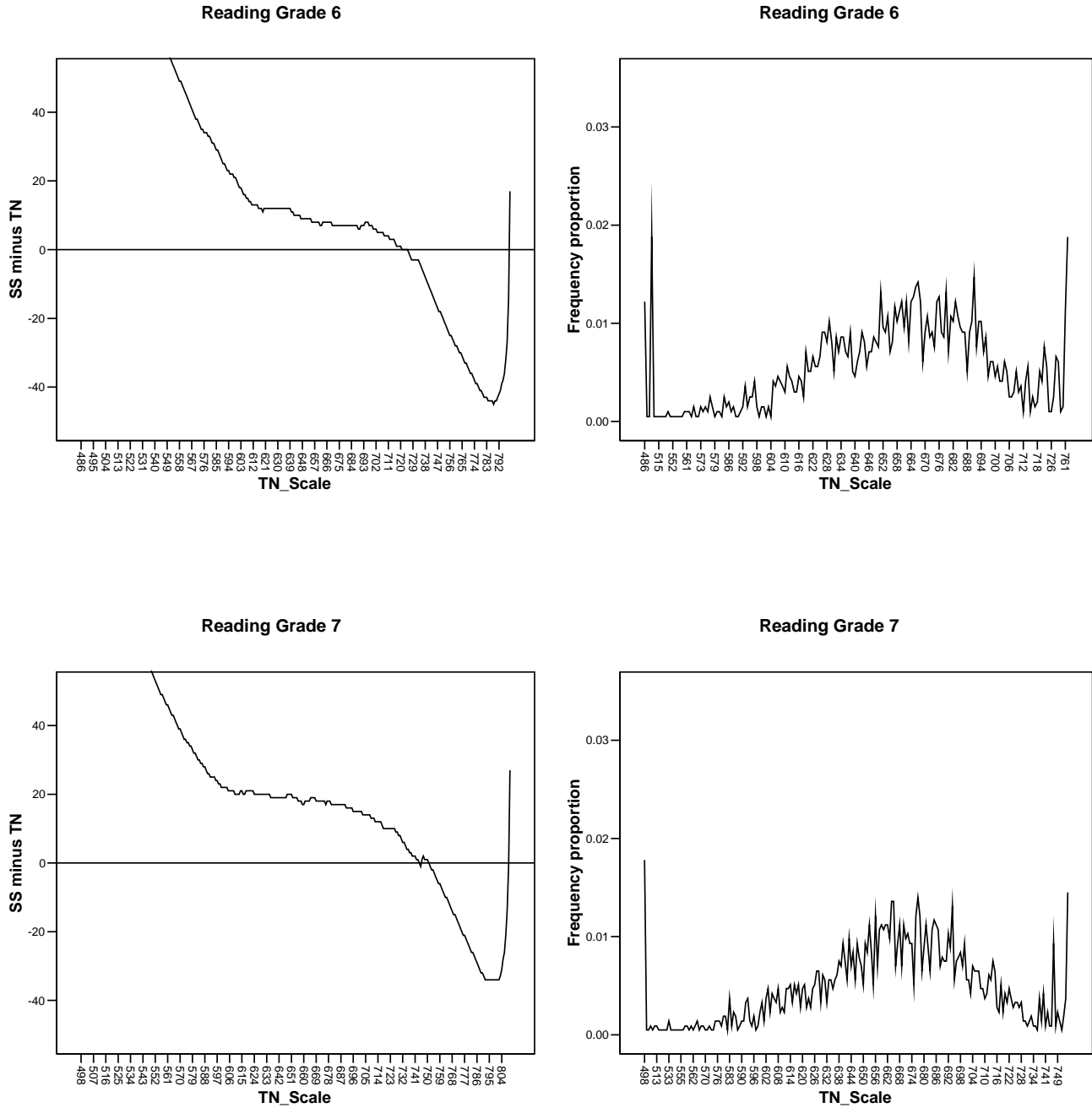


Figure F 28
TN and Spring SAT/9 scale score differences and frequency proportion
Reading Grades 8 - 9

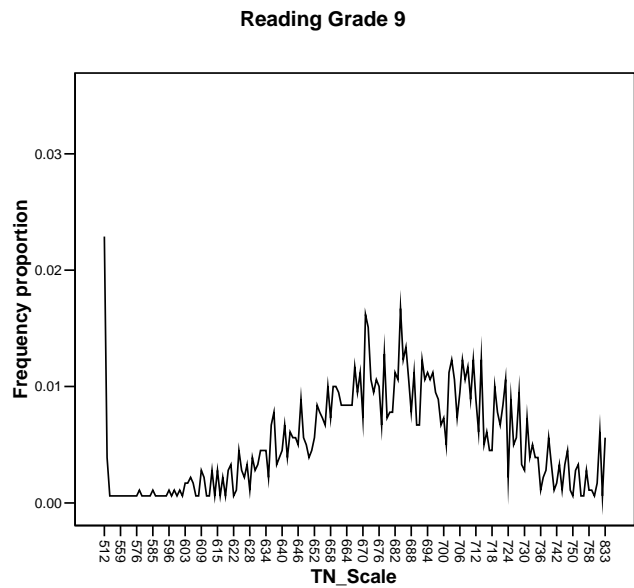
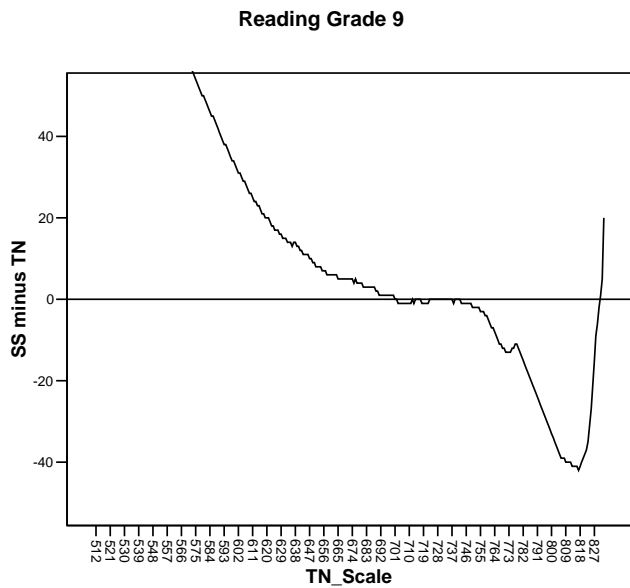
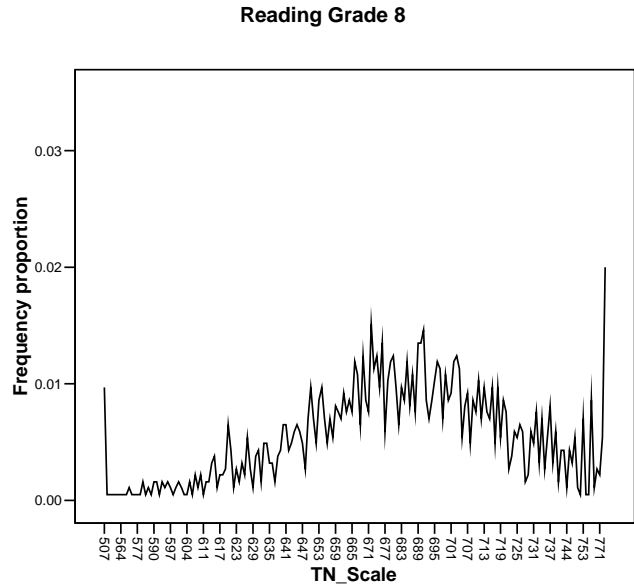
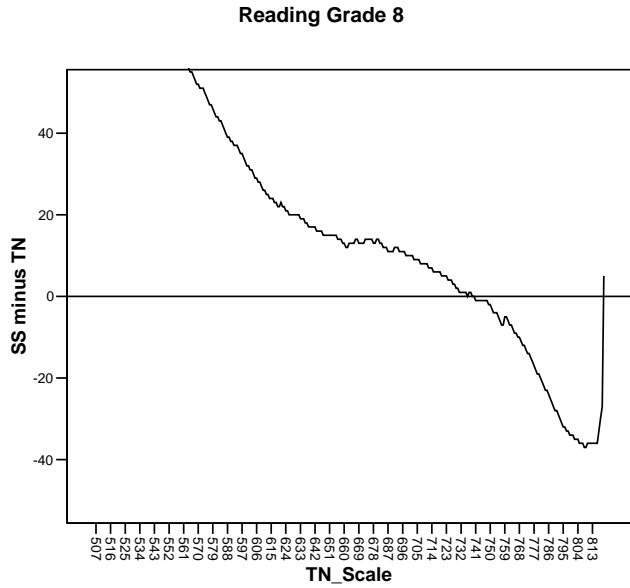


Figure F 29
TN and Spring SAT/9 scale score differences and frequency proportion
Language Grades 2 - 3

