Appendix A

Overview of Procedures Used for the NAEP 2003 Mathematics Assessment

This appendix provides an overview of the NAEP 2003 mathematics assessment's primary components — framework, development, administration, scoring, and analysis. A more extensive review of the procedures and methods used in the mathematics assessment will be included in the assessment procedure section of the NAEP web site (http://nces.ed.gov/nationsreportcard).

The NAEP 2003 Mathematics Assessment

The National Assessment Governing Board (NAGB), created by Congress in 1988, is responsible for formulating policy for NAEP. NAGB is specifically charged with developing assessment objectives and test specifications. The mathematics framework used for the 2003 assessment had its origins in a framework developed for the 1990 mathematics assessment under contract with the Council of Chief State School Officers (CCSSO). The CCSSO project considered objectives and frameworks for mathematics instruction at the state, district, and school levels. The project also examined curricular frameworks on which previous NAEP assessments were based, consulted with leaders in mathematics education, and considered a draft version of the National Council of Teachers of Mathematics (NCTM) *Curriculum and Evaluation Standards for School Mathematics.*[1] This project resulted in a

[1] National Council of Teachers of Mathematics. (1989). *Curriculum and Evaluation Standards for School Mathematics.* Reston, VA: Author.

"content-by-ability" matrix design used to guide both the NAEP 1990 and 1992 mathematics assessments. The design was reported in *Mathematics Objectives: 1990 Assessment*.[2]

Prior to 1990, mathematics was assessed based on an earlier framework, which also was used to develop NAEP long-term trend assessments. Because the long-term trend assessments all use the same test booklets, it is possible to compare students' performance across many assessment years. However, the NAEP main mathematics assessment that was administered in 2003 is comparable only to the other assessments based on the 1990 framework—1990, 1992, 1996, and 2000.

The 1996 assessment was based on the first update of the NAEP 1990 mathematics framework since the release of the NCTM *Curriculum and Evaluation Standards for School Mathematics* in 1989.[3] This update was conducted by the College Board and reflected refinements in the earlier framework specifications, while ensuring comparability of results across the 1990, 1992, and 1996 assessments. Since the 2003 framework is the same as the 1996 update, the assessment results from 1990 to 2003 can be compared. The refinements that distinguish the framework used in the 1996, 2000, and 2003 assessments from the assessments conducted in 1990 and 1992 include the following:

- moving away from the rigid content-by-ability matrix (forcing items to be classified in cells of a matrix limited the possibility of assessing students' ability to reason in rich problem-solving situations and to make connections among the content areas);
- including the three achievement levels—*Basic*, *Proficient*, and *Advanced*—described in chapter 1 of this report;
- allowing individual questions to be classified in more than one content area (since the option to classify questions in more than one content area provides greater opportunity to measure student ability in content settings that more closely approximate real-world situations);
- including the mathematics ability categories (conceptual understanding, procedural understanding, and problem solving) as well as the process goals (reasoning, communication, and connections) from the NCTM standards;
- including more constructed-response questions in the 1996, 2000, and 2003 assessments than were included in 1990 and 1992; and
- revisiting some of the content areas to make sure they reflect recent curricular emphases.

Figure A.1 describes the five content areas that constitute the NAEP mathematics assessment. These content areas apply to each of the three grades assessed by NAEP. The questions designed to test the various content areas at a particular grade level tend to reflect the expectations normally associated with instruction at that grade level.

[2] National Assessment of Educational Progress. (1988). *Mathematics Objectives: 1990 Assessment*. Princeton, NJ: Author.

[3] National Assessment Governing Board. *Mathematics Framework for the 1996 National Assessment of Educational Progress*. Washington, DC: Author.

Figure A.1 Descriptions of the five NAEP mathematics content areas

Number Sense, Properties, and Operations	This content area focuses on students' understanding of numbers (whole numbers, fractions, decimals, integers, real numbers, and complex numbers), operations, and estimation, and their application to real-world situations. At grade 4, the emphasis is on the development of number sense through connecting various models to their numerical representations, and an understanding of the meaning of addition, subtraction, multiplication, and division. At grade 8, number sense is extended to include positive and negative numbers, as well as properties and operations involving whole numbers, fractions, decimals, integers, and rational numbers.
Measurement	This content area focuses on an understanding of the process of measurement and the use of numbers and measures to describe and compare mathematical and real-world objects. Students are asked to identify attributes, select appropriate units and tools, apply measurement concepts, and communicate measurement-related ideas. At grade 4, the focus is on time, money, temperature, length, perimeter, area, capacity, weight/mass, and angle measure. At grade 8, this content area includes these measurement concepts, but the focus shifts to more complex measurement problems that involve volume or surface area or that require students to combine shapes and to translate and apply measures. Eighth-grade students also solve problems involving proportional thinking (such as scale drawing or map reading) and do applications that involve the use of complex measurement formulas.
Geometry and Spatial Sense	This content area is designed to extend beyond low-level identification of geometric shapes to include transformations and combinations of those shapes. Informal constructions and demonstrations (including drawing representations) along with their justifications take precedence over more traditional types of compass-and-straightedge constructions and proofs. At grade 4, students are asked to model properties of shapes under simple combinations and transformations, and to use mathematical communication skills to draw figures from verbal descriptions. At grade 8, students are asked to expand their understanding to include properties of angles and polygons. They are also asked to apply reasoning skills to make and validate conjectures about transformations and combinations of shapes.
Data Analysis, Statistics, and Probability	This content area emphasizes the appropriate methods for gathering data, the visual exploration of data, various ways of representing data, and the development and evaluation of arguments based on data analysis. At grade 4, students are asked to apply their understanding of numbers and quantities by solving problems that involve data. Fourth graders are asked to interact with a variety of graphs, to make predictions from data and explain their reasoning, to deal informally with measures of central tendency, and to use the basic concepts of chance in meaningful contexts. At grade 8, students are asked to analyze statistical claims and to design experiments, and they are asked to use simulations to model real-world situations. This content area focuses on eighth graders' basic understanding of sampling, their ability to make predictions based on experiments or data, and their ability to use some formal terminology related to probability, data analysis, and statistics.
Algebra and Functions	This content area extends from work with simple patterns at grade 4 to basic algebra concepts at grade 8. The grade 4 assessment involves informal demonstration of students' abilities to generalize from patterns, including the justification of their generalizations. Students are expected to translate between mathematical representations, to use simple equations, and to do basic graphing. At grade 8, the assessment includes more algebraic notation, stressing the meaning of variables and an informal understanding of the use of symbolic representations in problem-solving contexts. Students are asked to use variables to represent a rule underlying a pattern. Eighth graders are asked to demonstrate a beginning understanding of equations and functions and the ability to solve simple equations and inequalities.

SOURCE: National Assessment Governing Board. (2002). *Mathematics Framework for the 2003 National Assessment of Educational Progress.* Washington, DC: Author.

The assessment framework specifies not only the particular areas that should be assessed, but also the percentage of the assessment questions that should be devoted to each of the content areas. The target percentage distribution for content areas as specified in the framework is presented in table A.1. The distribution of items among the content areas is a critical feature of the assessment design, since it reflects the relative importance and value given to each.

The target percentages at eighth grade differ from those at fourth grade because of a shift in curricular emphasis. For example, in grade 4 there is more emphasis on number sense, properties, and operations than on algebra and functions. In grade 8, the percentage of algebra and functions items increases, and the percentage of number sense, properties, and operations items decreases. The actual content of the assessment is close to the targeted distribution.

Table A.1 Target percentage distribution of items, by content area and grade: 1990–2003

Grades 4 and 8	Grade 4		Grade 8	
	1990 and 1992	1996–2003	1990 and 1992	1996–2003
Number sense, properties, and operations	45	40	30	25
Measurement	20	20	15	15
Geometry and spatial sense	15	15	20	20
Data analysis, statistics, and probability	10	10	15	15
Algebra and functions	10	15	20	25

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

The Assessment Design

Each student who participated in the NAEP 2003 mathematics assessment received a booklet containing four sections: two sets of cognitive questions, a set of general background questions, and a set of subject-specific background questions. Assessments for each grade consisted of 10 sets of cognitive questions or "blocks." Some items from the 1990, 1992, 1996, and 2000 assessments were carried forward to 2003 to allow for the measurement of trends across time. Two new blocks were developed for the 2003 assessment as specified by the updated framework.

Three types of questions are used in the assessment: multiple-choice, short constructed-response, and extended constructed-response. Table A.2 shows the distribution of questions administered from 1990 to 2003 by type for each grade level. The total number of questions administered has varied somewhat across the assessment years due to the inclusion of special study blocks in certain years. The number of questions used in the main scaling, however, has remained relatively consistent.

Table A.2 Distribution of questions administered, by question type and grade: 1990–2003

Grades 4 and 8	Grade 4					Grade 8				
	1990	1992	1996	2000	2003	1990	1992	1996	2000	2003
Multiple-choice	102	99	81	87	114	149	118	102	100	129
Short constructed-response	41	59	64	50	59	42	65	69	51	58
Extended constructed-response	†	5	13	8	8	†	6	12	9	10
Total	**143**	**163**	**158**	**145**	**181**	**191**	**189**	**183**	**160**	**197**

† Not applicable. No extended constructed-response questions were included in the 1990 assessment.
NOTE: Short constructed-response questions included in the 1990 and 1992 assessments were scored dichotomously. New short constructed-response questions included in the 1996, 2000, and 2003 assessments were scored to allow for partial credit.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

The assessment design allowed maximum coverage of mathematics abilities at each grade, while minimizing the time burden for any one student. This was accomplished through the use of matrix sampling of items in which representative samples of students took various portions of the entire pool of assessment questions. Individual students are required to take only a small portion of the assessment, but the aggregate results across the entire assessment allow broad reporting of mathematics abilities for the targeted population.

In addition to matrix sampling, the assessment design used a procedure for distributing blocks across booklets that controlled for position and context effects. Students received different blocks of questions in their booklets according to a procedure that assigned blocks of questions balancing the positioning of blocks across booklets and balancing the pairing of blocks within booklets. Also, every block of questions was paired with every other block. The procedure also cycles the booklets for administration so that, typically, only a few students in any assessment session receive the same booklet.

In addition to the student assessment booklets, three other instruments provided data relating to the assessment: a teacher questionnaire, a school questionnaire, and a questionnaire for students with disabilities (SD) and limited-English-proficient (LEP) students. The teacher questionnaire was administered to the mathematics teachers of the fourth- and eighth-grade students participating in the assessment. The questionnaire took approximately 20 minutes to complete and focused on the teacher's general background and experience, the teacher's background related to mathematics, and classroom information about mathematics instruction.

The school questionnaire was given to the principal or other administrator in each participating school and took about 20 minutes to complete. The questions asked about school policies, programs, facilities, and the demographic composition and background of the students and teachers at the school.

The SD/LEP questionnaire was completed by a school staff member knowledgeable about those students selected to participate in the assessment who were identified as having an Individualized Education Program (IEP) or equivalent plan (for reasons other than being gifted

or talented) or having limited English proficiency. An SD/LEP questionnaire was completed for each identified student regardless of whether the student participated in the assessment. Each SD/LEP questionnaire took approximately three minutes to complete and asked about the student and the special-education programs in which he or she participated.

NAEP Samples

National Sample

The national results presented in this report are based on nationally representative probability samples of fourth- and eighth-grade students. The 2003 national sample consisted of the combined sample of public-school students assessed in each state and an additional nonpublic school sample. This represents a change from earlier assessments in which the national and state samples were independent. The combined sample was chosen using a stratified two-stage design that involved sampling students from selected schools (public and nonpublic).

Each selected school that participated in the assessment and each student assessed represents a portion of the population of interest. Sampling weights are needed to make valid inferences between the student samples and the respective populations from which they were drawn. Sampling weights account for disproportionate representation of students from different states and for students who attend nonpublic schools. Sampling weights also account for lower sampling rates for very small schools and are used to adjust for school and student nonresponse.[4]

Unlike the 1996 and 2000 national assessments, which featured the collection of data from samples of students where assessment accommodations for special-needs students were not permitted and from samples of students where accommodations for special-needs students were permitted, the 2003 national assessment has only samples of students where accommodations were permitted. (See page 175 for information on the types of accommodations permitted.) NAEP inclusion rules were applied and accommodations were offered when a student had an Individualized Education Program (IEP) indicating the need for accommodation because of a disability, was protected under Section 504 of the Rehabilitation Act of 1973 because of disability (SD), was identified as being a limited-English-proficient student (LEP), and/or was normally offered accommodations in other assessment situations.[5] All other students were asked to participate in the assessment under standard conditions. Prior to 1996, testing accommodations (e.g., extended time, small group testing) were not permitted for special-needs students selected to participate in the NAEP mathematics assessments.

Table A.3 shows the number of students included in the national samples for the NAEP mathematics assessments at grades 4 and 8. The 2003 mathematics assessment had only one sample of students, for whom accommodations were permitted. For the 1996 and 2000 assessments, the table shows both the number of students in the sample in which accommodations were not permitted and

[4] Additional details regarding the design and structure of the national and state samples will be included in the technical documentation section of the NAEP web site (http://nces.ed.gov/nationsreportcard).

[5] Section 504 of the Rehabilitation Act of 1973 is a civil rights law designed to prohibit discrimination on the basis of disability in programs and activities, including education, that receive federal financial assistance.

the number of students in the sample in which accommodations were permitted. The table shows that the same non-SD/LEP students were included in both samples in 2000; only the SD and/or LEP students differed between the two samples. The 1996 design differed somewhat, in that the two samples did not include all the same non-SD/LEP students. Although there was some overlap, not all of the non-SD/LEP students were included in both samples, as was the case in 2000. The 1990 and 1992 design differed from more recent assessment years in that the SD and/or LEP students were assessed in standard conditions and accommodations were not permitted. The sample sizes and target populations for the 2003 mathematics assessment are listed for the nation and states in table A.4 and for the participating districts in table A.5.

Table A.3 Number of students assessed, by sample type, special needs status, and accommodation option, grades 4 and 8: 1990–2003

	1990	1992	1996		2000		2003
	Accommodations not permitted sample	Accommodations not permitted sample	Accommodations not permitted sample	Accommodations permitted sample	Accommodations not permitted sample	Accommodations permitted sample	Accommodations permitted sample
Grade 4							
Total students assessed	3,423	7,176	6,627	6,915	13,511	13,855	190,147
Non-SD/LEP [1] students assessed	–	6,906	6,351	6,399	12,970[2]		156,886
SD/LEP students assessed without accommodations	–	270	276	286	541	590	16,321
SD/LEP students assessed with accommodations	†	†	†	230	†	295	16,940
Grade 8							
Total students assessed	3,431	7,663	7,146	7,114	15,694	15,930	153,189
Non-SD/LEP [1] students assessed	–	7,364	6,921	6,574	14,778[2]		131,386
SD/LEP students assessed without accommodations	–	299	225	357	916	802	10,747
SD/LEP students assessed with accommodations	†	†	†	183	†	350	11,056

– Not available. Data on participation of SD/LEP students are not available for 1990.
† Not applicable. Accommodations were not permitted in this sample.
[1] SD/LEP = students with disabilities/limited-English-proficient students.
[2] The same non-SD/LEP students were included in both samples in 2000.
NOTE: The sample sizes are larger in 2003 than in previous years because the 2003 national sample was based on the combined sample of students assessed in each participating state, plus an additional sample from nonpublic schools.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table A.4 National and state sample sizes and target populations, grades 4 and 8: 2003