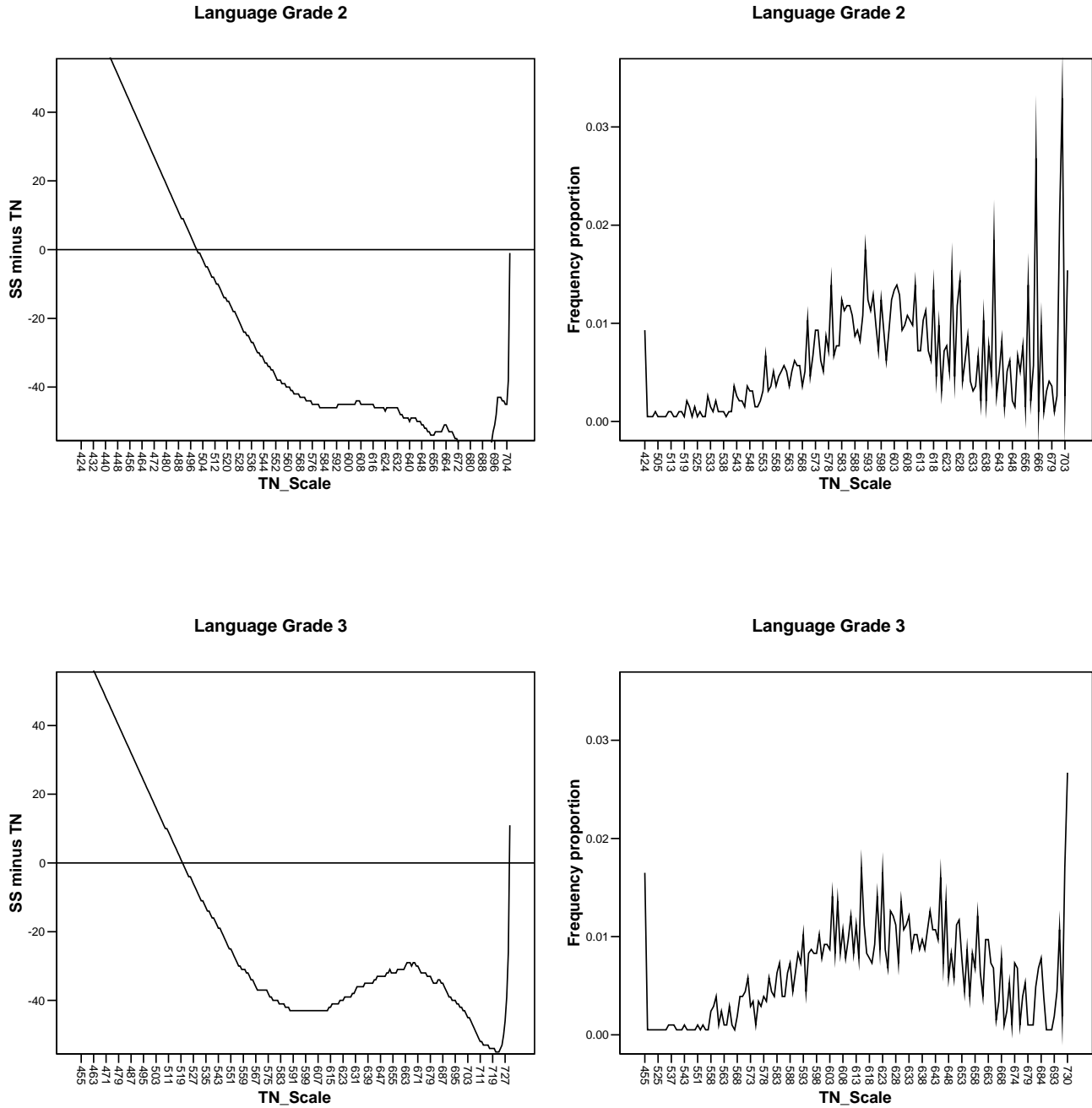


Figure F 30
TN and Spring SAT/9 scale score differences and frequency proportion
Language Grades 4 - 5

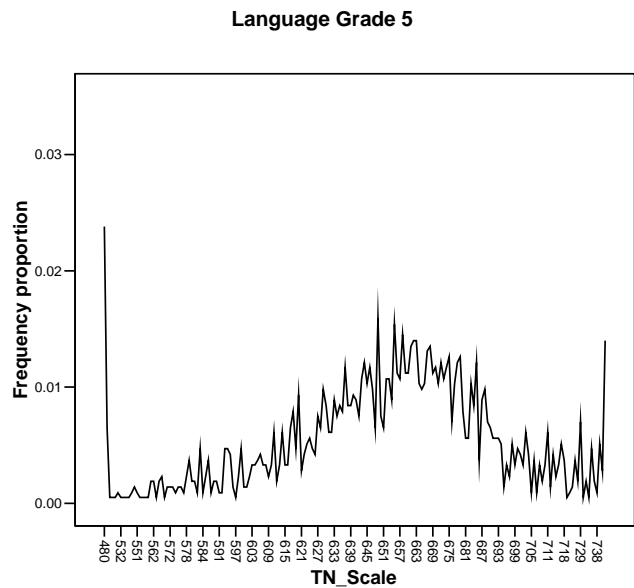
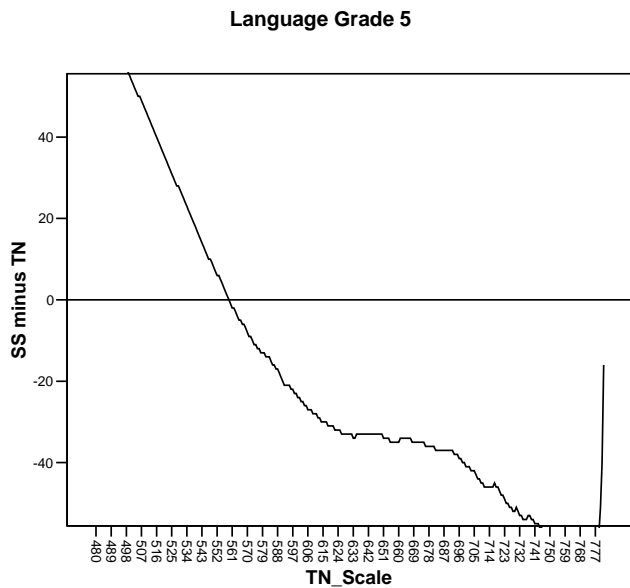
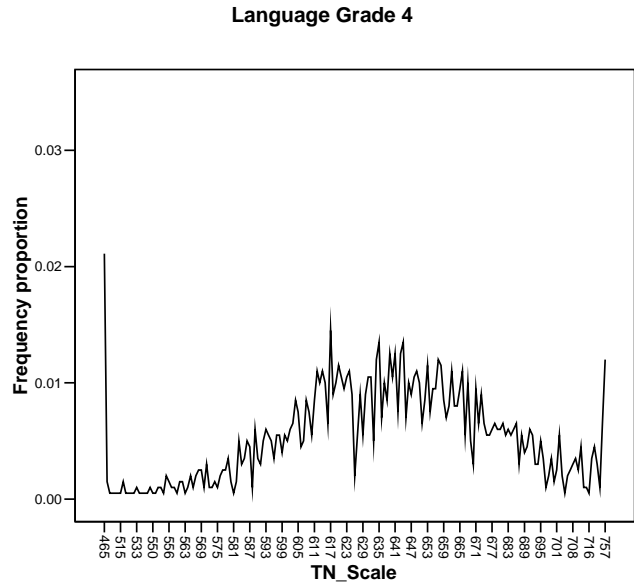
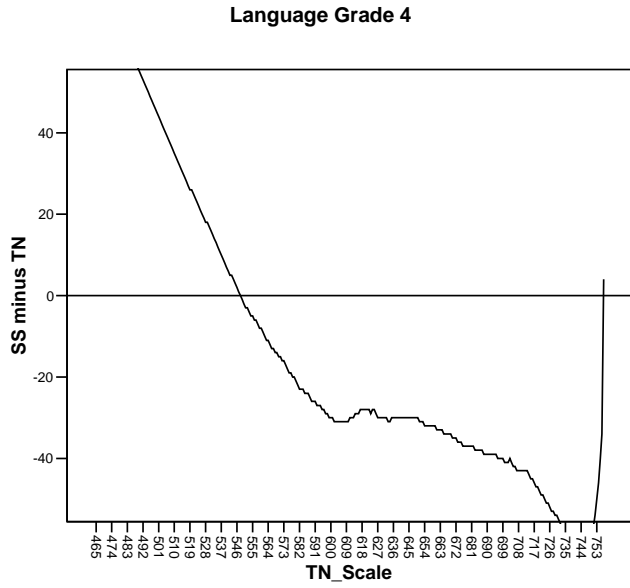


Figure F 31
TN and Spring SAT/9 scale score differences and frequency proportion
Language Grades 6 - 7