	Grade 4		Grade 8	
	Sample size	Target population	Sample size	Target population
Combined national	197,291	3,989,000	159,099	3,938,000
Public	191,439	3,603,000	153,488	3,575,000
Nonpublic	4,727	378,000	5,085	360,000
State				
Alabama	3,617	59,000	2,622	55,000
Alaska	2,855	9,000	2,572	9,000
Arizona	4,149	74,000	2,833	72,000
Arkansas	3,351	35,000	2,637	35,000
California	8,815	482,000	5,689	445,000
Colorado	3,545	57,000	2,814	56,000
Connecticut	3,359	44,000	2,822	42,000
Delaware	3,372	9,000	2,730	9,000
Florida	3,751	192,000	2,567	170,000
Georgia	5,464	114,000	4,338	110,000
Hawaii	3,733	14,000	2,941	14,000
Idaho	3,459	18,000	2,730	19,000
Illinois	5,292	150,000	4,373	149,000
Indiana	3,746	81,000	2,727	75,000
Iowa	3,344	35,000	3,006	39,000
Kansas	3,097	32,000	3,031	36,000
Kentucky	3,567	47,000	2,971	50,000
Louisiana	3,008	55,000	2,491	52,000
Maine	2,989	15,000	2,992	17,000
Maryland	3,624	63,000	2,524	64,000
Massachusetts	4,671	73,000	3,958	75,000
Michigan	3,941	130,000	2,793	131,000
Minnesota	3,649	60,000	2,713	65,000
Mississippi	3,446	39,000	2,765	36,000
Missouri	3,628	69,000	2,850	67,000
Montana	2,969	11,000	2,693	12,000
Nebraska	2,837	21,000	2,569	21,000
Nevada	3,488	28,000	2,718	26,000
New Hampshire	3,329	16,000	2,944	17,000
New Jersey	3,511	98,000	2,882	104,000
New Mexico	3,046	25,000	3,317	24,000
New York	4,586	218,000	3,633	218,000
North Carolina	5,128	99,000	4,269	104,000
North Dakota	3,123	8,000	2,726	8,000
Ohio	5,056	145,000	3,792	143,000
Oklahoma	3,326	45,000	2,931	46,000
Oregon	3,463	41,000	2,764	41,000
Pennsylvania	3,560	132,000	2,823	139,000
Rhode Island	3,313	12,000	2,767	12,000
South Carolina	3,679	50,000	2,685	54,000
South Dakota	3,397	9,000	2,893	10,000
Tennessee	3,717	72,000	2,698	68,000
Texas	6,139	314,000	4,780	331,000
Utah	3,841	35,000	2,801	35,000
Vermont	2,970	7,000	2,737	8,000
Virginia	3,741	94,000	2,985	93,000
Washington	3,897	75,000	2,690	75,000
West Virginia	2,897	20,000	2,442	20,000
Wisconsin	3,258	61,000	2,678	65,000
Wyoming	2,813	6,000	2,757	7,000
Other jurisdictions				
District of Columbia	2,883	6,000	2,025	5,000
DDESS [1]	1,339	3,000	725	2,000
DoDDS [2]	2,812	6,000	2,284	5,000

[1]Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2]Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table A.5 District sample sizes and target populations, grades 4 and 8: 2003

	Grade 4		Grade 8	
	Sample size	Target population	Sample size	Target population
Atlanta	1,655	5,000	1,533	4,000
Boston	1,596	5,000	1,363	5,000
Charlotte	1,838	9,000	1,427	8,000
Chicago	2,421	33,000	2,109	29,000
Cleveland	1,902	6,000	1,268	5,000
District of Columbia	2,883	6,000	2,025	5,000
Houston	2,510	17,000	1,845	12,000
Los Angeles	3,073	59,000	1,975	47,000
New York City	2,448	78,000	1,799	74,000
San Diego	1,787	11,000	1,292	10,000

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Table A.6 provides a summary of the 2003 national school and student participation rates for the mathematics assessment sample. Participation rates are presented for public and nonpublic schools, both individually and combined. Four different rates are presented. The first rate is a student-centered, weighted percentage of schools participating in the assessment, before substitution of demographically similar schools.[6] This rate is based only on the schools that were initially selected for the assessment. The numerator of this rate is the estimated number of students represented by the initially selected schools that participated in the assessment. The denominator is the estimated number of students represented by the initially selected schools that had eligible students enrolled.

[6] The initial base sampling weights were used in weighting the percentages of participating schools and students. An attempt was made to preselect one substitute school for each sampled public school, one for each sampled Catholic school, and one for each sampled nonpublic school (other than Catholic). To minimize bias, a substitute school resembled the original selection as much as possible in affiliation, type of location, estimated number of grade-eligible students, and minority composition.

The second school participation rate is a student-centered, weighted participation rate after substitution. The numerator of this rate is the estimated number of students represented by the participating schools, whether originally selected or selected as a substitute for a school that chose not to participate. The denominator is the estimated number of students represented by the initially selected schools that had eligible students enrolled (this is the same as that for the weighted participation rate for the sample of schools before substitution). Because of the common denominators, the weighted participation rate after substitution is at least as great as the weighted participation rate before substitution.

The third school participation rate is a school-centered, weighted percentage of schools participating in the assessment before substitution of demographically similar schools. This rate is based only on the schools that were initially selected for the assessment. The numerator of this rate is the estimated number of schools represented by the initially selected schools that participated in the assessment. The denominator is the estimated number of schools represented by the initially selected schools that had eligible students enrolled.

The fourth school participation rate is a school-centered weighted participation rate after substitution. The numerator is the estimated number of schools represented by the participating schools, whether originally selected or selected as a substitute for a school that did not participate. The denominator is the estimated number of schools, represented by the initially selected schools that had eligible students enrolled.

The student-centered and school-centered school participation rates differ if school participation is associated with the size of the school. If the student-centered rate is higher than the school-centered rate, this indicates that larger schools participated at a higher rate than smaller schools. If the student-centered rate is lower, smaller schools participated at a higher rate than larger schools.

Also presented in table A.6 are weighted student participation rates. Some students sampled for NAEP are not assessed because they cannot meaningfully participate. The numerator of this rate is the estimated number of students who are represented by the students assessed (in either an initial session or a makeup session). The denominator of this rate is the estimated number of students represented by the eligible sampled students in participating schools.

Table A.6 National school and student participation rates, by type of school, grades 4 and 8: 2003

	School participation					Student participation	
	Student-centered weighted		School-centered weighted				
	Percentage before substitution	Percentage after substitution	Percentage before substitution	Percentage after substitution	Number of schools participating	Student weighted percentage	Number of students assessed
Grade 4							
Combined national	98	98	92	93	7,488	94	190,147
Public	100	100	100	100	6,914	94	184,325
Nonpublic	79	80	74	76	539	95	4,718
Grade 8							
Combined national	97	98	90	91	6,095	92	153,189
Public	100	100	100	100	5,527	91	147,600
Nonpublic	74	76	75	78	558	95	5,073

NOTE: The number of schools and students in the combined national total at grades 4 and 8 includes students in the Department of Defense domestic schools located within the U.S. and Bureau of Indian Affairs schools that are not included as part of either the public or nonpublic totals.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

State Samples

The results provided in this report of the 2003 state assessment in mathematics are based on state-level samples of fourth- and eighth-grade public-school students. The samples were selected using a two-stage sample design that first selected schools within each state or other jurisdiction and then selected students within schools. The samples were weighted to allow valid inferences about the populations of interest. Participation rates for the states and other jurisdictions were calculated the same way that rates were computed for the nation. Tables A.7 and A.8 contain the unweighted number of participating schools and students, as well as weighted school and student participation rates for the state samples at grades 4 and 8, respectively.

District Samples

Results from the 2003 mathematics assessments are also reported (on a trial basis) for district-level samples of fourth- and eighth-grade students in the large urban school districts that participated in the Trial Urban District Assessment (TUDA)—Atlanta, Boston, Charlotte, Chicago, Cleveland, Houston, Los Angeles, New York City, and San Diego. The sample of students in the urban school districts represents an augmentation of the sample of students who would usually be selected as part of state samples. These samples allow reliable subgroup reporting in these districts. Furthermore, all students at "lower" geographic sampling levels are assumed to be part of "higher-level" samples. For example, Houston is one of the urban districts included in the TUDA. Data from students tested in the Houston sample were used to report results for Houston, but also contributed to the Texas and national estimates. Participation rates for the urban district samples are presented in table A.9.

Table A.7 School and student participation rates, grade 4 public schools: By state, 2003

Grade 4	School participation					Student participation	
	Student-centered weighted		School-centered weighted				
	Percentage before substitution	Percentage after substitution	Percentage before substitution	Percentage after substitution	Number of schools participating	Student weighted percentage	Number of students assessed
Nation (public)	100	100	100	100	6,914	94	184,325
Alabama	100	100	100	100	112	95	3,559
Alaska	99	99	97	97	154	95	2,825
Arizona	100	100	99	99	121	92	3,952
Arkansas	100	100	100	100	119	95	3,273
California	99	99	99	99	253	94	8,544
Colorado	100	100	100	100	124	96	3,460
Connecticut	99	99	99	99	110	95	3,221
Delaware	99	99	99	99	88	94	3,124
Florida	100	100	100	100	106	93	3,615
Georgia	100	100	100	100	156	95	5,372
Hawaii	100	100	100	100	107	95	3,629
Idaho	100	100	100	100	124	95	3,394
Illinois	100	100	100	100	174	94	5,000
Indiana	100	100	100	100	111	94	3,666
Iowa	100	100	98	98	136	96	3,238
Kansas	100	100	100	100	137	95	3,041
Kentucky	100	100	100	100	121	95	3,451
Louisiana	100	100	100	100	110	96	2,917
Maine	100	100	100	100	150	94	2,879
Maryland	100	100	100	100	108	94	3,470
Massachusetts	100	100	100	100	165	94	4,499
Michigan	100	100	100	100	136	95	3,784
Minnesota	100	100	98	98	113	95	3,551
Mississippi	100	100	100	100	111	94	3,241
Missouri	100	100	100	100	126	94	3,495
Montana	100	100	97	97	180	95	2,912
Nebraska	99	99	97	97	156	94	2,748
Nevada	100	100	100	100	111	93	3,315
New Hampshire	100	100	98	98	122	94	3,218
New Jersey	99	99	100	100	110	95	3,422
New Mexico	99	99	99	99	117	95	2,930
New York	100	100	100	100	149	92	4,308
North Carolina	100	100	100	100	153	95	4,912
North Dakota	100	100	100	100	209	97	3,066
Ohio	100	100	100	100	168	92	4,767
Oklahoma	100	100	100	100	137	96	3,199
Oregon	100	100	98	98	125	93	3,306
Pennsylvania	100	100	100	100	114	95	3,459
Rhode Island	100	100	100	100	114	93	3,201
South Carolina	100	100	100	100	106	95	3,438
South Dakota	100	100	98	98	187	96	3,342
Tennessee	100	100	100	100	116	94	3,615
Texas	100	100	100	100	197	96	5,653
Utah	100	100	98	98	113	94	3,733
Vermont	99	99	99	99	177	93	2,840
Virginia	100	100	100	100	116	95	3,497
Washington	100	100	100	100	109	96	3,769
West Virginia	100	100	100	100	137	94	2,810
Wisconsin	100	100	100	100	127	95	3,136
Wyoming	100	100	99	99	170	95	2,781
Other jurisdictions							
District of Columbia	100	100	100	100	118	94	2,748
DDESS[1]	99	99	98	98	39	96	1,313
DoDDS[2]	99	99	98	98	87	96	2,777

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table A.8 School and student participation rates, grade 8 public schools: By state, 2003

Grade 8	School participation					Student participation	
	Student-centered weighted		School-centered weighted				
	Percentage before substitution	Percentage after substitution	Percentage before substitution	Percentage after substitution	Number of schools participating	Student weighted percentage	Number of students assessed
Nation (public)	100	100	100	100	5,527	91	147,600
Alabama	100	100	100	100	104	93	2,563
Alaska	99	99	94	94	100	92	2,545
Arizona	100	100	100	100	118	89	2,713
Arkansas	100	100	100	100	109	93	2,582
California	99	99	99	99	188	91	5,512
Colorado	100	100	100	100	114	93	2,757
Connecticut	100	100	100	100	104	91	2,698
Delaware	100	100	100	100	37	89	2,455
Florida	99	99	98	98	97	91	2,483
Georgia	100	100	100	100	117	93	4,246
Hawaii	100	100	99	99	66	93	2,824
Idaho	100	100	100	100	91	92	2,708
Illinois	100	100	100	100	170	93	4,122
Indiana	100	100	100	100	99	93	2,656
Iowa	99	99	97	97	116	95	2,932
Kansas	100	100	100	100	126	94	2,934
Kentucky	100	100	100	100	113	93	2,833
Louisiana	100	100	100	100	96	93	2,370
Maine	100	100	100	100	108	93	2,861
Maryland	92	92	93	93	96	89	2,406
Massachusetts	99	99	99	99	131	91	3,773
Michigan	100	100	100	100	111	91	2,652
Minnesota	100	100	100	100	105	92	2,645
Mississippi	100	100	100	100	108	92	2,625
Missouri	100	100	100	100	116	93	2,735
Montana	98	98	96	96	131	93	2,643
Nebraska	100	100	98	98	126	94	2,469
Nevada	100	100	100	100	67	88	2,646
New Hampshire	100	100	100	100	84	91	2,829
New Jersey	99	99	99	99	107	91	2,810
New Mexico	100	100	100	100	97	92	3,217
New York	100	100	100	100	148	85	3,422
North Carolina	100	100	100	100	132	93	4,093
North Dakota	100	100	100	100	144	96	2,684
Ohio	100	100	100	100	129	90	3,523
Oklahoma	100	100	100	100	129	93	2,855
Oregon	100	100	100	100	109	91	2,671
Pennsylvania	100	100	100	100	103	93	2,776
Rhode Island	100	100	100	100	54	89	2,669
South Carolina	100	100	100	100	98	93	2,471
South Dakota	100	100	100	100	137	95	2,839
Tennessee	100	100	100	100	108	92	2,610
Texas	100	100	100	100	146	92	4,398
Utah	100	100	96	96	94	91	2,726
Vermont	98	98	98	98	104	89	2,650
Virginia	100	100	100	100	107	92	2,776
Washington	100	100	100	100	103	92	2,629
West Virginia	100	100	100	100	95	93	2,365
Wisconsin	100	100	100	100	105	92	2,591
Wyoming	100	100	100	100	89	91	2,720
Other jurisdictions							
District of Columbia	100	100	100	100	38	88	1,888
DDESS[1]	99	99	93	93	14	96	709
DoDDS[2]	99	99	96	96	54	96	2,256

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table A.9 Weighted school and student participation rates, grades 4 and 8 public schools: By urban district, 2003

	School participation		Student participation	
	Student weighted percentage before substitution	Number of schools participating	Student weighted percentage[1]	Number of students assessed
Grade 4				
Atlanta	100	50	95	1,640
Boston	100	59	95	1,515
Charlotte	100	51	95	1,761
Chicago	100	83	92	2,225
Cleveland	100	56	91	1,749
District of Columbia	100	118	94	2,748
Houston	100	80	93	2,303
Los Angeles	100	83	95	2,978
New York City	100	79	92	2,284
San Diego	100	55	94	1,739
Grade 8				
Atlanta	100	16	92	1,501
Boston	100	34	93	1,264
Charlotte	100	29	92	1,372
Chicago	100	83	93	1,956
Cleveland	100	35	78	1,125
District of Columbia	100	38	88	1,888
Houston	100	38	91	1,684
Los Angeles	100	67	90	1,921
New York City	100	77	80	1,694
San Diego	100	28	90	1,239

[1] The student weighted participation rate is calculated as follows: The numerator of this rate is the estimated number of students who are represented by the students assessed. The denominator of this rate is the estimated number of students represented by the eligible sampled students in participating schools.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Standards for State Sample Participation and Reporting of Results

In carrying out the 2003 state assessment program, NAEP established participation rate standards that jurisdictions were required to meet in order for their results to be reported. Participation rates before substitution needed to be at least 80 percent for schools and at least 85 percent for students. In the 2003 mathematics assessment, at both the fourth and eighth grades, all jurisdictions met NAEP participation rate standards.

The nonresponse bias analyses for nonpublic schools showed significant differences between responding and nonresponding schools in terms of reporting group, census region, and racial/ethnic composition of the schools. Nonresponse weighting adjustments have completely accounted for differences in reporting group, and largely accounted for differences in census region. These adjustments are unlikely to have fully accounted for differences in race/ethnicity.

Further information on the NCES guidelines used to report results in the state assessments, and the guidelines for notations when there was some risk of nonresponse bias in the reported results prior to the 2003 assessments, can be found in the NAEP 2000 mathematics report card (see appendix A, "Standards for Sample Participation and Reporting of Results").

Students with Disabilities (SD) and/or Limited-English-Proficient (LEP) Students

It is NAEP's intent to assess all selected students from the target population. Therefore, every effort is made to ensure that all selected students who are capable of participating in the assessment are assessed. Some students sampled for participation in NAEP can be excluded from the sample according to carefully defined criteria. These criteria were revised in 1996 to communicate more clearly a presumption of inclusion except under special circumstances. According to these criteria, students who had an Individualized Education Program (IEP) or were protected under Section 504 of the Rehabilitation Act of 1973 were to be included in the NAEP assessment except in the following cases:

- the school's IEP team determined that the student could not participate,
- the student's cognitive functioning was so severely impaired that she or he could not participate,
- the student's IEP required that the student had to be tested with an accommodation or adaptation that NAEP does not allow and the student could not demonstrate his or her knowledge without that accommodation.

All LEP students who received academic instruction in English for three years or more were to be included in the assessment. Those LEP students who received instruction in English for fewer than three years were to be included unless school staff judged them to be incapable of participating in the assessment in English.

Participation of SD/LEP Students in the NAEP Samples

Testing all sampled students is the best way for NAEP to ensure that the statistics generated by the assessment are as representative as possible of the performance of the entire national population and the populations of participating jurisdictions. However, all groups of students include certain proportions that cannot be tested in large-scale assessments (such as students who have profound mental disabilities) or who can only be tested through the use of testing accommodations such as extra time, one-on-one administration, or use of magnifying equipment. Some students with disabilities and some LEP students cannot show on a test what they know and can do unless they are provided with accommodations. When such accommodations are not allowed, students requiring such adjustments are often excluded from large-scale assessments such as NAEP. This phenomenon has become more common in the last decade and gained momentum with the passage of the 1997 Individuals with Disabilities Education Act (IDEA), which led schools and states to identify increasing proportions of students as needing accommodations on assessments in order to best show what they know and can do.[7] Furthermore,

[7] Office of Special Education Programs. (1997). *To Assure the Free Appropriate Public Education of all Children with Disabilities. Nineteenth Annual Report to Congress on the Implementation of the Individuals With Disabilities Education Act.* Archived at the U.S. Department of Education web site: http://www.ed.gov/offices/OSERS/OSEP/Research/OSEP97AnlRpt/index.html

Section 504 of the Rehabilitation Act of 1973 requires that, when students with disabilities are tested, schools must provide them with appropriate accommodations so that the test results accurately reflect students' achievement. In addition, as the proportion of limited-English-proficient students in the population has increased, some states have started offering accommodations such as translations of assessments or the use of bilingual dictionaries as part of assessments.

Before 1996, NAEP did not allow any testing under nonstandard conditions (i.e., accommodations were not permitted). At that time, NAEP samples were able to include almost all sampled students in standard assessment sessions. However, as the influence of IDEA grew more widespread, the failure to provide accommodations led to increasing levels of exclusion in the assessment. Such increases posed two threats to the program: 1) they threatened the stability of trend lines (because excluding more students in one assessment year than in another might lead to apparent rather than real differences) and 2) they made NAEP samples less than optimally representative of target populations.

NAEP reacted to this challenge by adopting a multipart strategy. The program had to move toward allowing the same assessment accommodations that were afforded students in state and district testing programs in order for NAEP samples to be as inclusive as possible. However, allowing accommodations represents a change in testing conditions that may affect measurement of changes over time. Therefore, beginning with the 1996 national assessments and the 1998 state assessments and up to 2000, NAEP assessed a series of parallel samples of students. In one set of samples, testing accommodations were not permitted; this allowed NAEP to maintain the measurement of achievement trends. In addition to the samples where accommodations were not permitted, parallel samples in which accommodations were permitted were also assessed. By having two overlapping samples and two sets of related data points, NAEP could meet two core program goals.[8] First, data trends could be maintained. Second, parallel trend lines could be set in ways that ensure that in future years the program would be able to use the most inclusive practices possible and mirror the procedures used by most state and district assessments. Beginning with the 2002 reading assessment, NAEP has used only the more inclusive procedures, in which assessment accommodations are permitted. In mathematics, national and state data from 1990, 1992, 1996, and 2000 are reported for the sample in which accommodations were not permitted. National and state data for the sample in which accommodations were permitted are reported for 2000 and 2003. National-only data for the accommodated samples are reported for 1996.

In order to make it possible to evaluate both the impact of increasing exclusion rates in some jurisdictions and differences between jurisdictions, complete data on exclusion in all years are in-

[8] The two samples are described as "overlapping" because, in 2000, the same group of non-SD/non-LEP students were included in both samples.

cluded in this appendix. Since the exclusion rates may affect trend measurement within a jurisdiction, readers should consider the magnitude of exclusion rate changes when interpreting score changes in jurisdictions. In addition, different rates of exclusion may influence the meaning of state comparisons. Thus, exclusion data should be reviewed in this context as well.

Percentages of SD/LEP students for the national sample of public and nonpublic schools in which accommodations were not permitted are presented in table A.10. The data in this table include the percentages of students *identified* as SD/LEP, the percentage of SD/LEP students *excluded*, and the percentage of SD/LEP students *assessed*. Tables A.11 and A.12 show similar information by jurisdiction. Percentages of these students in the national sample where accommodations were permitted are presented in table A.13. The state and jurisdiction results where accommodations were permitted are shown in tables A.14 through A.19. The data in these tables include the percentages of students *identified* as SD and/or LEP, the percentage of SD/LEP students *excluded*, the percentage of SD/LEP students *assessed*, the percentage *assessed without accommodations*, (calculated as the percentage of all students sampled minus those who were excluded and those asssessed with accommodations), and the percentage *assessed with accommodations*. Similar information for districts that participated in the Trial Urban District Assessment is presented in table A.20 for grade 4 and table A.21 for grade 8.

In the 2003 national sample, 4 percent of SD/LEP students at grade 4 and 3 percent of SD/LEP students at grade 8 were excluded from the assessment (see table A.13). Across the various jurisdictions that participated in the 2003 state assessment, the percentage of SD/LEP students excluded ranged from 1 to 7 percent at grade 4 (see table A.14) and from 1 to 9 percent at grade 8 (see table A.17). At the district level, between 1 and 8 percent of SD/LEP students were excluded at grade 4 (see table A.20) and between 2 and 9 percent were excluded at grade 8 (see table A.21).

Table A.10 **Students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were not permitted, grades 4 and 8 public and nonpublic schools: 1992–2000**

	1992[1]		1996		2000	
	Number of students	Weighted percentage of all students sampled	Number of students	Weighted percentage of all students sampled	Number of students	Weighted percentage of all students sampled
Grade 4						
SD[2] and/or LEP[3] students						
Identified	2,020	9	480	14	1,031	15
Excluded	1,750	6	204	6	490	7
Assessed	270	3	276	8	541	8
SD students						
Identified	1,163	7	359	11	672	11
Excluded	990	4	153	5	380	5
Assessed	173	3	206	6	292	5
LEP students						
Identified	939	3	142	3	454	5
Excluded	835	2	67	1	189	2
Assessed	104	1	75	2	265	3
Grade 8						
SD[2] and/or LEP[3] students						
Identified	2,329	9	391	11	1,772	14
Excluded	2,030	6	166	4	856	7
Assessed	299	4	225	6	916	8
SD students						
Identified	1,538	7	310	9	1,316	11
Excluded	1,323	4	149	4	719	6
Assessed	215	3	161	5	597	5
LEP students						
Identified	838	2	106	3	551	4
Excluded	750	2	38	1	210	1
Assessed	88	1	68	2	341	2

[1] In 1992, the identified and excluded students were combined across subject areas. Although their weighted percentages are comparable to 1996 and 2000, the row numbers of students are not.
[2] Students with disabilities.
[3] Limited-English-proficient students.
NOTE: Detail may not sum to totals because of rounding. Within each grade level the combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions but counted only once in the top portion. SD/LEP information is not available at the national level in 1990.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, and 2000 Mathematics Assessments.

Table A.11 Percentage of students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were not permitted, grade 4 public schools: By state, 1992–2000

Grade 4	SD[1] and/or LEP[2] students								
	1992			1996			2000		
	Identified	Excluded	Assessed	Identified	Excluded	Assessed	Identified	Excluded	Assessed
Nation (public)	10	7	4	16	6	9	16	7	9
Alabama	10	5	6	12	6	5	13	6	7
Alaska	–	–	–	20	4	16	–	–	–
Arizona	15	5	10	21	12	9	25	12	13
Arkansas	12	5	6	10	7	3	14	7	7
California	28	12	16	33	16	17	33	9	24
Colorado	10	5	5	15	8	7	–	–	–
Connecticut	14	7	7	16	8	8	15	10	5
Delaware	12	5	6	14	7	7	–	–	–
Florida	17	8	8	19	10	9	–	–	–
Georgia	10	5	4	13	7	6	11	7	4
Hawaii	13	6	8	14	6	9	19	10	9
Idaho	9	3	6	–	–	–	16	6	10
Illinois	–	–	–	–	–	–	17	10	6
Indiana	7	3	4	11	5	6	11	7	5
Iowa	9	3	6	13	6	7	15	10	5
Kansas	–	–	–	–	–	–	16	7	9
Kentucky	8	3	5	10	6	4	12	8	3
Louisiana	8	4	4	14	8	7	16	8	8
Maine	14	6	8	15	8	7	16	10	6
Maryland	11	4	7	14	8	7	12	9	4
Massachusetts	18	7	11	18	9	9	19	10	9
Michigan	7	5	2	11	6	5	11	8	3
Minnesota	9	3	6	14	6	8	16	6	10
Mississippi	7	5	2	8	6	2	6	4	2
Missouri	12	4	7	14	5	9	15	10	6
Montana	–	–	–	10	5	5	12	5	7
Nebraska	13	4	8	15	5	10	18	8	10
Nevada	–	–	–	16	9	8	20	10	9
New Hampshire	12	4	8	–	–	–	–	–	–
New Jersey	11	6	6	11	6	5	–	–	–
New Mexico	15	7	8	22	12	10	31	12	19
New York	12	5	6	15	8	7	16	12	4
North Carolina	12	4	8	14	7	7	16	13	3
North Dakota	9	2	7	11	4	7	12	6	6
Ohio	10	6	4	–	–	–	12	10	2
Oklahoma	13	7	6	–	–	–	20	10	10
Oregon	–	–	–	19	9	10	18	8	11
Pennsylvania	9	4	5	9	5	4	–	–	–
Rhode Island	15	6	10	18	6	12	23	12	11
South Carolina	10	5	5	12	6	7	17	7	10
Tennessee	12	4	8	13	6	6	11	4	7
Texas	17	8	9	24	10	14	25	15	10
Utah	10	4	6	13	6	7	14	7	7
Vermont	–	–	–	14	6	8	15	11	5
Virginia	11	5	6	14	7	7	16	11	5
Washington	–	–	–	13	5	8	–	–	–
West Virginia	9	4	4	13	8	5	13	10	3
Wisconsin	11	5	5	12	8	4	19	12	8
Wyoming	10	4	7	13	4	9	15	6	9
Other jurisdictions									
District of Columbia	11	9	2	14	11	3	19	9	10
DDESS[3]	–	–	–	9	4	5	11	5	5
DoDDS[4]	–	–	–	10	5	5	11	5	6

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
[1] Students with disabilities.
[2] Limited-English-proficient students.
[3] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[4] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, and 2000 Mathematics Assessments.

Table A.12 Percentage of students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were not permitted, grade 8 public schools: By state, 1990–2000

Grade 8	SD[1] and/or LEP[2] students											
	1990			1992			1996			2000		
	Identified	Excluded	Assessed	Identified	Excluded	Assessed	Identified	Excluded	Assessed	Identified	Excluded	Assessed
Nation (public)	–	–	–	10	6	4	11	5	7	15	7	8
Alabama	9	5	4	10	5	5	13	7	6	14	5	9
Alaska	–	–	–	–	–	–	15	5	10	–	–	–
Arizona	12	5	7	12	6	7	17	9	8	19	9	10
Arkansas	11	7	3	11	6	5	11	7	4	14	8	5
California	15	7	8	20	8	12	20	10	10	27	9	18
Colorado	10	4	5	10	4	5	12	4	8	–	–	–
Connecticut	11	6	5	14	7	8	15	8	7	16	10	6
Delaware	9	4	5	10	4	6	13	9	4	–	–	–
Florida	11	6	5	13	6	7	16	10	6	–	–	–
Georgia	7	3	3	8	5	3	10	7	3	11	7	3
Hawaii	10	4	5	13	5	8	12	5	7	20	7	13
Idaho	6	2	4	7	3	4	–	–	–	14	5	9
Illinois	9	5	4	–	–	–	–	–	–	15	8	7
Indiana	7	5	2	9	5	4	12	6	7	12	7	5
Iowa	10	4	6	11	4	6	13	5	7	–	–	–
Kansas	–	–	–	–	–	–	–	–	–	14	6	8
Kentucky	7	5	3	9	5	4	9	5	5	14	9	4
Louisiana	6	4	2	7	4	3	10	6	4	13	6	7
Maine	–	–	–	11	4	6	12	5	7	15	9	6
Maryland	11	4	6	11	5	6	12	7	5	13	11	3
Massachusetts	–	–	–	18	8	9	17	8	9	19	12	7
Michigan	8	4	4	9	6	3	9	5	4	11	7	4
Minnesota	9	3	6	7	3	4	11	3	8	15	5	10
Mississippi	–	–	–	10	7	3	11	7	4	11	7	3
Missouri	–	–	–	11	4	6	12	7	5	15	9	6
Montana	6	2	4	–	–	–	9	3	6	12	5	6
Nebraska	9	3	6	10	4	6	12	4	8	13	3	10
Nevada	–	–	–	–	–	–	16	8	8	16	10	6
New Hampshire	12	4	8	12	5	7	15	4	11	–	–	–
New Jersey	12	7	5	14	7	7	13	7	6	–	–	–
New Mexico	9	6	3	12	5	7	18	8	10	25	12	14
New York	12	6	6	13	8	4	14	8	6	16	13	3
North Carolina	9	3	6	12	3	9	9	4	5	16	14	2
North Dakota	8	3	5	8	2	5	10	3	6	11	4	7
Ohio	8	5	3	10	6	4	–	–	–	11	9	3
Oklahoma	8	5	3	10	6	4	–	–	–	15	9	6
Oregon	8	3	5	–	–	–	12	4	8	17	6	11
Pennsylvania	10	5	5	9	4	5	–	–	–	–	–	–
Rhode Island	14	6	8	14	5	8	17	7	10	20	12	8
South Carolina	–	–	–	10	6	4	10	6	4	13	7	6
Tennessee	–	–	–	10	5	5	11	4	7	13	5	8
Texas	12	6	6	14	7	7	17	9	8	20	10	11
Utah	–	–	–	9	4	5	11	6	5	14	6	8
Vermont	–	–	–	–	–	–	12	4	8	17	10	7
Virginia	9	5	4	12	5	7	13	7	6	15	10	5
Washington	–	–	–	–	–	–	13	6	7	–	–	–
West Virginia	9	5	4	10	6	4	13	8	4	15	11	3
Wisconsin	8	4	4	10	4	6	12	7	5	17	10	7
Wyoming	8	3	5	9	4	5	10	2	8	13	4	9
Other jurisdictions												
District of Columbia	6	5	1	11	10	2	13	10	4	15	9	6
DDESS [3]	–	–	–	–	–	–	12	4	8	13	11	1
DoDDS [4]	–	–	–	–	–	–	7	3	4	8	3	4

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting. SD/LEP information was not available for national public schools in 1990.
[1] Students with disabilities.
[2] Limited-English-proficient students.
[3] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[4] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, and 2000 Mathematics Assessments.

Table A.13 Students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grades 4 and 8 public and nonpublic schools: 1996–2003

	1996		2000		2003	
	Number of students	Weighted percentage of students sampled	Number of students	Weighted percentage of students sampled	Number of students	Weighted percentage of students sampled
Grade 4						
SD [1] and/or LEP [2] students						
Identified	701	15	1131	18	40,405	21
Excluded	185	4	246	4	7,144	4
Assessed	516	11	885	14	33,261	17
Without accommodations	286	7	590	9	16,321	9
With accommodations	230	5	295	5	16,940	8
SD students						
Identified	424	10	706	12	27,626	13
Excluded	109	3	180	3	5,630	3
Assessed	315	7	526	9	21,996	10
Without accommodations	172	4	310	5	8,004	4
With accommodations	143	4	216	4	13,992	6
LEP students						
Identified	308	6	472	7	16,315	10
Excluded	86	1	87	1	2,473	1
Assessed	222	5	385	6	13,842	8
Without accommodations	114	3	297	4	9,504	6
With accommodations	108	2	88	1	4,338	2
Grade 8						
SD [1] and/or LEP [2] students						
Identified	758	12	1603	13	27,713	17
Excluded	218	3	451	4	5,910	3
Assessed	540	8	1152	10	21,803	14
Without accommodations	357	6	802	7	10,747	7
With accommodations	183	3	350	3	11,056	6
SD students						
Identified	557	9	1206	10	21,969	13
Excluded	183	3	402	3	4,958	3
Assessed	374	6	804	7	17,011	10
Without accommodations	227	4	523	5	7,075	4
With accommodations	147	2	281	2	9,936	6
LEP students						
Identified	226	3	471	4	8,007	6
Excluded	51	1	103	1	1,606	1
Assessed	175	2	368	3	6,401	5
Without accommodations	133	2	290	2	4,484	4
With accommodations	42	#	78	1	1,917	1

The estimate rounds to zero.
[1] Students with disabilities.
[2] Limited-English-proficient students.
NOTE: Detail may not sum to totals because of rounding. Within each grade level the combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions but counted only once in the top portion. The sample sizes are larger in 2003 than in previous years because the 2003 national sample was based on the combined sample of students assessed in each participating state, plus an additional sample from nonparticipating states as well as a sample of nonpublic schools.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Table A.14 Percentage of students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 4 public schools: By state, 2000 and 2003