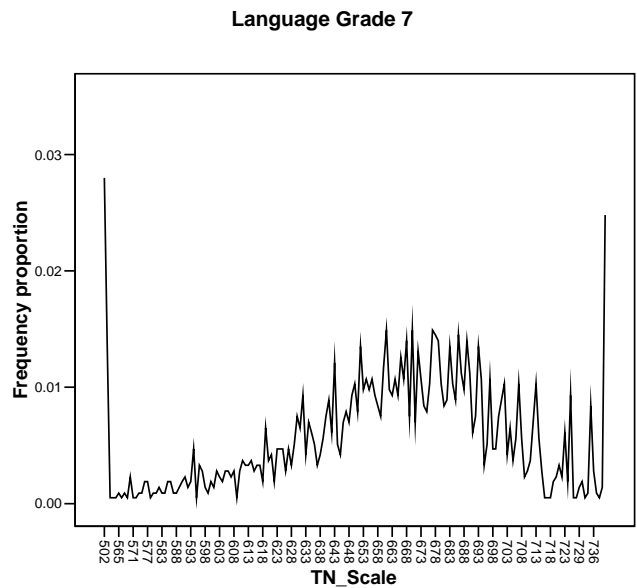
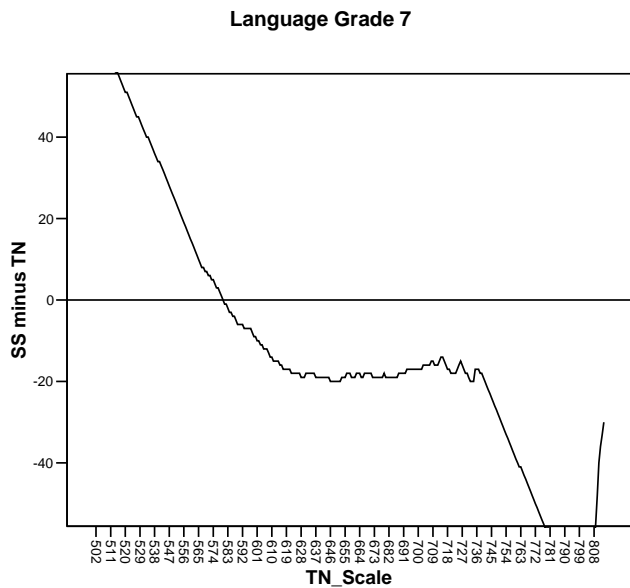
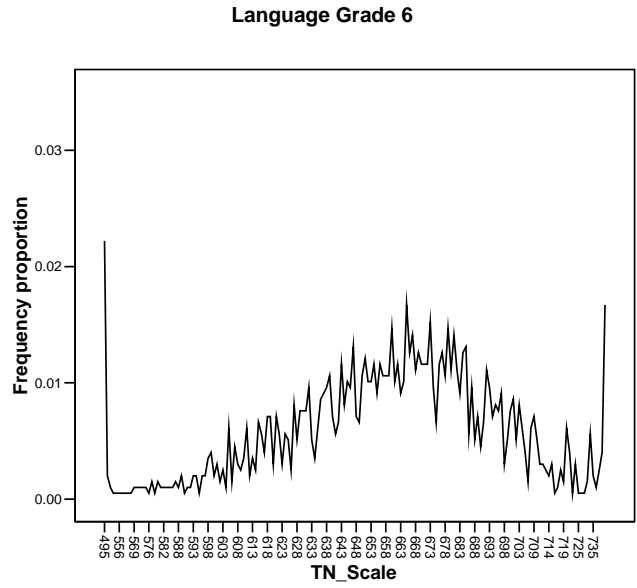
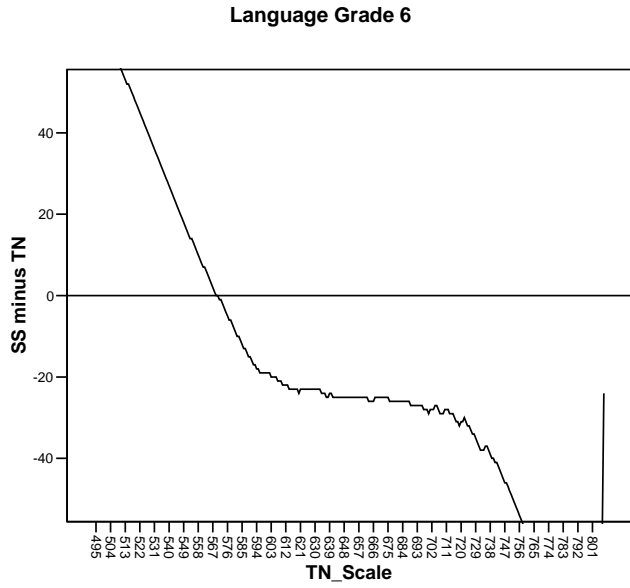
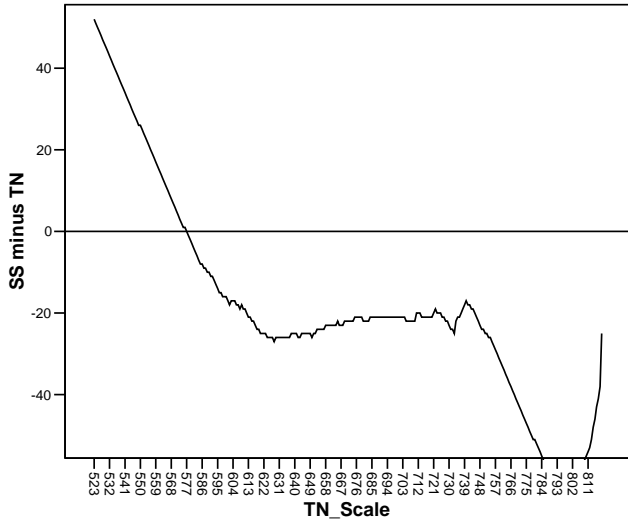
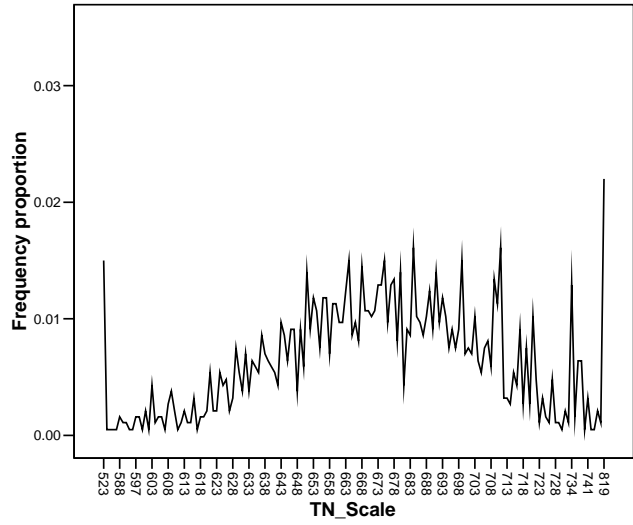


Figure F 32
TN and Spring SAT/9 scale score differences and frequency proportion
Language Grades 8 - 9

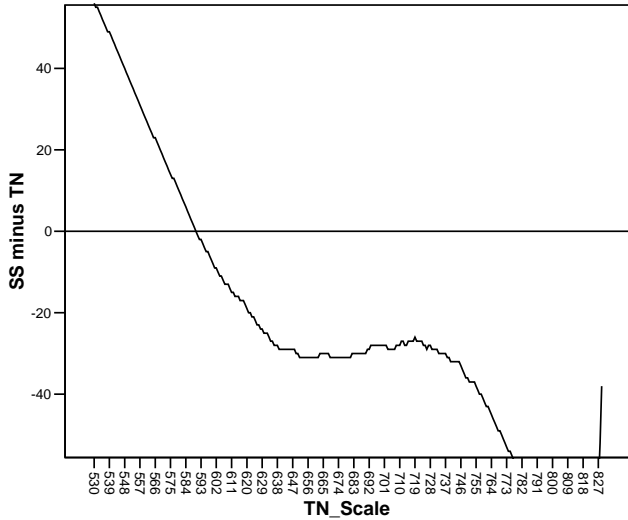
Language Grade 8



Language Grade 8



Language Grade 9



Language Grade 9

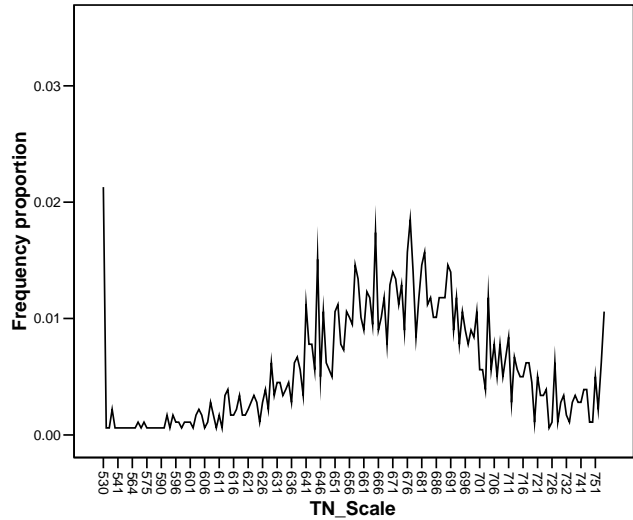


Figure F 33
TN and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 2 - 3

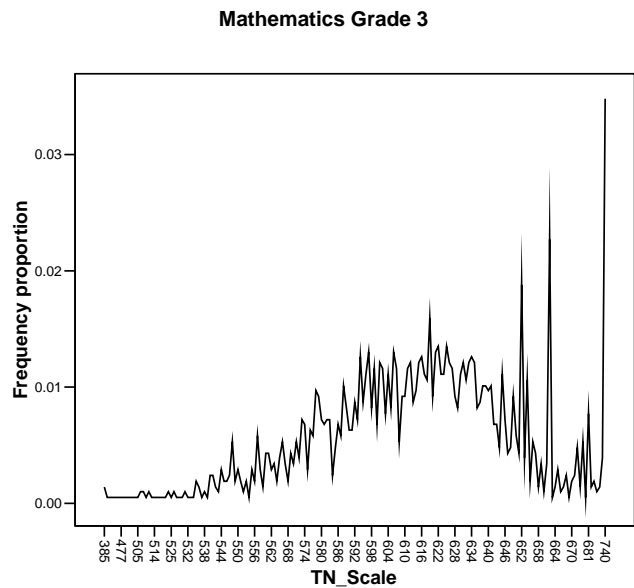
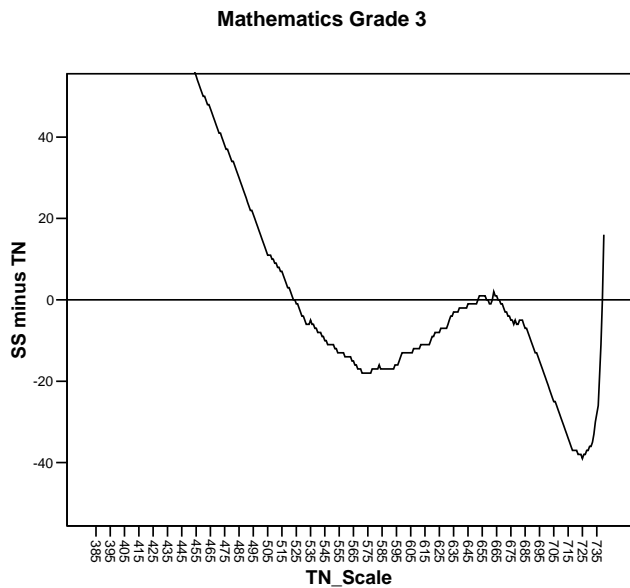
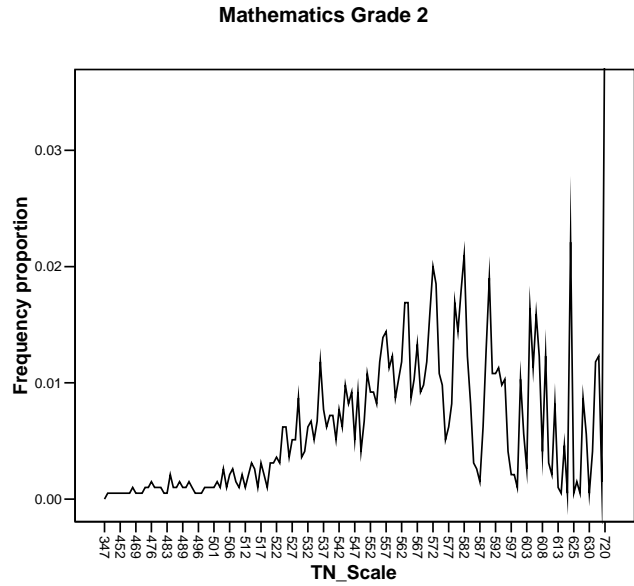
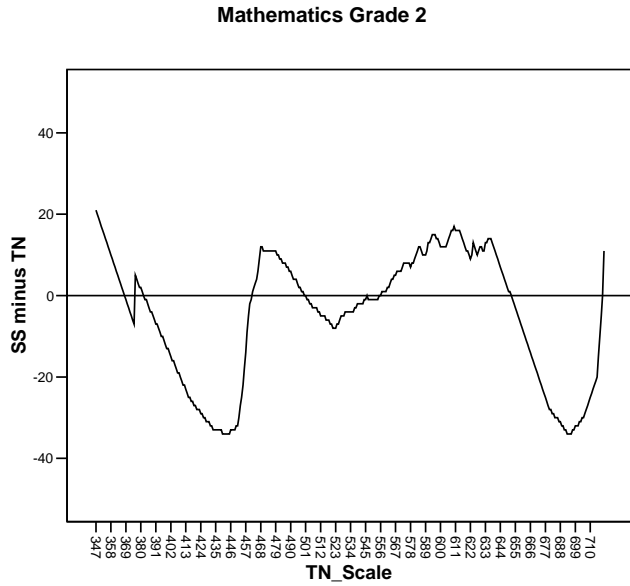