Grade 4	2000 SD[1] and/or LEP[2] students					
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations	All students assessed without accommodations
Nation (public)	19	4	15	10	5	91
Alabama	13	3	10	7	3	94
Alaska	–	–	–	–	–	–
Arizona	25	4	21	12	9	87
Arkansas	14	4	10	6	4	92
California	33	6	27	19	8	86
Colorado	–	–	–	–	–	–
Connecticut	14	5	10	5	4	91
Delaware	–	–	–	–	–	–
Florida	–	–	–	–	–	–
Georgia	11	3	8	4	4	93
Hawaii	19	9	11	8	3	89
Idaho	16	2	13	7	7	91
Illinois	17	3	14	5	9	88
Indiana	11	2	9	3	6	91
Iowa	15	2	12	5	7	91
Kansas	16	3	13	9	4	93
Kentucky	12	3	9	4	5	92
Louisiana	16	3	13	2	11	86
Maine	16	5	12	5	7	89
Maryland	12	2	10	4	6	92
Massachusetts	19	3	17	7	10	87
Michigan	11	3	8	3	4	92
Minnesota	16	2	14	7	7	90
Mississippi	6	3	3	1	2	95
Missouri	15	3	13	5	8	90
Montana	12	2	11	5	6	93
Nebraska	18	3	15	10	4	92
Nevada	20	7	13	8	5	88
New Hampshire	–	–	–	–	–	–
New Jersey	–	–	–	–	–	–
New Mexico	31	6	26	16	10	85
New York	16	5	11	2	9	86
North Carolina	16	5	11	3	8	87
North Dakota	12	1	11	7	4	95
Ohio	12	5	7	2	5	90
Oklahoma	20	5	15	11	5	90
Oregon	18	3	16	8	8	90
Pennsylvania	–	–	–	–	–	–
Rhode Island	23	3	20	10	10	87
South Carolina	17	5	12	7	5	90
South Dakota	–	–	–	–	–	–
Tennessee	11	3	9	7	1	96
Texas	25	7	18	12	6	87
Utah	14	3	11	7	4	94
Vermont	15	3	13	4	9	89
Virginia	16	4	12	5	7	89
Washington	–	–	–	–	–	–
West Virginia	13	3	11	3	8	89
Wisconsin	19	5	14	7	8	87
Wyoming	15	2	13	8	6	92
Other jurisdictions						
District of Columbia	19	5	14	7	7	88
DDESS[3]	11	4	7	3	4	92
DoDDS[4]	11	2	9	5	4	94

See notes at end of table. ▶

Table A.14 Percentage of students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 4 public schools: By state, 2000 and 2003 —Continued

Grade 4	2003 SD[1] and/or LEP[2] students					
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations	All students assessed without accommodations
Nation (public)	22	4	18	10	8	88
Alabama	12	2	10	8	2	96
Alaska	31	1	30	20	10	89
Arizona	27	5	23	18	5	91
Arkansas	17	2	14	7	8	90
California	38	3	35	31	4	92
Colorado	20	2	17	7	11	87
Connecticut	16	4	12	5	8	89
Delaware	18	7	11	4	7	86
Florida	26	3	23	8	15	82
Georgia	16	2	14	6	7	91
Hawaii	17	3	14	5	8	89
Idaho	18	2	16	9	7	91
Illinois	23	4	18	7	11	85
Indiana	17	2	14	8	7	91
Iowa	18	3	15	4	11	86
Kansas	16	2	14	3	11	87
Kentucky	14	3	11	5	7	90
Louisiana	22	3	19	3	16	81
Maine	18	3	15	4	11	86
Maryland	16	4	12	6	6	90
Massachusetts	22	3	19	4	15	82
Michigan	15	4	11	5	6	90
Minnesota	18	3	16	8	7	90
Mississippi	10	5	5	4	1	93
Missouri	17	4	13	4	10	87
Montana	16	2	14	7	7	91
Nebraska	20	3	17	9	9	88
Nevada	26	4	22	14	8	88
New Hampshire	20	3	17	5	12	85
New Jersey	18	2	16	1	14	83
New Mexico	40	4	36	22	15	82
New York	19	5	14	2	11	83
North Carolina	21	4	17	5	12	84
North Dakota	18	2	16	8	7	91
Ohio	13	4	9	2	7	89
Oklahoma	22	4	18	10	8	88
Oregon	27	4	23	11	11	84
Pennsylvania	15	3	12	3	9	88
Rhode Island	27	3	24	9	15	82
South Carolina	18	6	12	7	4	89
South Dakota	18	1	16	9	7	91
Tennessee	14	3	11	7	5	93
Texas	27	7	20	14	6	87
Utah	21	3	19	11	7	90
Vermont	18	4	14	4	10	86
Virginia	19	6	13	5	8	86
Washington	19	3	16	8	8	89
West Virginia	15	3	12	3	9	88
Wisconsin	20	4	16	4	12	84
Wyoming	18	1	17	6	11	88
Other jurisdictions						
District of Columbia	18	4	14	4	10	86
DDESS[3]	14	2	13	4	9	89
DoDDS[4]	14	1	13	7	6	93

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
[1] Students with disabilities.
[2] Limited-English-proficient students.
[3] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[4] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table A.15 Percentage of students with disabilities identified, excluded, and assessed, when accommodations were permitted, grade 4 public schools: By state, 2000 and 2003

Grade 4	2000 SD[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	13	3	9	5	4
Alabama	13	3	9	7	3
Alaska	–	–	–	–	–
Arizona	11	3	8	4	4
Arkansas	12	4	8	5	4
California	8	3	5	4	1
Colorado	–	–	–	–	–
Connecticut	11	3	8	4	4
Delaware	–	–	–	–	–
Florida	–	–	–	–	–
Georgia	9	3	7	3	4
Hawaii	13	6	7	5	2
Idaho	12	1	11	5	6
Illinois	11	2	9	3	6
Indiana	10	2	8	3	5
Iowa	13	1	11	4	7
Kansas	12	3	9	5	4
Kentucky	11	3	8	3	5
Louisiana	15	3	13	2	11
Maine	15	4	11	4	7
Maryland	11	2	9	4	5
Massachusetts	14	1	14	5	9
Michigan	10	3	7	3	4
Minnesota	12	2	10	5	5
Mississippi	6	3	3	1	2
Missouri	14	2	12	5	7
Montana	12	2	10	5	6
Nebraska	15	2	13	9	4
Nevada	10	3	7	3	4
New Hampshire	–	–	–	–	–
New Jersey	–	–	–	–	–
New Mexico	15	5	10	5	5
New York	11	2	8	#	8
North Carolina	14	4	10	3	7
North Dakota	11	1	9	5	4
Ohio	12	4	7	2	5
Oklahoma	16	4	12	7	4
Oregon	14	2	12	6	5
Pennsylvania	–	–	–	–	–
Rhode Island	16	2	14	6	8
South Carolina	17	5	12	7	5
South Dakota	–	–	–	–	–
Tennessee	10	2	8	7	1
Texas	15	6	9	6	3
Utah	9	3	6	4	2
Vermont	15	3	12	4	8
Virginia	13	3	10	4	6
Washington	–	–	–	–	–
West Virginia	13	3	11	3	8
Wisconsin	15	4	10	5	6
Wyoming	14	2	12	6	6
Other jurisdictions					
District of Columbia	13	3	10	5	5
DDESS [2]	8	3	5	1	4
DoDDS [3]	8	1	7	3	4

See notes at end of table. ▶

Table A.15 Percentage of students with disabilities identified, excluded, and assessed, when accommodations were permitted, grade 4 public schools: By state, 2000 and 2003—Continued

Grade 4	2003 SD[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	14	3	11	4	7
Alabama	11	2	10	7	2
Alaska	16	1	15	6	9
Arizona	12	3	9	5	3
Arkansas	14	1	12	5	8
California	10	2	8	6	2
Colorado	12	2	11	3	7
Connecticut	13	3	10	3	6
Delaware	16	6	10	3	7
Florida	18	2	16	4	12
Georgia	12	2	11	4	7
Hawaii	11	2	10	3	6
Idaho	12	1	11	4	7
Illinois	15	3	13	4	9
Indiana	14	2	12	6	6
Iowa	15	2	13	3	10
Kansas	14	1	12	2	10
Kentucky	13	3	11	4	7
Louisiana	21	3	18	3	16
Maine	18	3	14	4	10
Maryland	13	3	10	4	6
Massachusetts	18	2	16	2	14
Michigan	11	3	7	2	5
Minnesota	14	2	11	5	6
Mississippi	10	5	5	3	1
Missouri	15	3	12	3	9
Montana	14	2	12	5	7
Nebraska	16	2	14	6	8
Nevada	13	3	10	5	5
New Hampshire	18	3	16	4	11
New Jersey	14	2	13	1	12
New Mexico	17	2	15	7	9
New York	13	3	10	1	10
North Carolina	17	4	14	3	10
North Dakota	15	2	14	6	7
Ohio	12	4	8	2	7
Oklahoma	17	3	14	6	8
Oregon	17	4	14	7	7
Pennsylvania	13	2	11	2	9
Rhode Island	20	2	18	5	13
South Carolina	17	6	11	6	4
South Dakota	15	1	13	7	6
Tennessee	13	2	11	6	5
Texas	15	7	8	5	3
Utah	12	2	10	5	5
Vermont	17	4	13	4	10
Virginia	13	4	9	3	6
Washington	14	2	12	5	7
West Virginia	15	3	12	3	9
Wisconsin	15	3	12	2	10
Wyoming	15	1	14	3	11
Other jurisdictions					
District of Columbia	13	4	10	2	7
DDESS[2]	12	2	10	2	8
DoDDS[3]	8	1	8	3	5

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Students with disabilities.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table A.16 Percentage of limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 4 public schools: By state, 2000 and 2003

Grade 4	2000 LEP[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	7	1	6	5	1
Alabama	#	#	#	#	#
Alaska	–	–	–	–	–
Arizona	16	3	13	8	5
Arkansas	1	#	1	1	#
California	27	3	24	16	7
Colorado	–	–	–	–	–
Connecticut	3	1	2	1	1
Delaware	–	–	–	–	–
Florida	–	–	–	–	–
Georgia	2	1	1	1	#
Hawaii	7	3	4	4	#
Idaho	5	2	4	3	1
Illinois	7	2	5	2	3
Indiana	1	1	1	#	1
Iowa	2	1	1	1	#
Kansas	5	#	5	4	1
Kentucky	1	#	#	#	#
Louisiana	1	#	#	#	#
Maine	1	#	1	1	#
Maryland	2	1	1	1	#
Massachusetts	6	2	4	2	2
Michigan	1	1	#	#	#
Minnesota	5	1	4	2	3
Mississippi	#	#	#	#	#
Missouri	1	1	1	1	#
Montana	#	#	#	#	#
Nebraska	3	1	2	2	#
Nevada	11	4	7	6	1
New Hampshire	–	–	–	–	–
New Jersey	–	–	–	–	–
New Mexico	20	2	18	12	6
New York	6	3	3	1	2
North Carolina	3	1	2	1	1
North Dakota	1	#	1	1	#
Ohio	#	#	#	#	#
Oklahoma	5	1	5	3	1
Oregon	6	1	4	2	2
Pennsylvania	–	–	–	–	–
Rhode Island	7	1	6	4	2
South Carolina	1	1	#	#	#
South Dakota	–	–	–	–	–
Tennessee	1	1	1	1	#
Texas	13	2	11	8	3
Utah	6	1	5	3	2
Vermont	#	#	#	#	#
Virginia	4	2	2	1	1
Washington	–	–	–	–	–
West Virginia	#	#	#	#	#
Wisconsin	5	1	4	2	3
Wyoming	2	#	2	2	#
Other jurisdictions					
District of Columbia	6	2	4	2	2
DDESS[2]	3	1	2	2	#
DoDDS[3]	3	1	2	2	1

See notes at end of table. ▶

Table A.16 Percentage of limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 4 public schools: By state, 2000 and 2003—Continued

Grade 4	2003 LEP[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	11	1	9	7	2
Alabama	1	#	1	1	#
Alaska	18	#	18	15	3
Arizona	19	2	17	15	2
Arkansas	4	1	3	2	#
California	33	2	30	27	3
Colorado	9	1	9	4	4
Connecticut	4	1	3	1	2
Delaware	3	1	2	1	1
Florida	11	2	9	5	4
Georgia	4	1	4	3	1
Hawaii	7	2	5	3	2
Idaho	7	1	6	5	2
Illinois	9	2	7	4	3
Indiana	3	#	2	2	1
Iowa	4	1	3	2	1
Kansas	3	#	3	1	1
Kentucky	2	1	1	1	#
Louisiana	2	#	2	#	1
Maine	1	1	1	1	#
Maryland	4	2	2	2	1
Massachusetts	5	1	4	2	2
Michigan	5	1	4	3	1
Minnesota	6	1	5	3	2
Mississippi	1	1	#	#	#
Missouri	2	1	2	#	1
Montana	4	#	4	3	1
Nebraska	5	1	4	3	1
Nevada	17	2	14	11	4
New Hampshire	3	1	2	1	1
New Jersey	4	1	3	1	3
New Mexico	29	2	27	18	9
New York	8	3	4	2	3
North Carolina	5	1	4	2	2
North Dakota	4	#	4	3	1
Ohio	2	1	1	#	1
Oklahoma	7	1	6	5	1
Oregon	12	1	11	6	5
Pennsylvania	3	1	2	1	1
Rhode Island	10	2	7	4	3
South Carolina	2	#	2	1	#
South Dakota	4	#	4	2	2
Tennessee	1	#	1	1	#
Texas	16	2	14	10	4
Utah	12	1	10	8	3
Vermont	2	#	2	1	1
Virginia	8	2	6	2	3
Washington	7	1	6	4	2
West Virginia	#	#	#	#	#
Wisconsin	7	1	6	2	3
Wyoming	4	#	4	3	1
Other jurisdictions					
District of Columbia	7	1	5	2	3
DDESS[2]	4	1	3	2	1
DoDDS[3]	7	1	6	5	2

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Limited-English-proficient students.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table A.17 Percentage of students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 8 public schools: By state, 2000 and 2003

Grade 8	2000 SD[1] and/or LEP[2] students					
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations	All students assessed without accommodations
Nation (public)	14	4	10	7	3	93
Alabama	14	6	8	7	1	93
Alaska	–	–	–	–	–	–
Arizona	19	3	16	11	4	92
Arkansas	14	2	11	8	4	94
California	27	4	22	17	5	91
Colorado	–	–	–	–	–	–
Connecticut	16	6	10	6	4	90
Delaware	–	–	–	–	–	–
Florida	–	–	–	–	–	–
Georgia	11	5	6	3	3	93
Hawaii	20	5	15	13	2	93
Idaho	14	2	12	8	4	94
Illinois	15	5	11	7	3	92
Indiana	12	3	9	6	3	94
Iowa	–	–	–	–	–	–
Kansas	14	3	10	8	3	94
Kentucky	14	4	9	5	4	91
Louisiana	13	3	10	4	6	91
Maine	15	3	12	7	5	93
Maryland	13	3	11	7	4	94
Massachusetts	19	3	17	8	9	88
Michigan	11	4	7	5	2	94
Minnesota	15	2	13	11	3	96
Mississippi	11	5	5	4	1	93
Missouri	15	3	12	5	7	90
Montana	12	2	9	6	3	94
Nebraska	13	4	10	7	2	94
Nevada	16	4	12	8	5	92
New Hampshire	–	–	–	–	–	–
New Jersey	–	–	–	–	–	–
New Mexico	25	7	18	14	4	89
New York	16	4	12	5	7	89
North Carolina	16	5	11	4	7	88
North Dakota	11	2	9	8	2	96
Ohio	11	4	7	4	3	93
Oklahoma	15	4	11	8	3	93
Oregon	17	3	14	8	6	91
Pennsylvania	–	–	–	–	–	–
Rhode Island	20	3	16	12	4	92
South Carolina	13	4	9	7	2	94
South Dakota	–	–	–	–	–	–
Tennessee	13	2	10	9	1	97
Texas	20	8	12	10	2	90
Utah	14	3	11	8	3	95
Vermont	17	3	14	10	4	93
Virginia	15	6	9	5	4	90
Washington	–	–	–	–	–	–
West Virginia	15	3	12	4	8	90
Wisconsin	17	4	13	6	6	90
Wyoming	13	1	12	9	3	96
Other jurisdictions						
District of Columbia	15	6	9	3	6	88
DDESS[3]	13	3	10	7	3	94
DoDDS[4]	8	1	7	5	1	98

See notes at end of table. ▶

Table A.17 Percentage of students with disabilities and/or limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 8 public schools: By state, 2000 and 2003 —Continued

Grade 8	2003 SD[1] and/or LEP[2] students					
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations	All students assessed without accommodations
Nation (public)	19	4	15	8	7	89
Alabama	14	2	11	9	3	95
Alaska	23	1	22	14	8	91
Arizona	24	4	20	15	6	91
Arkansas	17	2	15	7	8	90
California	27	3	25	22	3	95
Colorado	15	2	14	5	8	90
Connecticut	17	4	13	5	8	88
Delaware	18	9	9	3	6	85
Florida	19	3	16	5	11	86
Georgia	13	2	11	5	6	92
Hawaii	20	4	17	8	9	88
Idaho	15	1	14	9	5	95
Illinois	18	4	14	4	9	86
Indiana	15	2	13	6	7	91
Iowa	17	2	15	6	9	88
Kansas	16	3	13	4	9	88
Kentucky	14	4	9	4	5	91
Louisiana	16	5	12	2	10	86
Maine	17	4	13	5	8	89
Maryland	16	4	12	7	5	91
Massachusetts	18	3	15	4	11	86
Michigan	15	5	10	4	6	89
Minnesota	16	2	14	8	6	92
Mississippi	9	5	4	3	2	93
Missouri	16	4	12	3	9	87
Montana	14	2	12	5	6	92
Nebraska	16	4	13	7	5	91
Nevada	18	2	16	9	6	91
New Hampshire	20	3	16	6	10	87
New Jersey	18	2	16	2	14	84
New Mexico	32	2	30	16	14	83
New York	20	5	15	3	12	83
North Carolina	18	4	15	3	12	85
North Dakota	16	1	14	7	7	92
Ohio	13	5	8	3	5	90
Oklahoma	19	2	17	10	7	91
Oregon	20	3	16	11	6	91
Pennsylvania	15	2	14	3	11	88
Rhode Island	23	4	20	7	13	84
South Carolina	15	7	8	5	4	89
South Dakota	13	2	11	6	6	93
Tennessee	16	3	13	12	1	96
Texas	20	7	13	11	2	91
Utah	16	3	14	9	5	92
Vermont	18	3	15	7	7	90
Virginia	17	7	10	4	6	87
Washington	16	2	14	10	5	93
West Virginia	16	3	14	5	9	89
Wisconsin	17	3	14	3	11	86
Wyoming	17	1	15	6	10	89
Other jurisdictions						
District of Columbia	20	6	14	5	9	85
DDESS[3]	18	2	16	4	12	86
DoDDS[4]	9	1	8	3	5	94

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
[1] Students with disabilities.
[2] Limited-English-proficient students.
[3] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[4] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table A.18 **Percentage of students with disabilities identified, excluded, and assessed, when accommodations were permitted, grade 8 public schools: By state, 2000 and 2003**

Grade 8	2000 SD[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	11	3	7	5	2
Alabama	14	6	7	7	1
Alaska	–	–	–	–	–
Arizona	11	2	9	6	2
Arkansas	13	2	11	7	4
California	10	3	7	5	3
Colorado	–	–	–	–	–
Connecticut	14	5	9	6	3
Delaware	–	–	–	–	–
Florida	–	–	–	–	–
Georgia	9	4	6	3	3
Hawaii	15	4	11	10	2
Idaho	11	2	9	6	3
Illinois	11	3	8	5	3
Indiana	11	3	8	5	3
Iowa	–	–	–	–	–
Kansas	12	3	9	6	3
Kentucky	12	4	8	4	4
Louisiana	12	2	10	4	6
Maine	14	3	12	7	4
Maryland	12	2	10	7	4
Massachusetts	16	2	15	7	8
Michigan	10	4	7	5	2
Minnesota	12	1	11	9	2
Mississippi	10	5	5	4	1
Missouri	14	3	12	5	7
Montana	12	2	9	6	3
Nebraska	11	3	8	6	2
Nevada	12	3	9	5	4
New Hampshire	–	–	–	–	–
New Jersey	–	–	–	–	–
New Mexico	17	7	10	8	3
New York	12	3	9	2	6
North Carolina	14	4	10	3	7
North Dakota	11	2	9	7	2
Ohio	11	4	7	4	3
Oklahoma	13	4	9	7	3
Oregon	13	2	11	6	5
Pennsylvania	–	–	–	–	–
Rhode Island	16	3	14	10	4
South Carolina	13	4	9	7	2
South Dakota	–	–	–	–	–
Tennessee	11	2	9	9	1
Texas	14	7	7	5	1
Utah	10	2	8	6	2
Vermont	16	3	13	9	4
Virginia	13	5	7	4	4
Washington	–	–	–	–	–
West Virginia	14	3	12	4	8
Wisconsin	15	4	12	6	6
Wyoming	12	1	11	8	3
Other jurisdictions					
District of Columbia	11	5	7	2	4
DDESS [2]	8	2	6	3	3
DoDDS [3]	6	1	5	4	1

See notes at end of table. ▶

Table A.18 Percentage of students with disabilities identified, excluded, and assessed, when accommodations were permitted, grade 8 public schools: By state, 2000 and 2003—Continued

Grade 8	2003 SD[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	14	3	11	5	6
Alabama	13	2	11	8	3
Alaska	15	1	14	6	8
Arizona	11	3	9	4	4
Arkansas	15	1	13	6	7
California	11	1	9	7	2
Colorado	12	1	10	4	7
Connecticut	14	3	11	4	7
Delaware	16	8	8	3	5
Florida	14	2	12	3	9
Georgia	11	2	10	4	6
Hawaii	16	3	13	5	8
Idaho	10	1	10	6	4
Illinois	15	4	12	3	8
Indiana	14	2	11	5	6
Iowa	16	2	14	5	9
Kansas	13	2	11	3	8
Kentucky	13	4	9	4	5
Louisiana	16	4	11	2	9
Maine	16	4	12	5	7
Maryland	14	3	10	6	5
Massachusetts	16	2	14	4	10
Michigan	13	4	8	3	5
Minnesota	13	2	11	6	5
Mississippi	9	5	4	2	2
Missouri	15	4	12	3	9
Montana	12	2	10	5	6
Nebraska	14	3	11	6	5
Nevada	12	2	10	5	5
New Hampshire	19	3	15	6	9
New Jersey	15	1	14	2	12
New Mexico	20	2	18	8	10
New York	16	4	12	2	10
North Carolina	16	3	12	2	10
North Dakota	14	1	13	6	7
Ohio	13	5	8	3	5
Oklahoma	16	2	14	8	6
Oregon	14	3	12	7	4
Pennsylvania	14	1	13	2	10
Rhode Island	20	3	17	5	12
South Carolina	15	7	8	4	4
South Dakota	11	2	9	4	5
Tennessee	14	3	12	11	1
Texas	15	6	9	8	2
Utah	11	2	9	5	4
Vermont	17	3	15	7	7
Virginia	15	6	9	3	6
Washington	13	2	11	7	4
West Virginia	16	3	13	5	9
Wisconsin	15	3	13	2	10
Wyoming	15	1	14	4	9
Other jurisdictions					
District of Columbia	16	5	11	3	8
DDESS [2]	12	1	11	1	10
DoDDS [3]	6	1	6	1	4

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
[1] Students with disabilities.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table A.19 Percentage of limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 8 public schools: By state, 2000 and 2003

Grade 8	2000 LEP[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	4	1	3	3	1
Alabama	1	#	#	#	#
Alaska	–	–	–	–	–
Arizona	10	1	8	6	2
Arkansas	1	#	#	#	#
California	19	2	17	13	4
Colorado	–	–	–	–	–
Connecticut	2	2	1	#	1
Delaware	–	–	–	–	–
Florida	–	–	–	–	–
Georgia	2	1	#	#	#
Hawaii	6	1	4	4	#
Idaho	4	1	4	3	1
Illinois	5	2	3	3	#
Indiana	1	#	1	1	#
Iowa	–	–	–	–	–
Kansas	1	#	1	1	#
Kentucky	1	1	1	1	#
Louisiana	1	#	1	#	#
Maine	#	#	#	#	#
Maryland	2	1	1	1	#
Massachusetts	4	2	2	1	1
Michigan	#	#	#	#	#
Minnesota	3	1	3	2	#
Mississippi	#	#	#	#	#
Missouri	#	#	#	#	#
Montana	#	#	#	#	#
Nebraska	2	1	1	1	#
Nevada	5	1	4	3	#
New Hampshire	–	–	–	–	–
New Jersey	–	–	–	–	–
New Mexico	11	2	9	7	2
New York	6	2	4	3	1
North Carolina	2	1	1	1	#
North Dakota	1	#	1	1	#
Ohio	2	1	1	#	#
Oklahoma	2	#	1	1	#
Oregon	5	1	4	3	1
Pennsylvania	–	–	–	–	–
Rhode Island	4	1	3	2	1
South Carolina	1	#	#	#	#
South Dakota	–	–	–	–	–
Tennessee	1	1	1	1	#
Texas	8	2	6	5	1
Utah	4	#	3	3	1
Vermont	1	1	1	#	#
Virginia	3	1	2	1	1
Washington	–	–	–	–	–
West Virginia	#	#	#	#	#
Wisconsin	2	1	1	1	1
Wyoming	2	#	2	2	#
Other jurisdictions					
District of Columbia	4	2	2	1	2
DDESS [2]	6	2	4	4	#
DoDDS [3]	2	#	1	1	#

See notes at end of table. ▶

Table A.19 Percentage of limited-English-proficient students identified, excluded, and assessed, when accommodations were permitted, grade 8 public schools: By state, 2000 and 2003—Continued

Grade 8	2003 LEP[1] students				
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
Nation (public)	6	1	5	4	1
Alabama	1	#	1	1	#
Alaska	11	#	11	10	1
Arizona	16	2	14	12	2
Arkansas	3	1	2	1	1
California	20	2	19	17	1
Colorado	5	1	4	2	2
Connecticut	4	1	3	1	1
Delaware	2	1	1	1	1
Florida	7	1	5	3	3
Georgia	2	1	2	1	1
Hawaii	6	1	5	3	2
Idaho	6	#	5	4	1
Illinois	4	1	3	1	2
Indiana	3	#	2	1	1
Iowa	2	#	2	1	1
Kansas	4	1	3	1	2
Kentucky	1	1	1	1	#
Louisiana	1	1	1	#	#
Maine	1	#	1	#	#
Maryland	3	1	2	2	#
Massachusetts	3	1	2	1	1
Michigan	3	1	2	1	1
Minnesota	4	1	3	2	1
Mississippi	1	#	#	#	#
Missouri	1	#	1	#	1
Montana	3	#	2	1	1
Nebraska	3	1	2	1	#
Nevada	7	1	6	5	2
New Hampshire	1	#	1	#	1
New Jersey	3	1	2	#	2
New Mexico	20	1	19	11	7
New York	6	2	4	1	3
North Carolina	4	1	3	1	2
North Dakota	2	#	2	1	1
Ohio	1	#	1	#	#
Oklahoma	5	1	5	3	1
Oregon	7	1	6	4	2
Pennsylvania	2	#	2	1	1
Rhode Island	5	2	4	2	2
South Carolina	1	#	1	1	#
South Dakota	3	#	3	2	1
Tennessee	3	1	2	2	#
Texas	8	2	6	5	1
Utah	7	1	6	5	2
Vermont	1	#	1	1	#
Virginia	4	2	2	1	1
Washington	5	1	4	3	1
West Virginia	1	#	#	#	#
Wisconsin	3	1	2	1	1
Wyoming	3	#	3	2	1
Other jurisdictions					
District of Columbia	5	1	4	2	2
DDESS [2]	7	1	5	3	3
DoDDS [3]	4	1	3	2	1

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Limited-English-proficient students.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table A.20 Percentage of students with disabilities and limited-English-proficient students identified, excluded, and assessed, grade 4 public schools: By urban district, 2003

Grade 4	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
SD [1] and/or LEP [2] students					
Nation (public)	22	4	18	10	8
Large central city (public)	30	5	25	16	9
Atlanta	9	1	8	4	4
Boston	33	5	28	11	17
Charlotte	21	4	17	5	12
Chicago	31	8	23	16	7
Cleveland	15	7	8	3	5
District of Columbia	18	4	14	4	10
Houston	45	8	37	19	18
Los Angeles	60	3	56	48	8
New York City	22	6	16	4	12
San Diego	41	2	38	34	4
SD students only					
Nation (public)	14	3	11	4	7
Large central city (public)	13	3	9	4	6
Atlanta	8	1	7	3	4
Boston	20	3	16	4	12
Charlotte	17	3	14	3	10
Chicago	15	5	10	4	6
Cleveland	12	5	6	2	5
District of Columbia	13	4	10	2	7
Houston	18	7	11	8	3
Los Angeles	11	2	9	5	4
New York City	12	1	12	1	10
San Diego	11	1	10	7	3
LEP students only					
Nation (public)	11	1	9	7	2
Large central city (public)	21	3	18	14	4
Atlanta	2	#	2	1	#
Boston	18	3	15	8	7
Charlotte	8	2	6	2	4
Chicago	20	5	15	13	2
Cleveland	4	1	2	1	1
District of Columbia	7	1	5	2	3
Houston	35	4	31	14	17
Los Angeles	56	2	53	47	6
New York City	13	6	7	3	4
San Diego	34	2	32	30	2

The estimate rounds to zero.
[1] Students with disabilities.
[2] Limited-English-proficient students.
NOTE: The combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Table A.21 Percentage of students with disabilities and limited-English-proficient students identified, excluded, and assessed, grade 8 public schools: By urban district, 2003

Grade 8	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations
SD [1] and/or LEP [2] students					
Nation (public)	19	4	15	8	7
Large central city (public)	24	5	19	12	7
Atlanta	11	2	9	4	5
Boston	31	7	24	9	15
Charlotte	18	3	14	5	9
Chicago	22	7	15	8	7
Cleveland	21	9	12	2	9
District of Columbia	20	6	14	5	9
Houston	26	8	18	16	3
Los Angeles	37	2	35	29	6
New York City	24	5	19	6	14
San Diego	29	4	26	22	4
SD students only					
Nation (public)	14	3	11	5	6
Large central city (public)	14	4	11	5	5
Atlanta	10	1	9	4	5
Boston	24	4	20	7	13
Charlotte	14	3	12	4	8
Chicago	17	5	12	6	7
Cleveland	17	9	8	1	6
District of Columbia	16	5	11	3	8
Houston	16	7	10	9	#
Los Angeles	12	2	10	5	5
New York City	15	2	13	3	10
San Diego	11	1	10	7	3
LEP students only					
Nation (public)	6	1	5	4	1
Large central city (public)	13	2	11	8	3
Atlanta	2	1	1	1	#
Boston	13	5	8	4	4
Charlotte	7	1	6	3	3
Chicago	8	3	5	3	2
Cleveland	5	1	4	1	3
District of Columbia	5	1	4	2	2
Houston	16	5	11	9	2
Los Angeles	33	2	31	27	4
New York City	13	4	9	3	6
San Diego	23	3	20	18	2

The estimate rounds to zero.
[1] Students with disabilities.
[2] Limited-English-proficient students.
NOTE: The combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Investigating the Potential Effects of Exclusion Rates on Assessment Results

Variation in the rates of exclusion of students with disabilities and limited-English-proficient students introduces validity concerns for comparisons over time or between jurisdictions. The essential problem is the differential representativeness of samples, which could impact the comparability of cross-state comparisons within a given year and state trends across years. Since students with disabilities or limited-English-proficient students tend to score below average on assessments, excluding students with special needs may increase a jurisdiction's scores. Conversely, including more of these students might depress score gains. In 2003, exclusion rates varied among jurisdictions. In addition, cases of both increases and decreases in exclusion rates occurred between 2000 and 2003, making comparisons over time within jurisdictions complex to interpret. Tables A.14 to A.17 on the preceding pages display the rates of exclusion in 2000 and 2003 in each jurisdiction for grade 4 and grade 8, respectively.

As shown in table A.14, of the 53 jurisdictions that assessed mathematics at grade 4 in 2003, four jurisdictions had exclusion rates of 6 percent or greater, while the majority had exclusion rates of less than 6 percent. Table A.17 displays the corresponding data for grade 8. Of the 53 jurisdictions that assessed mathematics at grade 8 in 2003, five jurisdictions had exclusion rates of 6 percent or above, and one of these had an exclusion rate of 9 percent.

One factor that contributed to the variability in exclusion rates across states is that the percentage of students who are *identified* as having disabilities or limited English proficiency varies across jurisdictions. Reasons for the variation include 1) lack of standardized criteria for defining students as having specific disabilities or as being limited in their English proficiency; 2) changes or differences in policy and practices regarding implementation of the Individuals with Disabilities Education Act (IDEA); and 3) differences in the percentage of students classified as limited English proficient and, to a lesser extent, as students with disabilities.

With regard to cross-state comparisons, the correlations between rates of exclusion and average 2003 mathematics scores were not found to be significant at either grade 4 (-.003) or grade 8 (-.05). In other words, higher exclusion rates were not associated with higher average scores in 2003. With regard to state trends, the correlations between changes in the rate of exclusion of students with special needs and changes in average mathematics scale scores from 2000 to 2003 were not found to be significant at grade 4 (-.01) and were detected to be significant at grade 8 (-.31).