Figure F 34
TN and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 4 - 5

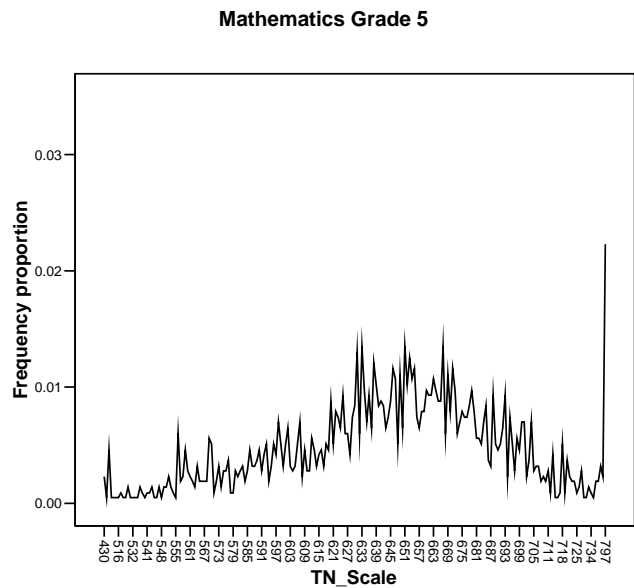
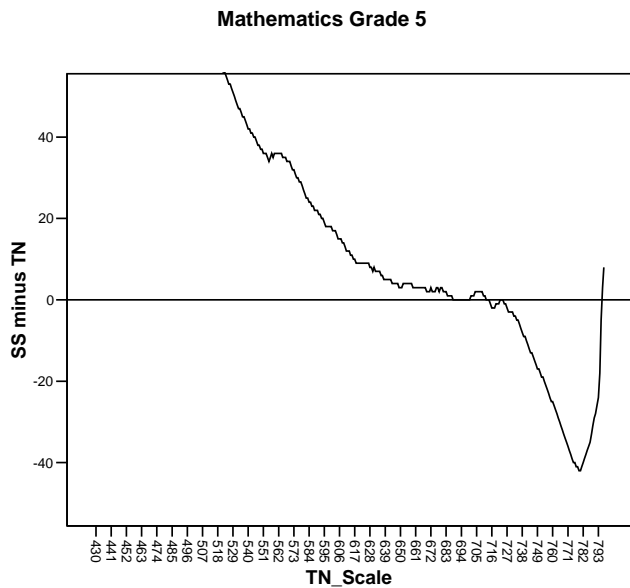
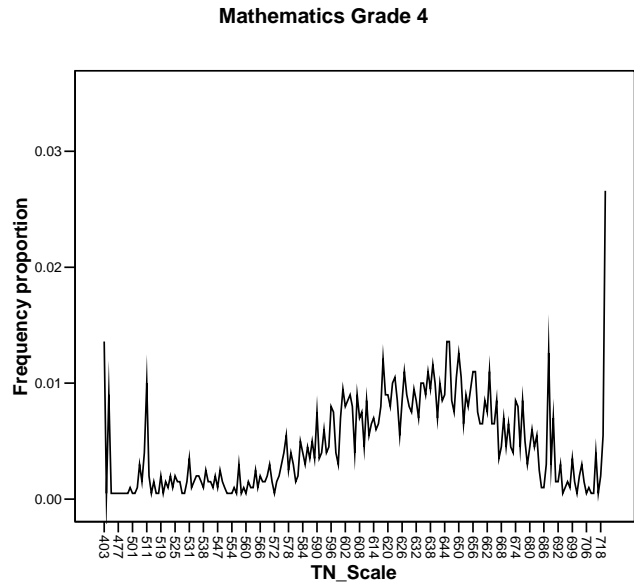
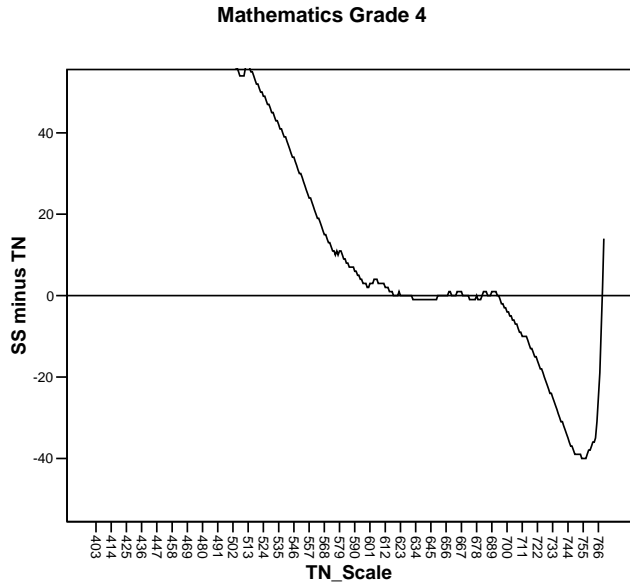


Figure F 35
TN and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 6 - 7

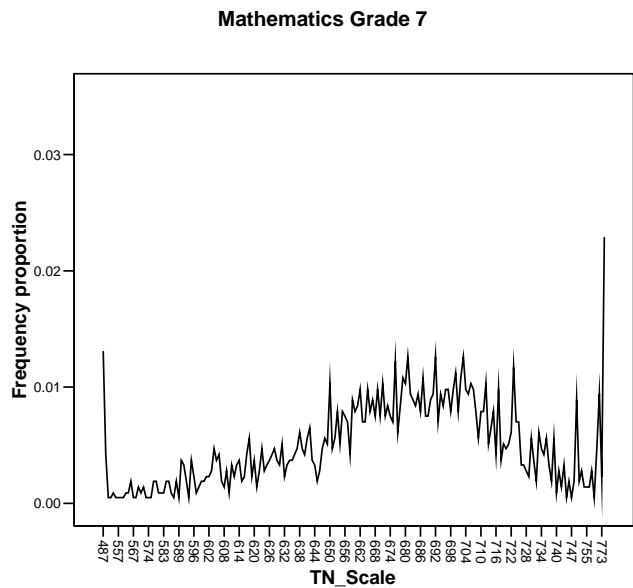
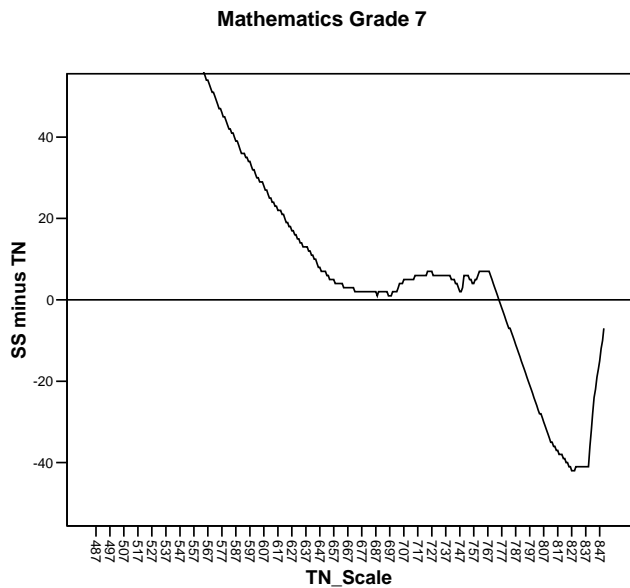
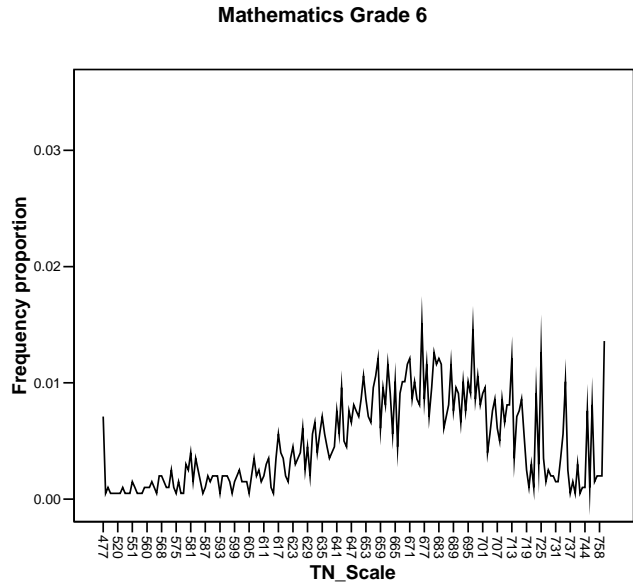
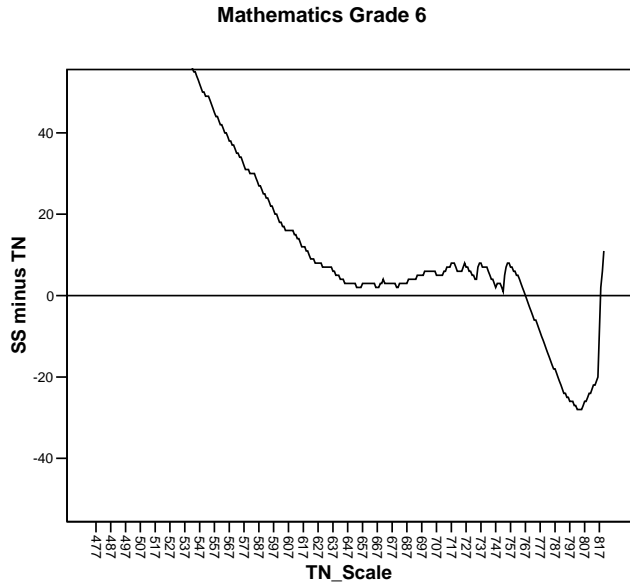