Because the representativeness of samples is ultimately a validity issue, NCES has commissioned studies of the impact of assessment accommodations on overall scores. NCES has also investigated scenarios for estimating what the average scores might have been had the excluded students been assessed. Two alternative

statistical scenarios have been proposed, based on different hypotheses about how excluded students might have performed. Combined with the actual performance of students who were assessed, these scenarios produce results for the full population (that is, including estimates for excluded students) in each jurisdiction and each assessment year. These techniques provide some indication as to which statements about trend gains or losses *might* be changed if exclusion rates were zero in both assessment years and if the hypotheses about the performance of missing students are correct.

One scenario was developed by Donald McLaughlin of American Institutes for Research, and predicts what the performance of excluded SD/LEP students might have been had these students been tested. The basic assumption underlying this approach is that these students would have performed as well as included SD/LEP students with similar disabilities, level of English proficiency, and background characteristics.[9]

The other scenario was developed by Al Beaton of Boston College and similarly makes an assumption about what the performance of excluded SD/LEP students might have been had they been tested. The idea of Beaton's scenario is to calculate median rather than average scores. A "median" is the score reached or exceeded by fifty percent of the student population. This statistic is not influenced by extreme values. Beaton's assumption is that all SD/LEP students would score below *Basic* or below the median of the group being analyzed. This assumption lowers the median score for every group.

The methods used to construct the scenarios are still under development. NCES is continuing research into different procedures for reducing the percentages of students excluded from NAEP. In addition, NCES will continue to evaluate the potential impact of changes in exclusion rates on score gains.

Types of Accommodations Permitted

Table A.22 displays the percentages of SD/LEP students assessed with the variety of available accommodations. It should be noted that students assessed with accommodations typically received some combination of accommodations. The percentages presented in the table reflect only the primary accommodation provided. For example, students assessed in small groups (as compared with standard NAEP sessions of about 30 students) usually received extended time. In one-on-one administrations, students often received assistance in recording answers (e.g., use of a scribe or computer) and were afforded extra time. Extended time was considered the primary accommodation only when it was the sole accommodation provided.

[9] Because students with very severe levels of disability and students with little or no proficiency in English are not assessed in NAEP, ability estimates for students with those characteristics may be overestimated.

Table A.22 Students with disabilities and/or limited-English-proficient students assessed with accommodations, by type of primary accommodation, grades 4 and 8 public and nonpublic schools: 1996–2003

	Weighted percentage of all assessed students					
	Grade 4			Grade 8		
	1996	2000	2003	1996	2000	2003
SD[1] and/or LEP[2] students						
Bilingual book	1.39	0.78	0.77	0.41	0.45	0.26
Large-print book	#	0.03	0.05	0.04	#	0.03
Extended time	0.82	0.62	0.94	0.66	0.53	1.53
Read aloud	0.37	0.35	0.67	0.14	0.24	0.29
Small group	1.62	2.43	5.15	1.01	1.62	4.17
One-on-one	0.87	0.43	0.32	0.36	0.10	0.15
Scribe/computer	†	0.04	0.17	†	#	0.07
Other	0.02	#	0.08	0.08	0.08	0.07
SD students						
Bilingual book	0.03	#	0.06	#	#	0.02
Large-print book	#	0.03	0.05	0.04	#	0.03
Extended time	0.82	0.58	0.73	0.66	0.44	1.39
Read aloud	0.37	0.33	0.50	0.14	0.23	0.27
Small group	1.62	2.26	4.69	1.01	1.57	3.93
One-on-one	0.87	0.41	0.32	0.36	0.09	0.14
Scribe/computer	†	0.04	0.17	†	#	0.06
Other	0.02	#	0.07	0.08	0.07	0.06
LEP students						
Bilingual book	1.39	0.78	0.77	0.41	0.45	0.26
Large-print book	#	#	#	#	#	#
Extended time	0.10	0.06	0.30	0.01	0.10	0.27
Read aloud	0.03	0.02	0.22	0.06	0.03	0.05
Small group	0.15	0.31	0.91	#	0.09	0.47
One-on-one	0.09	0.02	0.04	0.01	0.01	0.01
Scribe/computer	†	#	0.01	†	#	#
Other	#	#	0.01	#	0.01	0.01

† Not applicable. There was no separate scribe/computer accommodation type category in 1996.
# The estimate rounds to less than 0.01.
[1] Students with disabilities.
[2] Limited-English-proficient students.
NOTE: The combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the SD or LEP portions but counted only once in the SD and/or LEP portion.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Data Collection and Scoring

The NAEP 2003 mathematics assessment was conducted from January to March 2003 by contractors to the U.S. Department of Education. Trained field staff from Westat conducted the data collection. Materials from the 2003 assessment were shipped to Pearson, where trained staff evaluated the responses to the constructed-response questions using scoring rubrics or guides prepared by Educational Testing Service (ETS). Each constructed-response question had a unique scoring guide that defined the criteria used to evaluate students' responses. The extended constructed-response questions were evaluated with four- and five-level guides, and many of the short constructed-response questions were rated according to three-level guides that permitted partial credit. Other short constructed-response questions were scored as either correct or incorrect.

For the 2003 mathematics assessment, 4,719,464 constructed responses were scored. This number includes rescoring to monitor interrater reliability. The

within-year average percentage of exact agreement for the 2003 national reliability sample was 95 percent at both the fourth and eighth grades.

Data Analysis and IRT Scaling

After the professional scoring, all information was transcribed into the NAEP database at ETS. Each processing activity was conducted with rigorous quality control. After the assessment information was compiled in the database, the data were weighted according to the population structure. The weighting for the national and state samples reflected the probability of selection for each student as a result of the sampling design, adjusted for nonresponse.[10]

Analyses were then conducted to determine the percentages of students who gave various responses to each cognitive and background question. In determining these percentages for the cognitive questions, a distinction was made between missing responses at the end of a block (i.e., missing responses after the last question the student answered) and missing responses before the last observed response. Missing responses before the last observed response were considered intentional omissions. In analysis, omitted responses to multiple-choice items were scored as fractionally correct.[11] Omitted responses for constructed-response items were placed into the lowest score category. Missing responses after the last observed response were considered "not reached" and treated as if the questions had not been presented to the student. In calculating response percentages for each question, only students classified as having been presented the question were included in the denominator of the statistic.

It is standard NAEP practice to treat all nonrespondents to the last question in a block as if they had not reached the question. For multiple-choice and short constructed-response questions, this practice produces a reasonable pattern of results in that the proportion reaching the last question is not dramatically smaller than the proportion reaching the next-to-last question. However, for mathematics blocks that ended with extended constructed-response questions, there may be extremely large drops in the proportion of students attempting some of the final questions. Therefore, for blocks ending with an extended constructed-response question, students who answered the next-to-last question, but did not respond to the extended constructed-response question, were classified as having intentionally omitted the last question.

Item Response Theory (IRT) was used to estimate average mathematics scale scores for the nation and for various subgroups of interest within the nation. IRT models the probability of answering a question in a certain way as a mathematical function of proficiency or skill. The main purpose of IRT analysis is to provide a common scale on which performance can be compared among groups, such as those defined by characteristics, including gender and race/ethnicity, even when students receive different blocks of items. One desirable feature of IRT is that it locates items and students on this

[10] Weighting procedures are described more fully in the "Weighting and Variance Estimation" section found later in this document. Additional information about the use of weighting procedures will be included in the technical documentation section of the NAEP web site (http://nces.ed.gov/nationsreportcard).

[11] Lord, F. M. (1980). *Applications of Item Response Theory to Practical Testing Problems,* p. 229. Hillsdale, NJ: Lawrence Erlbaum Associates.

common scale. In contrast to classical test theory, IRT does not rely solely on the total number of correct item responses, but uses the particular patterns of student responses to items in determining the student location on the scale. As a result, adding items that function at a particular point on the scale to the assessment does not change the location of the students on the scale, even though students may respond correctly to more items. It does increase the relative precision with which students are measured, particularly those students whose scale locations are close to the additional items.

The results for 1990, 1992, 1996, 2000, and 2003 are presented on the NAEP mathematics composite scale. For the NAEP mathematics assessment, a scale ranging from 0 to 500 was used to report performance in each of the five mathematics content areas at each grade: number sense, properties, and operations; measurement; geometry and spatial sense; data analysis, statistics, and probability; and algebra and functions. The scales summarize student performance across all three types of questions in the assessment (multiple-choice, short constructed-response, and extended constructed-response).

In producing these content-area scales, three distinct IRT models were used. Multiple-choice questions were scaled using the three-parameter logistic (3PL) model; short constructed-response questions rated as acceptable or unacceptable were scaled using the two-parameter logistic (2PL) model; and short constructed-response questions rated according to a three-level guide, as well as extended constructed-response questions rated on a four- or five-level guide, were scaled using a generalized partial-credit (GPC) model.[12] Developed by ETS and first used in 1992, the GPC model permits the scaling of questions scored according to multipoint rating schemes. The model takes full advantage of the information available from each of the student response categories used for these more complex constructed-response questions.[13]

The scales are composed of three types of questions: multiple-choice, short constructed-response (scored either dichotomously or allowing for partial credit), and extended constructed-response (scored according to a partial-credit model). Unfortunately, the question of how much information different types of questions contribute to a scale has no simple answer. The information provided by a given question is determined by the IRT model used to scale the question. It is a function of the item parameters and varies by level of mathematics proficiency.[14] Thus, the answer to the query "How much information do the different types of questions provide?" will differ for each level of mathematics performance. When considering the composite mathematics scale, the answer is even more complicated. The mathematics data are scaled separately by the content areas. The composite scale is a weighted combination of these subscales. IRT information functions are only strictly

[12] Muraki, E. (1992). A Generalized Partial Credit Model: Application of an EM Algorithm. *Applied Psychological Measurement, 16*(2), 159–176.

[13] More detailed information regarding the IRT analyses used in NAEP will be included in the technical documentation section of the NAEP web site (http://nces.ed.gov/nationsreportcard).

[14] Donoghue, J. R. (1994). An Empirical Examination of the IRT Information of Polytomously Scored Mathematics Items Under the Generalized Partial Credit Model. *Journal of Educational Measurement, 31*(4), 295–311.

comparable when they are derived from the same calibration. Because the composite scale is based on five separate calibrations, there is no direct way to compare the information provided by the questions on the composite scale.

Because the NAEP design gives each student a small proportion of the pool of assessment items, the assessment cannot provide reliable information about individual performance. Traditional test scores for individual students, even those based on IRT, would result in misleading estimates of population characteristics, such as subgroup means and percentages of students at or above a certain scale-score level. However, it is NAEP's goal to estimate these population characteristics. NAEP's objectives can be achieved with methodologies that produce estimates of the population-level parameters directly, without the intermediary computation of estimates of individuals. This is accomplished using marginal estimation scaling model techniques for latent variables.[15] Under the assumptions of the scaling models, these population estimates will be consistent in the sense that the estimates approach the model-based population values as the sample size increases. This would not be the case for population estimates obtained by aggregating optimal estimates of individual performance.[16]

Item-Mapping Procedures

The mathematics performance of fourth- and eighth-graders can be illustrated by "item maps," which position question or "item" descriptions along the NAEP mathematics scale at each grade. Each question shown is placed at the point on the scale where students are more likely to give successful responses to it. The descriptions used on these item maps focus on the mathematics knowledge or skill needed to respond successfully to the question. For multiple-choice questions, the description indicates the knowledge or skill demonstrated by selection of the correct option; for constructed-response questions, the description takes into account the knowledge or skill specified by the different levels of scoring criteria for that question.

To map questions to particular points on the NAEP mathematics scale, a response-probability convention was adopted to divide those who had a higher probability of success from those who had a lower probability. Choosing a response-probability convention has an impact on the mapping of the test questions onto the mathematics scale. A lower boundary convention maps the mathematics questions at lower points along the scale, and a higher boundary convention maps the same questions at higher points on the scale. The underlying distribution of mathematics skills in the population does not change, but the choice of a response-probability convention does have an impact on the proportion of the student population that is reported as "able to do" the questions on the mathematics scales.

There is no obvious choice of a point along the probability scale that is clearly superior to any other point. If the convention were set with a boundary at 50 percent, those above the boundary would be more likely to get a question right than get it wrong, while those below the

[15] Mislevy, R. J., and Sheehan, K. M. (1987). Marginal Estimation Procedures. In A. E. Beaton (Ed.) *Implementing the New Design: The NAEP 1983–1984 Technical Report* (Technical Rep. No. 15-TR-20), pp. 293–260. Princeton, NJ: Educational Testing Service.

[16] For theoretical and empirical justification of the procedures employed, see Mislevy, R. J. (1988). Randomization-Based Inferences About Latent Variables From Complex Samples. *Psychometrika, 56*(2), 177–196.

boundary would be more likely to get the question wrong than right. Although this convention has some intuitive appeal, it was rejected on the grounds that having a 50:50 chance of getting the question right shows an insufficient degree of mastery. If the convention were set with a boundary at 80 percent, students above the criterion would have a high probability of responding successfully to a question. However, many students below this criterion show some level of mathematics ability that would be ignored by such a stringent criterion. In particular, those in the range between 50 and 80 percent correct would be more likely to get the question right, yet would not be in the group described as "able to do" the question.

In a compromise between the 50 percent and the 80 percent conventions, NAEP has adopted two related response-probability conventions for all its subjects: 65 percent for constructed-response questions (where guessing is not a factor), and 74 percent for multiple-choice questions with four response options (to adjust for the possibility of answering correctly by guessing) or 72 percent for five response options (to correct for the possibility of answering correctly by guessing, with slightly less correction applied when students were presented with five rather than four options). These response-probability conventions were established, in part, based on an intuitive judgment that they would provide the best picture of students' mathematics skills.

Some additional support for the dual conventions adopted by NAEP was provided by Huynh.[17] He examined the IRT information provided by items, according to the IRT model used in scaling NAEP questions. Following Bock, Huynh decomposed the item information into that provided by a correct response $[P(\Theta)\ I(\Theta)]$ and that provided by an incorrect response $[(1- P(\Theta))\ I(\Theta)]$.[18] Huynh showed that the item information provided by a correct response to a constructed-response item is maximized at the point along the mathematics scale at which the probability of a correct response is 0.65 (for multiple-choice items, the information provided by a correct response is maximized at the point at which the probability of getting the item correct is 0.72 or 0.74). It should be noted, however, that maximizing the item information $I(\Theta)$, rather than the information provided by a correct response $[P(\Theta)\ I(\Theta)]$, would imply an item-mapping criterion closer to 50 percent.

The NAEP mathematics achievement results are presented in terms of the composite mathematics scale. However, the mathematics assessment was scaled separately for the five content areas at grades 4 and 8. The composite scale is a weighted combination of the five subscales for the five content areas. To obtain item map information, a procedure developed by Donoghue was used.[19] This method models the relationship between the item response function for the subscale and the subscale structure to derive the relationship between the item

[17] Huynh, H. (1995). Some Technical Aspects of Standard Setting. In *Proceedings of the Joint Conference on Standard-Setting for Large-Scale Assessments of the National Assessment Governing Board (NAGB) and the National Center for Education Statistics (NCES), Volume II* (pp.75–93). Washington, DC: U.S. Government Printing Office.

[18] Bock, R. D. (1972). Estimating Item Parameters and Latent Ability When Responses are Scored in Two or More Latent Categories. *Psychometrika, 37,* 29–51.

[19] Donoghue, J. R. (1997, March). *Item Mapping to a Weighted Composite Scale.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

score and the composite scale (i.e., an item response function for the composite scale). This item response function is then used to derive the probability used in the mapping.

Weighting and Variance Estimation

A complex sampling design was used to select the students who were assessed. The properties of a sample selected through such a design can be very different from those of a simple random sample in which every student in the target population has an equal chance of selection and in which the observations from different sampled students can be considered to be statistically independent of one another. Therefore, the properties of the sample for the data collection design were taken into account during the analysis of the assessment data.

One way that the properties of the sample design were addressed was by using sampling weights to account for the fact that the probabilities of selection were not identical for all students. All population and subpopulation characteristics based on the assessment data were estimated using sampling weights. These weights included adjustments for school and student nonresponse.

Prior to 2003, the national samples used weights that had been poststratified to the census or Current Population Survey (CPS) totals for the populations being assessed. Due to concerns about the availability of appropriate targets for poststratification as a result of changes in the reporting of race in the 2000 census, nonpoststratified weights have been used in the analysis of national samples since 2003. The state NAEP samples have always been analyzed using nonpoststratified weights, since there were no targets available from CPS to use in poststratification.

Not only must appropriate estimates of population characteristics be derived, but appropriate measures of the degree of uncertainty must be obtained for those statistics. Two components of uncertainty are accounted for in the variability of statistics based on student ability: 1) the uncertainty due to sampling only a relatively small number of students, and 2) the uncertainty due to sampling only a portion of the cognitive domain of interest. The first component accounts for the variability associated with the estimated percentages of students who had certain background characteristics or who answered a certain cognitive question correctly.