Figure F 36
TN and Spring SAT/9 scale score differences and frequency proportion
Mathematics Grades 8 - 9

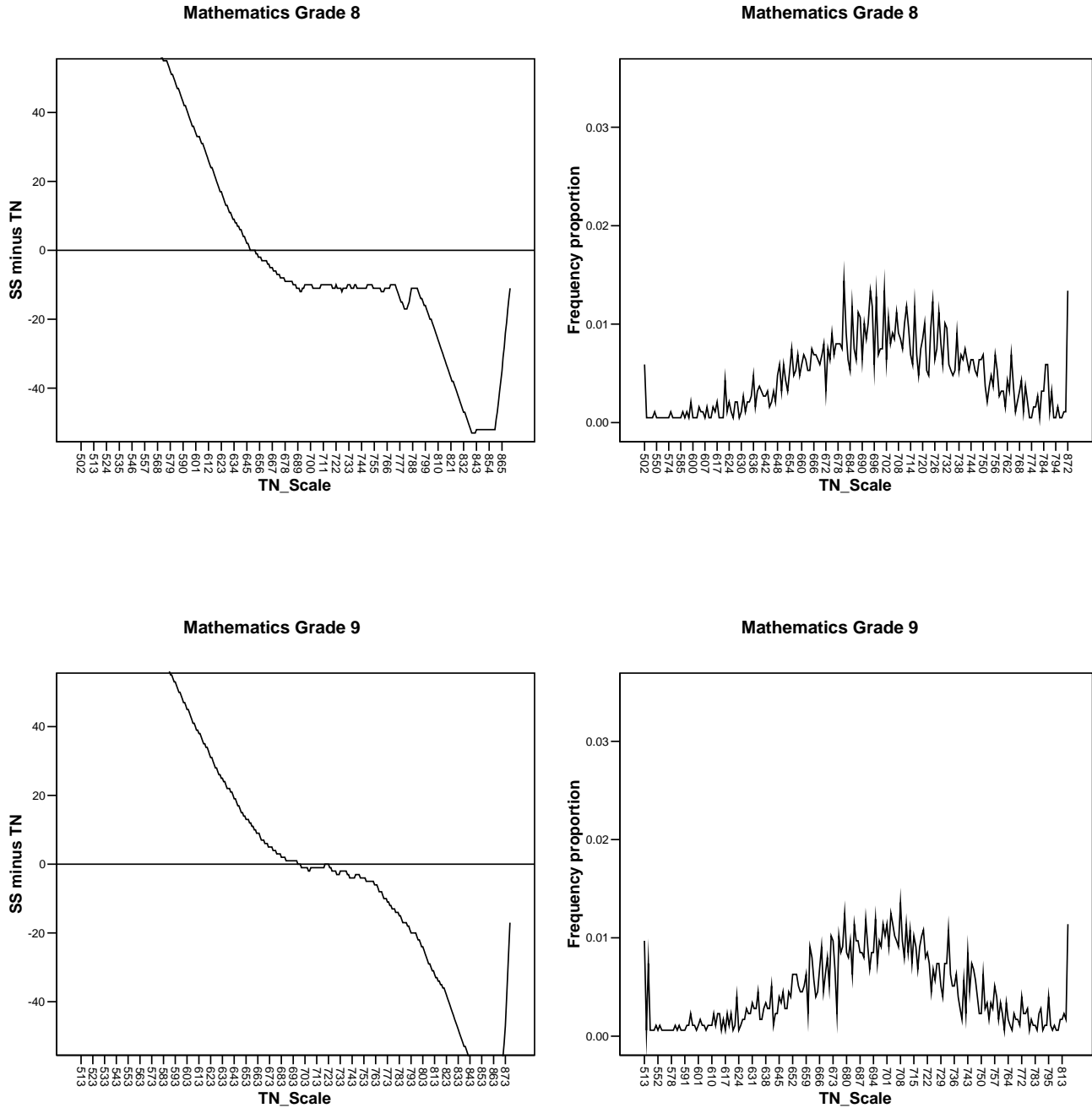


Figure F 37
Fall and Spring SAT/9 scale scores across TN scale scores
Reading Grades 2 - 3

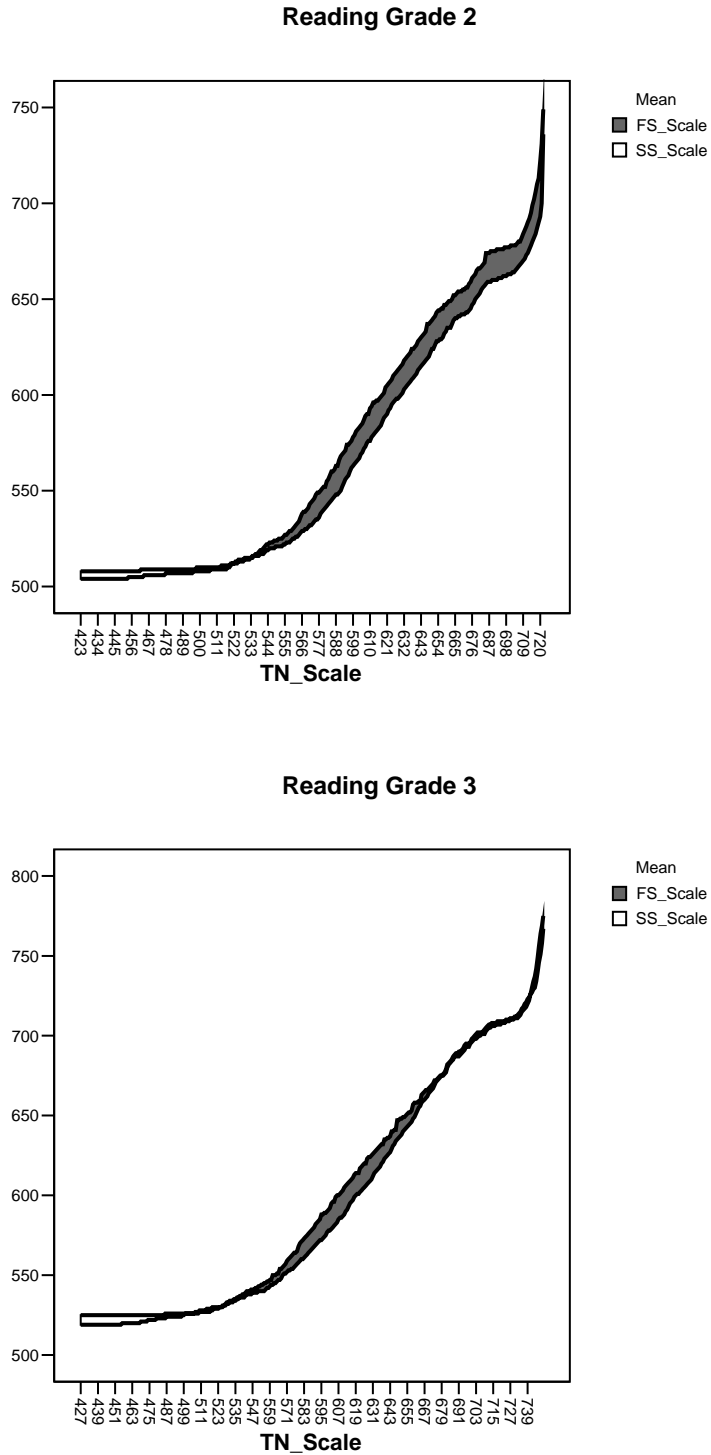


Figure F 38
Fall and Spring SAT/9 scale scores across TN scale scores
Reading Grades 4 - 5

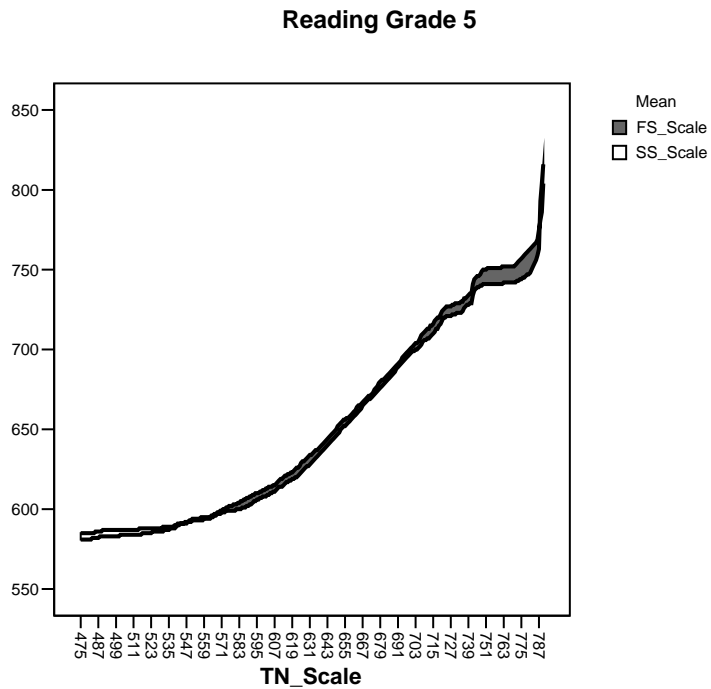
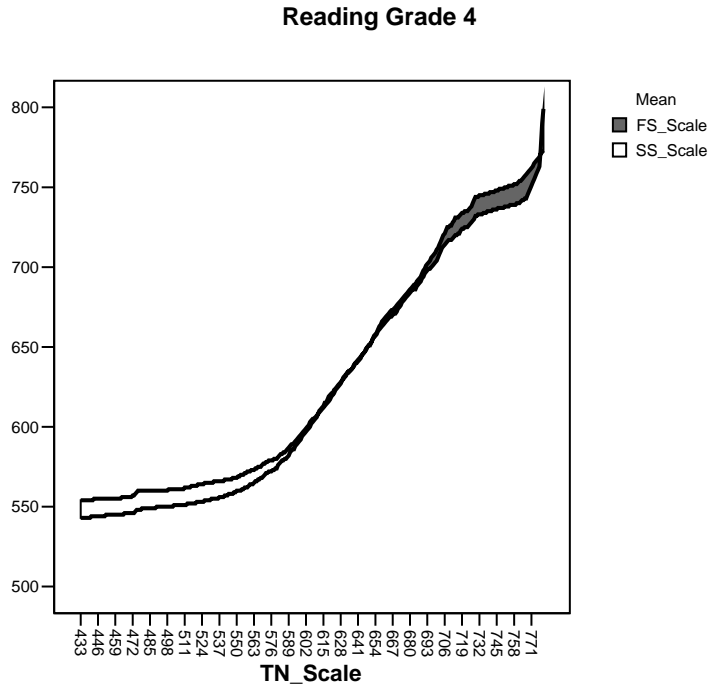


Figure F 39
Fall and Spring SAT/9 scale scores across TN scale scores
Reading Grades 6 - 7

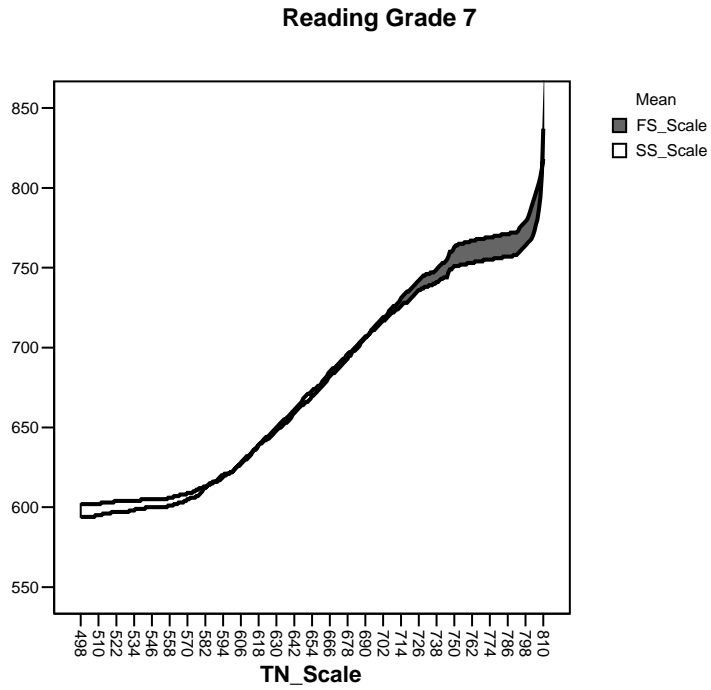
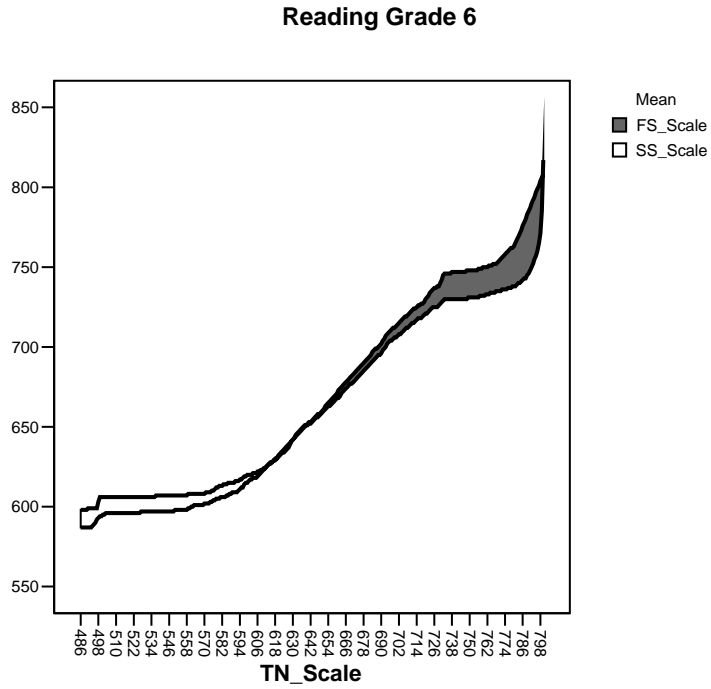


Figure F 40
Fall and Spring SAT/9 scale scores across TN scale scores
Reading Grades 8 - 9

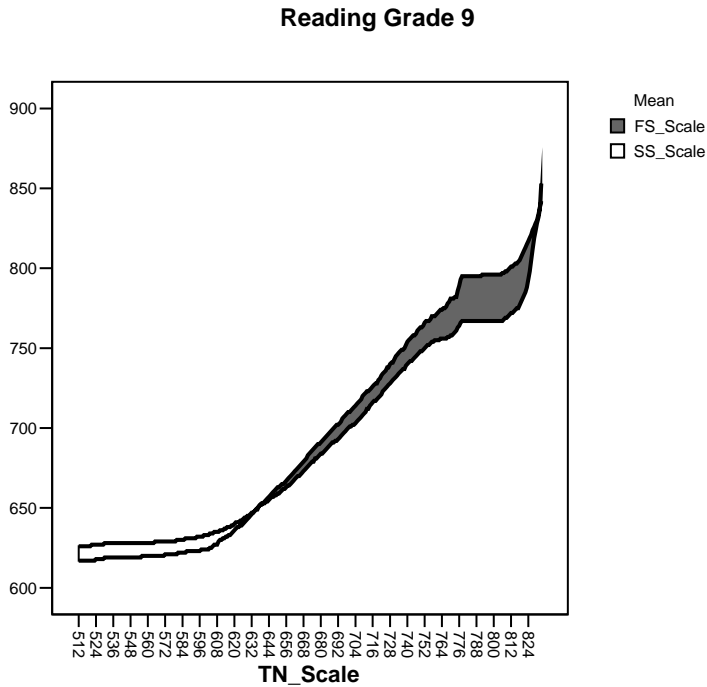
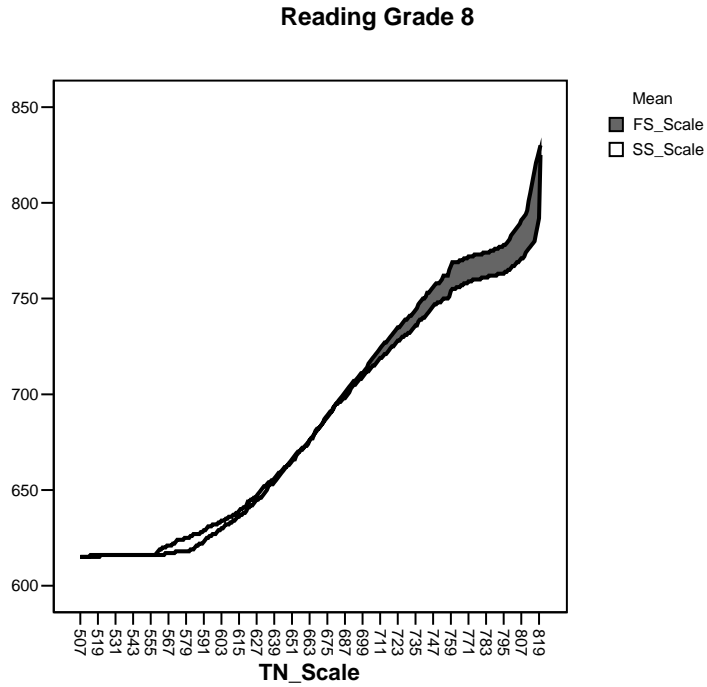


Figure F 41
Fall and Spring SAT/9 scale scores across TN scale scores
Language Grades 2 - 3

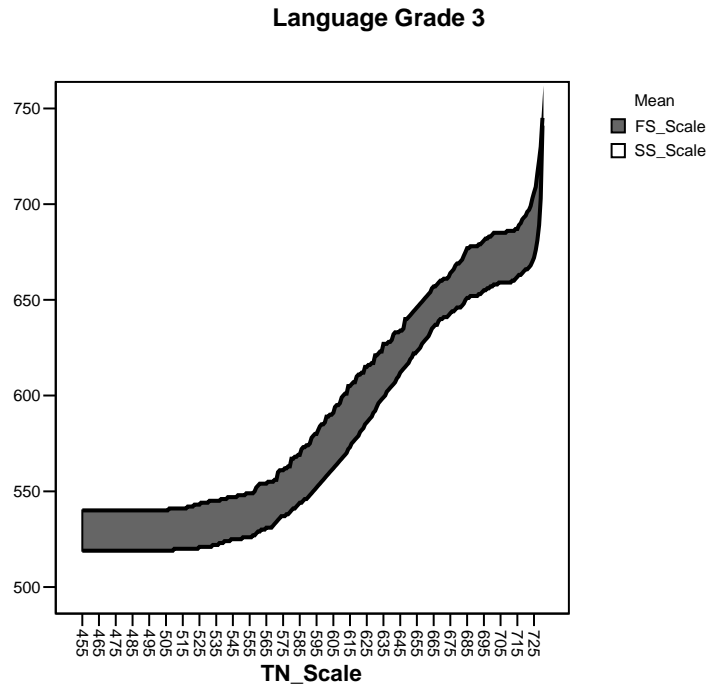
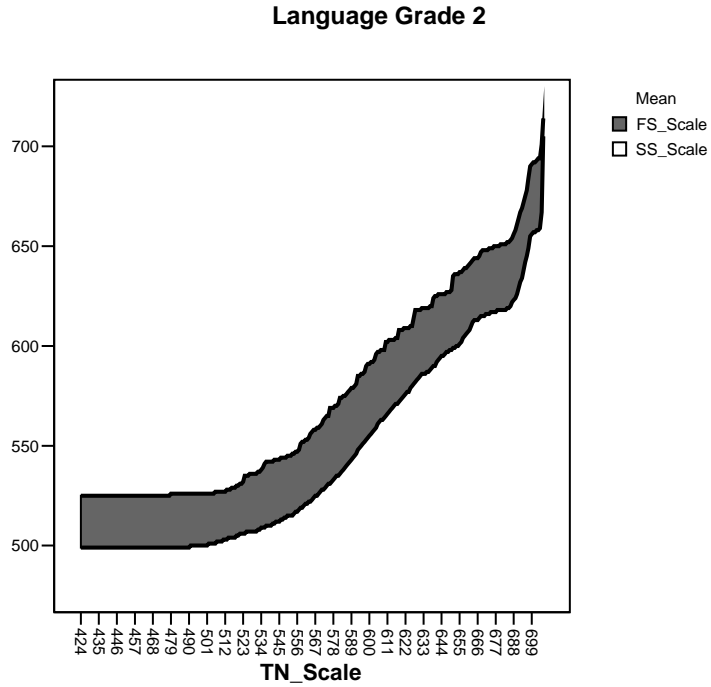