Because NAEP uses complex sampling procedures, conventional formulas for estimating sampling variability that assume simple random sampling are inappropriate. NAEP uses a jackknife replication procedure to estimate standard errors. The jackknife standard error provides a reasonable measure of uncertainty for any student information that can be observed without error. However, because each student typically responds to only a few questions within any mathematics content area, the scale score for any single student would be imprecise. In this case, NAEP's marginal estimation methodology can be used to describe the performance of groups and subgroups of students. The estimate of the variance of the students' posterior scale score distributions (which reflect the imprecision due to lack of measurement accuracy) is computed. This component of variability is then included in the standard errors of NAEP scale scores.[20]

[20] For further details, see Johnson, E. G., and Rust, K. F. (1992). Population Inferences and Variance Estimation for NAEP Data. *Journal of Educational Statistics, 17*(2), 175–190.

Typically, when the standard error is based on a small number of students or when the group of students is enrolled in a small number of schools, the amount of uncertainty associated with the estimation of standard errors may be quite large. Estimates of standard errors subject to a large degree of uncertainty are followed by the "!" symbol to indicate that the nature of the sample does not allow accurate determination of the variability of the statistic (see for example table A.25). In such cases, the standard errors—and any confidence intervals or significance tests involving these standard errors—should be interpreted cautiously.

The reader is reminded that, as with findings from all surveys, NAEP results are subject to other kinds of error, including the effects of imperfect adjustment for student and school nonresponse and unknowable effects associated with the particular instrumentation and data collection methods. Nonsampling errors can be attributed to a number of sources—inability to obtain complete information about all selected schools in the sample (some students or schools refused to participate, or students participated but answered only certain questions); ambiguous definitions; differences in interpreting questions; inability or unwillingness to give correct background information; mistakes in recording, coding, or scoring data; and other errors in collecting, processing, sampling, and estimating missing data. The extent of nonsampling errors is difficult to estimate and, because of their nature, the impact of such errors cannot be reflected in the data-based estimates of uncertainty provided in NAEP reports.

Drawing Inferences from the Results

The reported statistics are estimates and are therefore subject to a measure of uncertainty. There are two sources of such uncertainty. First, NAEP uses a sample of students rather than testing all students. Second, all assessments have some amount of uncertainty related to the fact that they cannot ask all questions that might be asked in a content area. The magnitude of this uncertainty is reflected in the standard error of each of the estimates. When the percentages or average scale scores of certain groups are compared, the estimated standard error should be taken into account. Therefore, the comparisons are based on statistical tests that consider the estimated standard errors of those statistics and the magnitude of the difference among the averages or percentages.

For the data in this report, all the estimates have corresponding estimated standard errors of the estimates. For example, tables A.23 and A.24 show the average national scale score for the NAEP 1990–2003 national assessments and the percentage of students within each achievement-level range and at or above achievement levels. In both tables, estimated standard errors appear in parentheses next to each estimated scale score or percentage. Additional examples of estimated standard errors corresponding with results included in this report are presented in tables A.25 through A.27. For the estimated standard errors corresponding to other data from this report, the reader can go to the Data Tool on the NCES web site (http://nces.ed.gov/nationsreportcard/naepdata/).

Table A.23 Average mathematics scale scores and standard errors, grades 4 and 8: 1990–2003

	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 4							
	213 (0.9) *	220 (0.7) *	224 (0.9) *	228 (0.9) *	224 (1.0) *	226 (0.9) *	235 (0.2)
Grade 8							
	263 (1.3) *	268 (0.9) *	272 (1.1) *	275 (0.8) *	270 (0.9) *	273 (0.8) *	278 (0.3)

* Significantly different from 2003.
NOTE: Standard errors of the estimated scale scores appear in parentheses. In addition to allowing for accommodations, the accommodations-permitted results (1996–2003) differ slightly from previous years' results, and from previously reported results for 1996 and 2000, due to changes in sample weighting procedures. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table A.24 Percentages of students and standard errors, by mathematics achievement level, grades 4 and 8: 1990–2003

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
Accommodations not permitted	1990	50 (1.4) *	37 (1.5) *	12 (1.1) *	1 (0.4) *	50 (1.4) *	13 (1.2) *
	1992	41 (1.0) *	41 (1.0) *	16 (1.0) *	2 (0.3) *	59 (1.0) *	18 (1.0) *
	1996	36 (1.2) *	43 (0.9)	19 (0.8) *	2 (0.3) *	64 (1.2) *	21 (0.9) *
	2000	31 (1.1) *	43 (0.8) *	23 (0.9) *	3 (0.3) *	69 (1.1) *	26 (1.1) *
Accommodations permitted	1996	37 (1.3) *	43 (1.0) *	19 (0.9) *	2 (0.3) *	63 (1.3) *	21 (1.1) *
	2000	35 (1.3) *	42 (1.1) *	21 (0.9) *	3 (0.3) *	65 (1.3) *	24 (1.0) *
	2003	23 (0.3)	45 (0.3)	29 (0.3)	4 (0.1)	77 (0.3)	32 (0.3)
Grade 8							
Accommodations not permitted	1990	48 (1.4) *	37 (1.1) *	13 (1.0) *	2 (0.3) *	52 (1.4) *	15 (1.1) *
	1992	42 (1.1) *	37 (0.8) *	18 (0.8) *	3 (0.4) *	58 (1.1) *	21 (1.0) *
	1996	38 (1.1) *	39 (1.0)	20 (0.8) *	4 (0.5) *	62 (1.1) *	24 (1.1) *
	2000	34 (0.8) *	38 (0.8)	22 (0.7)	5 (0.5)	66 (0.8) *	27 (0.9)
Accommodations permitted	1996	39 (1.0) *	38 (0.9)	20 (0.9) *	4 (0.4) *	61 (1.0) *	23 (1.0) *
	2000	37 (0.9) *	38 (0.7) *	21 (0.6) *	5 (0.4)	63 (0.9) *	26 (0.8) *
	2003	32 (0.3)	39 (0.2)	23 (0.2)	5 (0.1)	68 (0.3)	29 (0.3)

* Significantly different from 2003.
NOTE: Standard errors of the estimated percentages appear in parentheses. Detail may not sum to totals because of rounding. In addition to allowing for accommodations, the accommodations-permitted results (1996–2003) differ slightly from previous years' results, and from previously reported results for 1996 and 2000, due to changes in sample weighting procedures. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table A.25 Average mathematics scale scores and standard errors, by student eligibility for free/reduced-price school lunch and race/ethnicity, grades 4 and 8: 2003

	Eligible	Not eligible	Information not available
Grade 4			
White	231 (0.3)	247 (0.2)	247 (0.6)
Black	212 (0.4)	226 (0.6)	221 (1.3)
Hispanic	219 (0.4)	232 (0.9)	224 (2.1)
Asian/Pacific Islander	234 (1.2)	254 (1.6)	248 (2.1)
American Indian/Alaska Native	218 (0.9)	237 (1.7)	219 (4.6) !
Grade 8			
White	272 (0.6)	291 (0.3)	293 (0.9)
Black	247 (0.6)	262 (0.7)	256 (1.8)
Hispanic	254 (0.8)	269 (1.1)	263 (1.4)
Asian/Pacific Islander	274 (1.5)	300 (1.6)	299 (2.3)
American Indian/Alaska Native	255 (2.2)	276 (2.1)	260 (5.0) !

! Interpret data with caution. The nature of the sample does not allow accurate determination of the variability of the statistic.
NOTE: Standard errors of the estimated scale scores appear in parentheses.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table A.26 Average mathematics scale scores and standard errors, grade 8 public schools: By state, 1990–2003

Grade 8	Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003
Nation (public)[1]	262 (1.4)*	267 (1.0)*	271 (1.2)*	274 (0.8)	272 (0.9)*	276 (0.3)
Alabama	253 (1.1)*,**	252 (1.7)*,**	257 (2.1)*	262 (1.8)	264 (1.8)	262 (1.5)
Alaska	–	–	278 (1.8)	–	–	279 (0.9)
Arizona	260 (1.3)*,**	265 (1.3)*,**	268 (1.6)	271 (1.5)	269 (1.8)	271 (1.2)
Arkansas	256 (0.9)*,**	256 (1.2)*,**	262 (1.5)*	261 (1.4)*	257 (1.5)*,**	266 (1.2)
California	256 (1.3)*,**	261 (1.7)*,**	263 (1.9)	262 (2.0)*	260 (2.1)*,**	267 (1.2)
Colorado	267 (0.9)*,**	272 (1.0)*,**	276 (1.1)*,**	–	–	283 (1.1)
Connecticut	270 (1.0)*,**	274 (1.1)*,**	280 (1.1)*,**	282 (1.4)	281 (1.3)	284 (1.2)
Delaware	261 (0.9)*,**	263 (1.0)*,**	267 (0.9)*,**	–	–	277 (0.7)
Florida	255 (1.2)*,**	260 (1.5)*,**	264 (1.8)*,**	–	–	271 (1.5)
Georgia	259 (1.3)*,**	259 (1.2)*,**	262 (1.6)*,**	266 (1.3)	265 (1.2)*,**	270 (1.2)
Hawaii	251 (0.8)*,**	257 (0.9)*,**	262 (1.0)*,**	263 (1.3)	262 (1.4)*	266 (0.8)
Idaho	271 (0.8)*,**	275 (0.7)*,**	–	278 (1.3)	277 (1.0)*	280 (0.9)
Illinois	261 (1.7)*,**	–	–	277 (1.6)	275 (1.7)	277 (1.2)
Indiana	267 (1.2)*,**	270 (1.1)*,**	276 (1.4)*,**	283 (1.4)	281 (1.4)	281 (1.1)
Iowa	278 (1.1)*,**	283 (1.0)	284 (1.3)	–	–	284 (0.8)
Kansas	–	–	–	284 (1.4)	283 (1.7)	284 (1.3)
Kentucky	257 (1.2)*,**	262 (1.1)*,**	267 (1.1)*,**	272 (1.4)	270 (1.3)*,**	274 (1.2)
Louisiana	246 (1.2)*,**	250 (1.7)*,**	252 (1.6)*,**	259 (1.5)*,**	259 (1.5)*,**	266 (1.5)
Maine	–	279 (1.0)*,**	284 (1.3)	284 (1.2)	281 (1.1)	282 (0.9)
Maryland	261 (1.4)*,**	265 (1.3)*,**	270 (2.1)*,**	276 (1.4)	272 (1.7)*,**	278 (1.0)
Massachusetts	–	273 (1.0)*,**	278 (1.7)*,**	283 (1.3)*	279 (1.5)*,**	287 (0.9)
Michigan	264 (1.2)*,**	267 (1.4)*,**	277 (1.8)	278 (1.6)	277 (1.9)	276 (2.0)
Minnesota	275 (0.9)*,**	282 (1.0)*,**	284 (1.3)*,**	288 (1.4)	287 (1.4)*	291 (1.1)
Mississippi	–	246 (1.2)*,**	250 (1.2)*,**	254 (1.3)*,**	254 (1.1)*,**	261 (1.1)
Missouri	–	271 (1.2)*,**	273 (1.4)*,**	274 (1.5)*,**	271 (1.5)*,**	279 (1.1)
Montana	280 (0.9)*,**	–	283 (1.3)	287 (1.2)	285 (1.4)	286 (0.8)
Nebraska	276 (1.0)*,**	278 (1.1)*,**	283 (1.0)	281 (1.1)	280 (1.2)	282 (0.9)
Nevada	–	–	–	268 (0.9)	265 (0.8)*,**	268 (0.8)
New Hampshire	273 (0.9)*,**	278 (1.0)*,**	–	–	–	286 (0.8)
New Jersey	270 (1.1)*,**	272 (1.6)*,**	–	–	–	281 (1.1)
New Mexico	256 (0.7)*,**	260 (0.9)*,**	262 (1.2)	260 (1.7)	259 (1.3)*,**	263 (1.0)
NewYork	261 (1.4)*,**	266 (2.1)*,**	270 (1.7)*,**	276 (2.1)	271 (2.2)*,**	280 (1.1)
North Carolina	250 (1.1)*,**	258 (1.2)*,**	268 (1.4)*,**	280 (1.1)	276 (1.3)*,**	281 (1.0)
North Dakota	281 (1.2)*,**	283 (1.1)*,**	284 (0.9)*,**	283 (1.1)*,**	282 (1.1)*,**	287 (0.8)
Ohio	264 (1.0)*,**	268 (1.5)*,**	–	283 (1.5)	281 (1.6)	282 (1.3)
Oklahoma	263 (1.3)*,**	268 (1.1)*,**	–	272 (1.5)	270 (1.3)	272 (1.1)
Oregon	271 (1.0)*,**	–	276 (1.5)*,**	281 (1.6)	280 (1.5)	281 (1.3)
Pennsylvania	266 (1.6)*,**	271 (1.5)*,**	–	–	–	279 (1.1)
Rhode Island	260 (0.6)*,**	266 (0.7)*,**	269 (0.9)*,**	273 (1.1)	269 (1.3)*	272 (0.7)
South Carolina	–	261 (1.0)*,**	261 (1.5)*,**	266 (1.4)*,**	265 (1.5)*,**	277 (1.3)
South Dakota	–	–	–	–	–	285 (0.8)
Tennessee	–	259 (1.4)*,**	263 (1.4)*,**	263 (1.7)	262 (1.5)*,**	268 (1.8)
Texas	258 (1.4)*,**	265 (1.3)*,**	270 (1.4)*,**	275 (1.5)	273 (1.6)	277 (1.1)
Utah	–	274 (0.7)*,**	277 (1.0)*,**	275 (1.2)*,**	274 (1.2)*,**	281 (1.0)
Vermont	–	–	279 (1.0)*,**	283 (1.1)	281 (1.5)*,**	286 (0.8)
Virginia	264 (1.5)*,**	268 (1.2)*,**	270 (1.6)*,**	277 (1.5)*	275 (1.3)*,**	282 (1.3)
Washington	–	–	276 (1.3)*,**	–	–	281 (0.9)
West Virginia	256 (1.0)*,**	259 (1.0)*,**	265 (1.0)*,**	271 (1.0)	266 (1.2)*,**	271 (1.2)
Wisconsin	274 (1.3)*,**	278 (1.5)*,**	283 (1.5)	–	–	284 (1.3)
Wyoming	272 (0.7)*,**	275 (0.9)*,**	275 (0.9)*,**	277 (1.2)*,**	276 (1.0)*,**	284 (0.7)
Other jurisdictions						
District of Columbia	231 (0.9)*,**	235 (0.9)*,**	233 (1.3)*,**	234 (2.2)*,**	235 (1.1)*,**	243 (0.8)
DDESS[2]	–	–	269 (2.3)*,**	277 (2.3)	274 (1.8)*,**	282 (1.5)
DoDDS[3]	–	–	275 (0.9)*,**	278 (1.0)*,**	278 (1.1)*,**	286 (0.7)

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Standard errors of the estimated scale scores appear in parentheses. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table A.27 Percentage of students at or above *Proficient* and standard errors, by race/ethnicity, grade 8 public schools: By state, 1990–2003