Figure F 42
Fall and Spring SAT/9 scale scores across TN scale scores
Language Grades 4 - 5

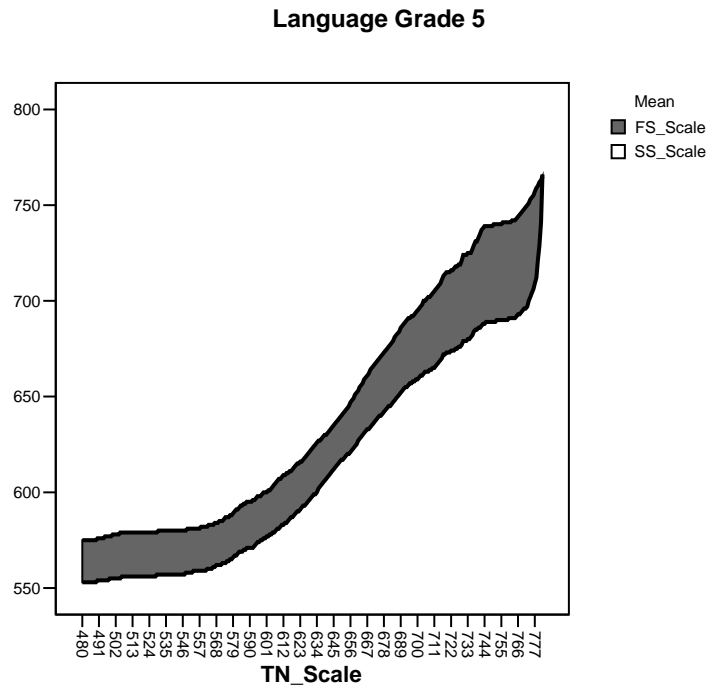
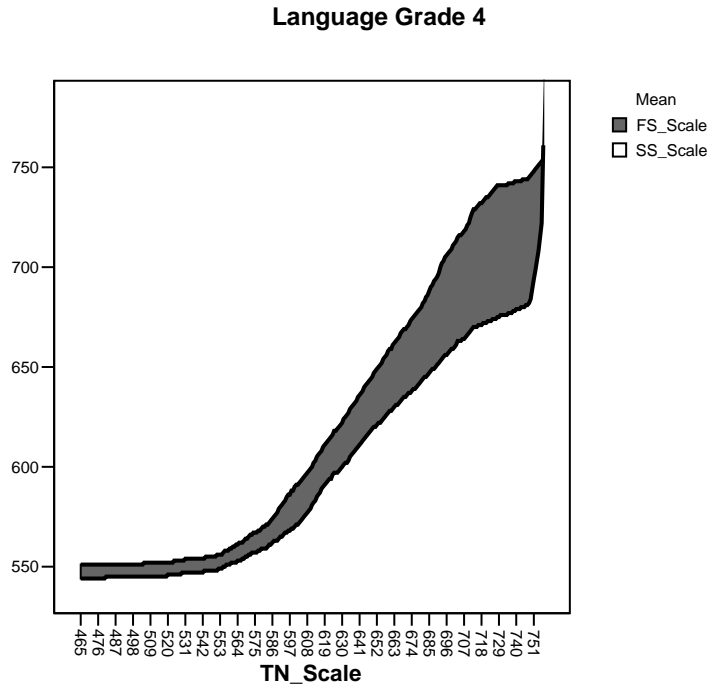


Figure F 43
Fall and Spring SAT/9 scale scores across TN scale scores
Language Grades 6 - 7

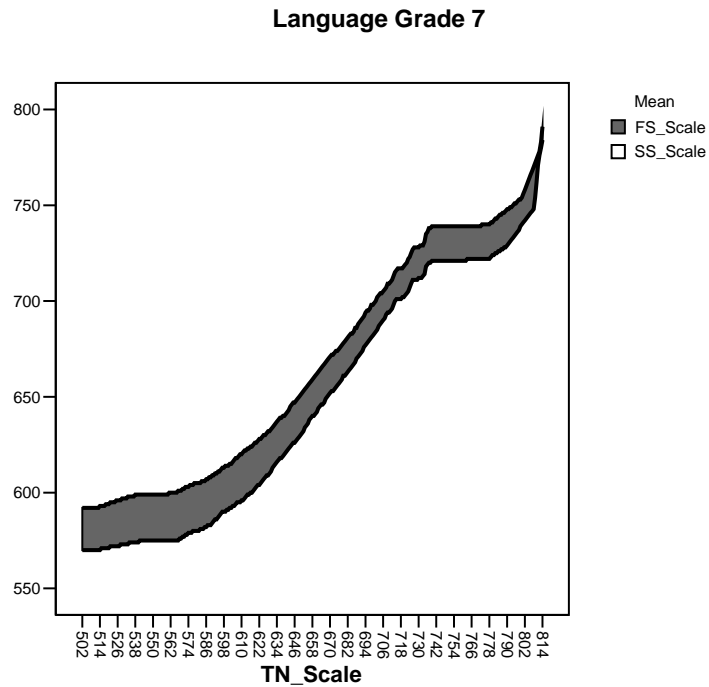
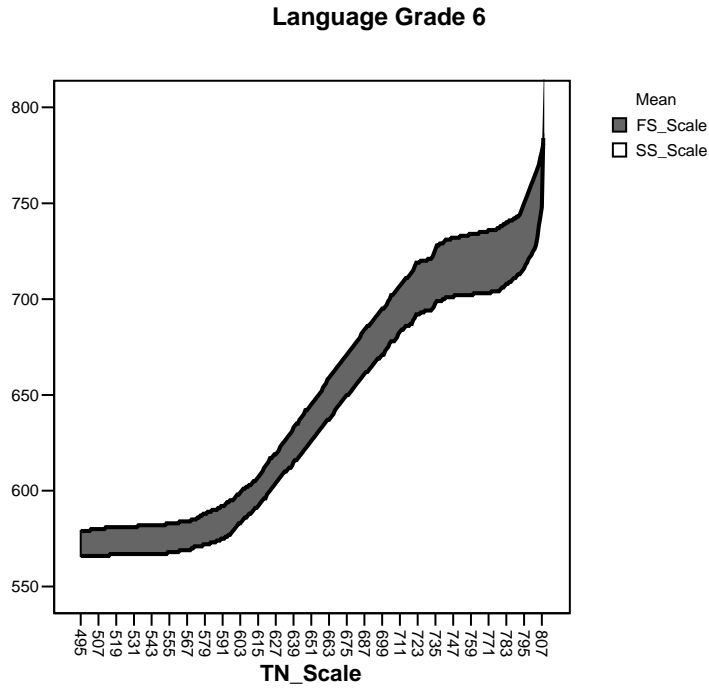


Figure F 44
Fall and Spring SAT/9 scale scores across TN scale scores
Language Grades 8 - 9

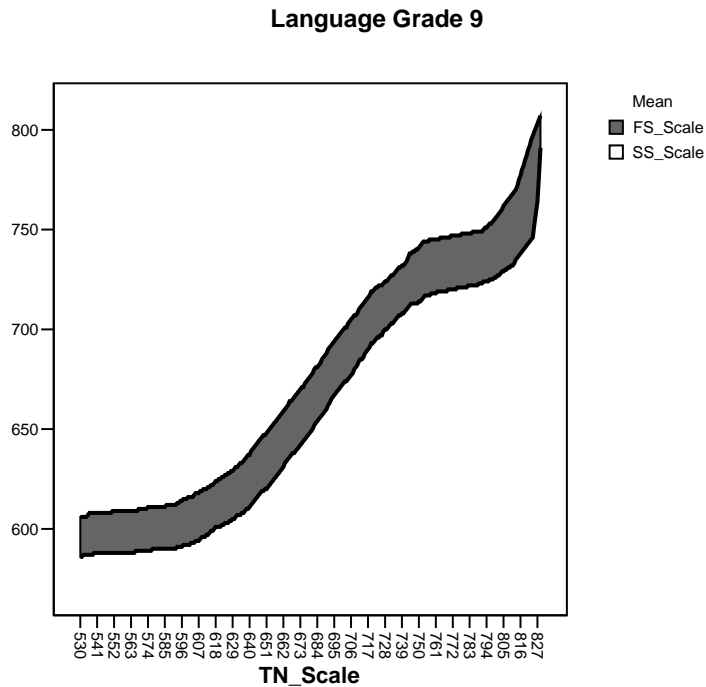
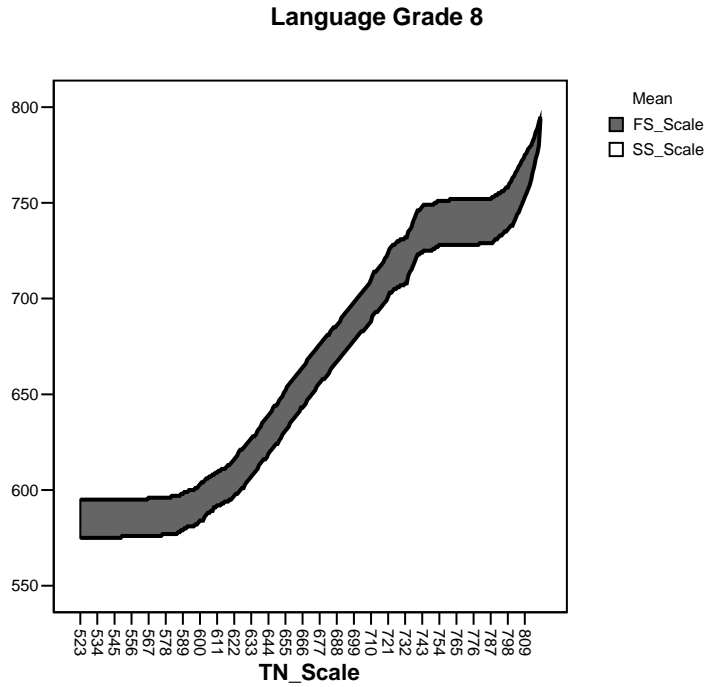


Figure F 45
Fall and Spring SAT/9 scale scores across TN scale scores
Mathematics Grades 2 - 3

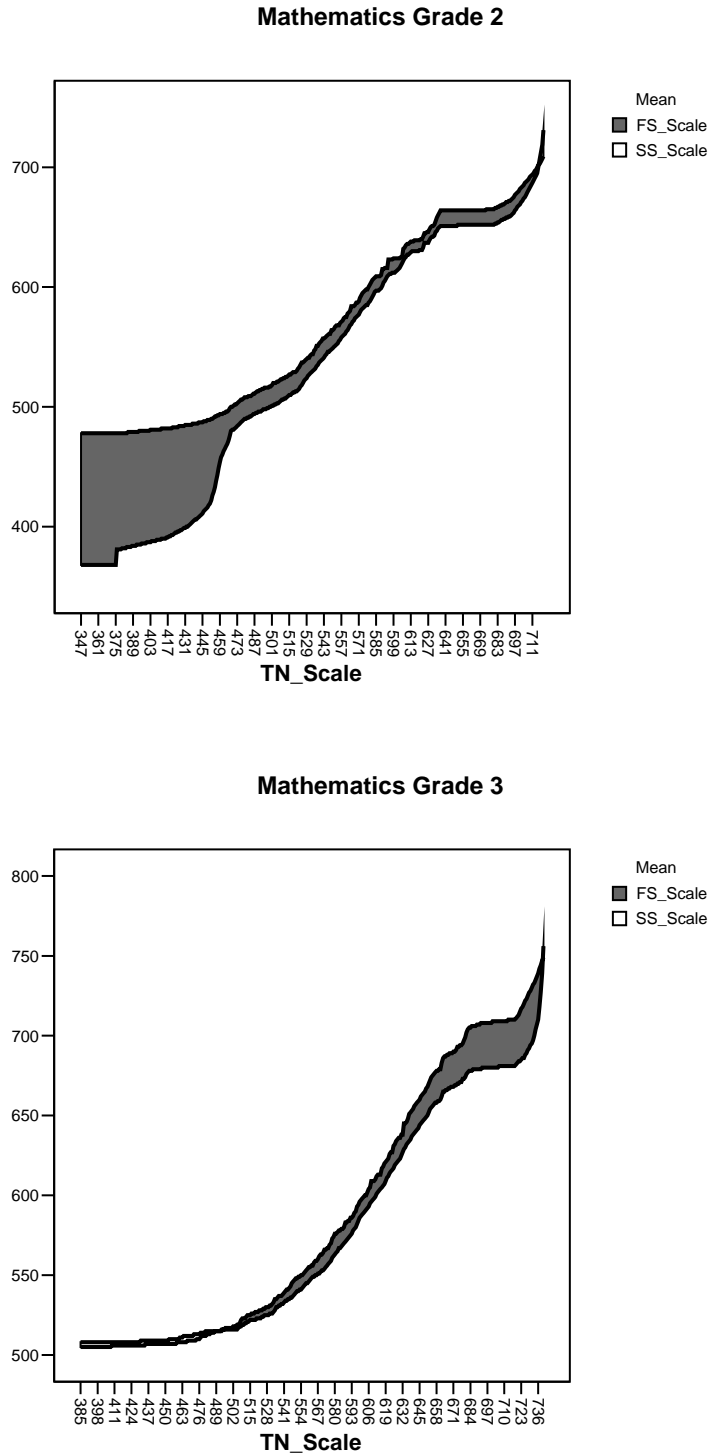


Figure F 46
Fall and Spring SAT/9 scale scores across TN scale scores
Mathematics Grades 4 - 5

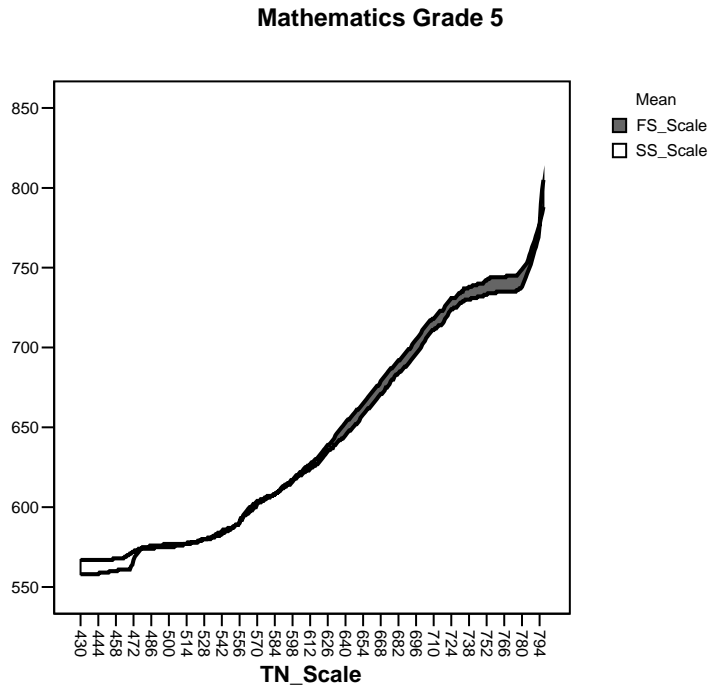
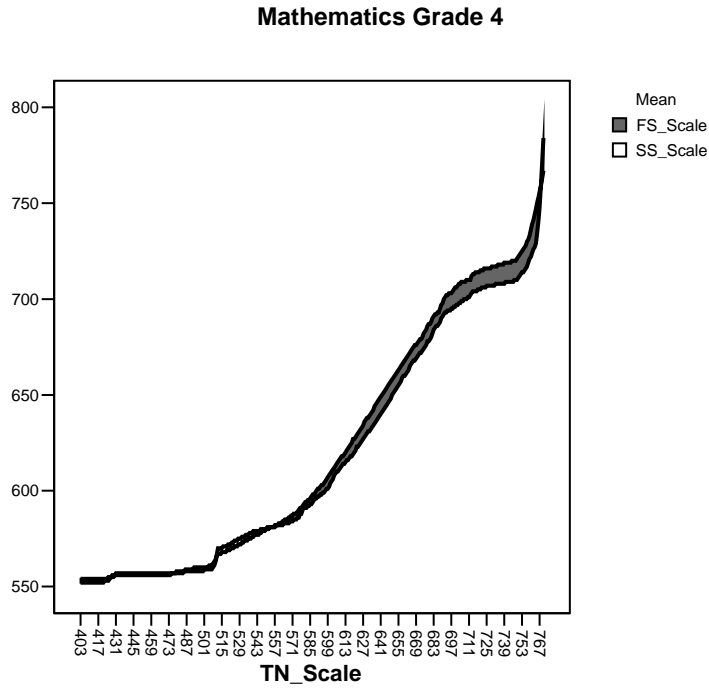


Figure F 47
Fall and Spring SAT/9 scale scores across TN scale scores
Mathematics Grades 6 - 7

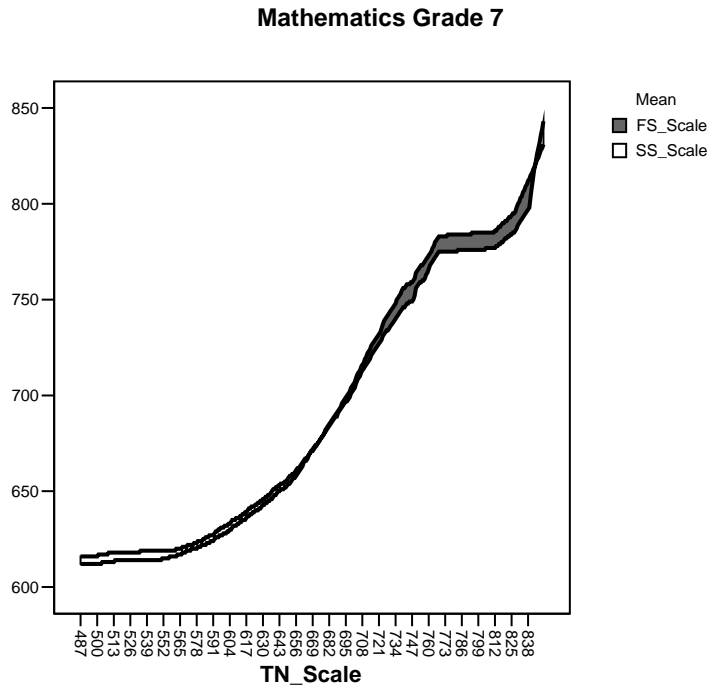
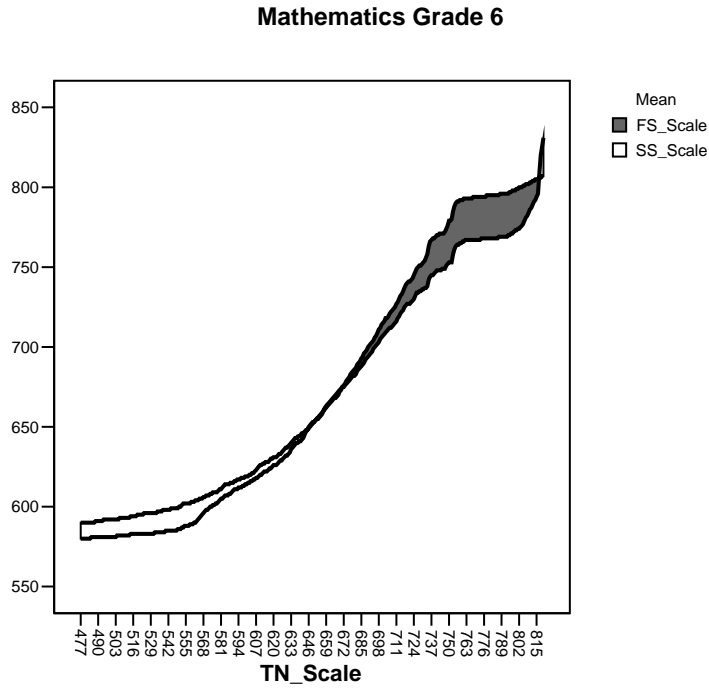


Figure F 48
Fall and Spring SAT/9 scale scores across TN scale scores
Mathematics Grades 8 - 9