Grade 8	White						Black					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public) [1]	18(1.4) *	25(1.2) *	29(1.5) *	33(1.3)	33(1.1) *	36(0.4)	5(1.1)	2(0.7) *	4(0.9) *	5(0.6) *	5(0.7) *	7(0.3)
Alabama	12(0.9) *,**	15(1.3) *,**	18(2.7)	22(2.0)	23(1.9)	23(1.9)	2(0.6)	1(0.4) *,**	2(0.4)	3(0.9)	3(0.9)	3(0.6)
Alaska	–	–	36(1.9)	–	–	41(1.6)	–	–	‡	–	–	11(3.7)
Arizona	18(1.2) *,**	20(1.7) *,**	24(1.5) *,**	29(2.2)	28(2.0)	32(1.6)	4(2.0)	5(3.1)	6(2.8)	7(3.0)	7(3.1)	7(3.2)
Arkansas	12(0.9) *,**	13(0.9) *,**	16(1.2) *,**	18(1.5) *	18(1.0) *,**	24(1.4)	1(0.3) *	2(0.8)	2(1.0)	2(0.6)	2(0.6)	3(1.0)
California	18(1.9) *,**	23(2.0) *,**	26(2.2) *,**	26(2.0) *	26(2.4)	34(1.8)	2(1.1)	2(1.4)	7(4.4)	4(1.7)	4(2.1)	6(1.5)
Colorado	20(1.2) *,**	26(1.3) *,**	30(1.3) *,**	–	–	43(1.6)	2(1.2) !	4(2.7)	8(3.2)	–	–	9(3.4)
Connecticut	26(1.1) *,**	32(1.2) *,**	37(1.6) *,**	43(1.9)	42(1.5)	44(1.7)	4(1.6)	3(1.2)	4(1.1)	4(1.2)	4(1.2)	7(1.9)
Delaware	18(1.0) *,**	20(1.2) *,**	24(1.3) *,**	–	–	35(1.2)	4(1.0) *,**	3(1.1) *,**	3(1.1) *,**	–	–	8(1.6)
Florida	16(1.3) *,**	21(1.6) *,**	25(1.8) *,**	–	–	34(2.0)	2(0.8) *,**	3(0.8) *,**	2(1.0) *,**	–	–	7(1.3)
Georgia	19(1.6) *,**	18(1.4) *,**	24(2.6) *,**	28(1.5)	27(1.7)	32(1.8)	3(0.7) *,**	3(0.6) *,**	3(0.7) *,**	4(0.9)	4(0.8)	7(0.9)
Hawaii	16(2.7) *,**	16(2.0) *,**	24(3.5)	25(2.8)	22(2.4)	25(2.6)	‡	‡	‡	‡	‡	‡
Idaho	19(1.2) *,**	23(1.2) *,**	–	29(1.8)	28(1.4)	31(1.1)	‡	‡	–	‡	‡	‡
Illinois	18(1.6) *,**	–	–	37(1.8)	35(2.2)	40(2.0)	3(1.1)	–	–	7(2.0)	8(1.9)	6(1.5)
Indiana	18(1.1) *,**	22(1.3) *,**	27(1.7) *,**	34(1.8)	32(2.0)	35(1.2)	2(0.9)	3(1.4)	3(1.0)	7(3.5) !	7(2.7) !	7(2.9)
Iowa	26(1.5) *,**	32(1.3) *	32(1.8)	–	–	35(1.3)	‡	‡	11(4.1) !	–	–	11(3.9)
Kansas	–	–	–	37(2.2)	36(2.0)	39(1.6)	–	–	–	12(4.7)	10(5.1)	8(1.9)
Kentucky	11(0.9) *,**	15(1.1) *,**	17(1.3) *,**	22(1.5)	22(1.5)	25(1.4)	2(0.9)	4(1.7)	2(‡)	7(2.6)	6(1.8)	5(1.9)
Louisiana	8(1.1) *,**	12(1.5) *,**	12(1.5) *,**	19(1.9) *,**	18(1.8) *,**	28(1.9)	1(0.4) *,**	1(0.4) *,**	2(0.6) *,**	2(0.7) *	2(0.8) *	5(1.0)
Maine	–	26(1.6)	31(1.7)	32(1.4)	31(1.6)	30(1.3)	–	14(3.5) !	‡	‡	‡	‡
Maryland	22(1.4) *,**	28(1.7) *,**	34(2.8)	40(1.8)	38(1.7)	40(1.6)	3(0.8) *,**	3(0.9) *,**	4(0.9) *,**	7(1.1)	6(1.1)	9(1.4)
Massachusetts	–	26(1.4) *,**	31(2.1) *,**	36(1.3) *,**	34(1.4) *,**	44(1.3)	–	6(2.2)	8(2.9)	9(3.8)	9(3.5)	10(1.7)
Michigan	18(1.2) *,**	23(1.8) *,**	34(1.8)	34(2.0)	34(2.2)	35(1.8)	1(0.6) *,**	2(0.5)	5(2.0)	2(0.9)	3(1.2)	4(1.1)
Minnesota	24(1.2) *,**	32(1.2) *,**	36(1.9) *,**	41(1.5) *,**	41(1.6) *,**	49(1.5)	7(2.9) !	‡	5(3.3)	‡	‡	9(2.4)
Mississippi	–	12(1.2) *,**	13(1.5) *,**	14(1.2) *,**	14(1.4) *,**	22(2.0)	–	1(0.4) *,**	1(0.3) *,**	1(0.4) *	1(0.5) *	3(0.7)
Missouri	–	22(1.3) *,**	24(1.6) *,**	25(1.5) *,**	25(1.4) *,**	32(1.3)	–	3(0.9) *	4(1.7)	4(1.4)	3(1.6)	6(1.5)
Montana	28(1.5) *,**	–	35(1.4)	40(1.7)	39(1.6)	37(1.3)	‡	–	‡	‡	‡	‡
Nebraska	26(1.3) *,**	28(1.7) *,**	33(1.5)	34(1.6)	33(1.8)	36(1.6)	2(‡)	2(1.3)	6(3.0)	6(3.2)	6(2.4)	7(2.8)
Nevada	–	–	–	25(1.2)	24(1.1)	27(1.1)	–	–	–	6(2.2)	5(1.4)	9(2.3)
New Hampshire	20(1.1) *,**	25(1.3) *,**	–	–	–	35(1.2)	‡	‡	–	–	–	‡
New Jersey	26(1.5) *,**	30(1.8) *,**	–	–	–	42(1.7)	4(1.3)	3(1.0)	–	–	–	7(1.6)
New Mexico	19(1.9) *,**	18(1.4) *,**	26(1.8)	24(1.9) *	23(2.0) *,**	31(1.7)	‡	‡	‡	‡	‡	5(2.6)
New York	21(1.4) *,**	27(1.6) *,**	30(1.8) *,**	35(2.1) *,**	33(2.4) *,**	44(2.0)	3(0.9) *,**	4(1.4) *,**	4(1.6) *,**	9(2.9)	8(2.9)	10(1.3)
North Carolina	12(1.0) *,**	16(1.2) *,**	27(1.6) *,**	40(1.5) *	37(1.8) *,**	44(1.4)	2(0.7) *,**	3(0.8) *,**	5(0.9) *,**	7(1.1) *	7(1.2) *	11(1.4)
North Dakota	29(1.7) *,**	30(1.7) *,**	35(1.5) *	33(1.6) *,**	33(1.4) *,**	39(1.1)	‡	‡	‡	‡	‡	‡
Ohio	16(1.2) *,**	21(1.5) *,**	–	34(1.7)	34(1.4)	35(1.9)	2(1.1) *,**	2(0.7) *,**	–	7(2.2)	7(2.6)	8(1.5)
Oklahoma	16(1.4) *,**	19(1.3) *,**	–	22(1.3)	22(1.4)	25(1.3)	#(‡) **	2(1.0)	–	5(1.9)	5(2.0)	5(1.2)
Oregon	21(1.2) *,**	–	28(1.7) *,**	34(2.0)	34(1.9)	35(1.6)	‡	–	‡	‡	‡	17(4.7)
Pennsylvania	20(1.3) *,**	24(1.5) *,**	–	–	–	35(1.7)	3(1.2) !	4(2.4)	–	–	–	4(1.4)
Rhode Island	16(0.8) *,**	18(1.2) *,**	23(1.5) *,**	28(1.3)	26(1.3)	29(1.3)	2(1.1)	2(‡)	6(3.4)	6(2.5)	4(2.0)	5(1.6)
South Carolina	–	22(1.5) *,**	21(1.9) *,**	27(1.7) *,**	27(1.8) *,**	39(1.7)	–	3(0.6) *,**	3(0.7) *,**	4(0.9) *,**	4(0.8) *,**	8(0.9)
South Dakota	–	–	–	–	–	37(1.1)	–	–	–	–	–	‡
Tennessee	–	14(1.2) *,**	18(1.5) *,**	21(1.6) *	20(1.5) *	26(1.4)	–	2(0.7) *,**	3(1.2)	3(1.3)	3(1.0)	5(1.0)
Texas	20(1.6) *,**	27(1.7) *,**	32(1.8) *,**	35(2.0)	35(2.7)	38(2.0)	2(1.0) *,**	5(1.3)	4(1.6)	7(2.2)	7(2.1)	8(1.5)
Utah	–	23(1.2) *,**	26(1.3) *,**	27(1.2) *,**	27(1.2) *,**	34(1.5)	–	‡	‡	‡	‡	‡
Vermont	–	–	28(1.4) *,**	33(1.5)	31(1.5) *	35(1.1)	–	–	‡	‡	‡	‡
Virginia	21(1.9) *,**	23(1.2) *,**	27(1.4) *,**	32(1.7) *	32(1.5) *	40(2.4)	4(1.1) *,**	5(1.1) *,**	3(0.9) *,**	6(1.2) *	6(1.0) *	11(1.5)
Washington	–	–	29(1.4) *,**	–	–	36(1.6)	–	–	4(2.3) *,**	–	–	13(3.1)
West Virginia	9(0.8) *,**	10(0.8) *,**	14(0.9) *,**	18(0.9)	18(1.1)	20(1.3)	3(‡)	3(1.9)	2(1.6) !	7(3.1)	7(4.0)	6(3.5)
Wisconsin	25(1.5) *,**	29(1.4) *,**	36(1.9)	–	–	40(1.6)	3(1.6)	7(‡)	2(‡)	–	–	5(2.0)
Wyoming	20(1.1) *,**	22(1.1) *,**	23(1.0) *,**	26(1.2) *,**	25(1.1) *,**	35(1.1)	‡	‡	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	‡	‡	‡	64(8.6)	56(5.1)	‡	1(0.4) *,**	2(0.6)	3(0.7)	3(0.7)	3(0.6)	3(0.5)
DDESS [2]	–	–	31(4.9)	36(3.8)	36(3.2)	42(3.5)	–	–	8(3.0)	15(3.2)	12(3.5)	10(2.7)
DoDDS [3]	–	–	30(1.7) *,**	34(1.6) *,**	34(2.3) *	42(2.1)	–	–	7(1.5) *,**	9(1.7) *	10(2.8)	15(1.9)

See notes at end of table. ▶

Table A.27 Percentage of students at or above *Proficient* and standard errors, by race/ethnicity, grade 8 public schools: By state, 1990–2003 —Continued

Grade 8	Hispanic						Asian/Pacific Islander					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public) [1]	7 (2.1)	6 (1.0) *	8 (1.7)	8 (1.1)	8 (1.0) *	11 (0.5)	30 (6.8) !	43 (8.0)	‡	40 (4.4)	40 (4.8)	42 (1.4)
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	–	–	‡	–	–	11 (4.1)	–	–	‡	–	–	29 (3.9)
Arizona	3 (1.0) *,**	5 (1.9)	5 (1.0) *,**	7 (1.6)	6 (1.1)	9 (0.9)	‡	‡	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	7 (3.5) !	‡	‡	‡	‡	‡	‡
California	3 (0.7) *,**	3 (1.0) *,**	4 (0.8) *,**	7 (2.6)	6 (2.4)	8 (1.2)	19 (3.0) *,**	30 (3.7)	31 (4.2)	34 (6.2)	34 (4.6)	39 (4.0)
Colorado	4 (1.0) *,**	6 (1.3) *,**	8 (1.5)	–	–	12 (1.8)	‡	‡	36 (9.0)	–	–	38 (5.8)
Connecticut	2 (1.1) *,**	3 (1.3) *,**	7 (2.3)	7 (2.0)	7 (1.9)	11 (2.2)	‡	‡	33 (7.3)	‡	‡	51 (7.4)
Delaware	‡	‡	‡	–	–	11 (3.3)	‡	‡	‡	–	–	‡
Florida	7 (2.1) *,**	5 (1.6) *,**	8 (2.1) *,**	–	–	16 (2.2)	‡	‡	‡	–	–	41 (7.7)
Georgia	‡	‡	‡	‡	‡	14 (3.7)	‡	‡	‡	‡	‡	40 (8.7)
Hawaii	‡	‡	10 (3.9)	‡	‡	16 (4.7)	11 (0.8) *,**	14 (0.8)	15 (1.1)	15 (1.2)	15 (1.2)	15 (1.1)
Idaho	8 (3.0)	8 (2.7)	–	8 (2.6)	7 (2.0)	7 (2.0)	‡	‡	–	‡	‡	‡
Illinois	3 (1.4) *,**	–	–	9 (3.0)	11 (3.4)	9 (2.0)	31 (5.4) !*,**	–	–	‡	‡	58 (6.2)
Indiana	‡	‡	‡	‡	‡	9 (4.0)	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	–	–	10 (3.4)	‡	‡	‡	–	–	‡
Kansas	–	–	–	13 (4.1)	12 (3.3)	16 (3.1)	–	–	–	‡	‡	34 (8.3)
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Maryland	11 (3.8)	‡	‡	22 (7.6)	20 (7.0)	15 (3.6)	45 (6.7)	37 (6.4) *	65 (5.8) !	52 (5.7)	49 (7.0) !	56 (5.7)
Massachusetts	–	3 (1.8) !*,**	3 (1.8) *	10 (3.4)	8 (3.1)	9 (1.9)	–	‡	28 (6.1) *,**	50 (6.0)	44 (6.7)	57 (6.2)
Michigan	‡	10 (4.8) !	‡	‡	‡	14 (5.6) !	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	16 (5.4)	19 (5.5)	‡	31 (6.0) !	‡	‡	32 (4.8)
Mississippi	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Missouri	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Montana	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡
Nebraska	‡	10 (3.4) !	10 (4.5)	5 (2.3)	5 (2.2)	10 (2.6)	‡	‡	‡	‡	‡	‡
Nevada	–	–	–	8 (1.3)	8 (1.3)	7 (1.1)	–	–	–	29 (3.6)	25 (3.9)	31 (5.1)
New Hampshire	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Jersey	4 (1.3) *,**	4 (1.4) *,**	–	–	–	14 (2.4)	53 (7.0)	52 (6.2)	–	–	–	61 (4.4)
New Mexico	4 (0.7) *,**	4 (0.7) *,**	6 (1.3)	6 (1.1)	5 (0.9)	7 (0.7)	‡	‡	‡	‡	‡	‡
New York	5 (1.6) *,**	4 (1.8) *,**	5 (1.5) *,**	11 (2.3)	10 (2.6)	16 (2.7)	26 (6.0) !*	35 (8.5)	31 (6.8) !	39 (6.1) !	37 (7.9) !	41 (3.8)
North Carolina	‡	‡	‡	‡	‡	16 (4.2)	‡	‡	‡	‡	‡	48 (6.0)
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	‡	‡	–	‡	‡	18 (7.1)	‡	‡	–	‡	‡	‡
Oklahoma	‡	‡	–	11 (3.9) !	13 (3.7)	9 (3.1)	‡	‡	–	‡	‡	‡
Oregon	12 (4.0)	–	10 (4.3)	11 (6.9)	6 (2.1)	12 (2.8)	29 (6.8)	–	38 (5.8)	34 (7.6)	38 (8.2)	41 (6.5)
Pennsylvania	‡	‡	–	–	–	6 (3.2)	‡	‡	–	–	–	‡
Rhode Island	1 (0.8) *,**	2 (1.0) *	3 (1.6)	3 (1.9)	3 (1.4)	5 (1.5)	‡	‡	16 (5.7)	20 (6.9)	20 (4.4)	20 (5.4)
South Carolina	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	–	‡	–	–	–	–	–	‡
Tennessee	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Texas	4 (0.9) *,**	6 (1.1) *,**	7 (1.3) *,**	13 (1.7)	13 (1.8)	14 (1.4)	34 (6.6) !*,**	58 (6.9)	40 (18.5) !	43 (8.4)	44 (7.7)	58 (7.6) !
Utah	–	7 (2.5)	8 (3.3)	6 (2.3)	6 (2.5)	7 (2.1)	–	‡	‡	‡	20 (5.3)	25 (5.2)
Vermont	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
Virginia	‡	‡	‡	21 (5.6)	16 (4.3)	17 (3.7)	43 (6.1)	32 (5.3) *	35 (6.0)	49 (10.1)	44 (7.7)	48 (5.0)
Washington	–	–	7 (2.7) *,**	–	–	17 (3.0)	–	–	27 (4.1)	–	–	37 (3.7)
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	‡	‡	‡	–	–	16 (4.1)	‡	‡	‡	–	–	17 (4.9)
Wyoming	8 (3.2)	11 (3.5)	7 (2.6)	8 (3.1)	8 (3.4)	13 (3.2)	‡	‡	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	‡	11 (5.4)	4 (2.3)	6 (2.2)	5 (3.2)	3 (1.7)	‡	‡	‡	‡	‡	‡
DDESS [2]	–	–	18 (5.9)	18 (4.1)	13 (4.2)	19 (4.0)	–	–	‡	‡	‡	‡
DoDDS [3]	–	–	13 (3.6) *,**	21 (3.7)	20 (5.5)	29 (4.2)	–	–	24 (4.7) *,**	27 (4.0) *	25 (4.8) *	38 (3.2)

See notes at end of table. ▶

Table A.27 Percentage of students at or above *Proficient* and standard errors, by race/ethnicity, grade 8 public schools: By state, 1990–2003 —Continued

Grade 8	American Indian/Alaska Native						Other[4]					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public)[1]	‡	‡	‡	14 (4.7) !	13 (7.9) !	16 (1.3)	‡	8 (4.0) !*	‡	‡	‡	24 (2.5)
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	–	–	11 (2.9)	–	–	12 (1.3)	–	–	‡	–	–	‡
Arizona	# (‡) !	6 (2.9) !	7 (‡) !	‡	‡	7 (2.6)	‡	‡	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
California	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Colorado	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Connecticut	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Delaware	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Florida	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Georgia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Hawaii	‡	‡	‡	‡	‡	‡	10 (2.4)	13 (2.9)	10 (2.4)	15 (3.8)	14 (3.8)	15 (2.8)
Idaho	‡	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡
Illinois	‡	–	–	‡	‡	‡	‡	–	–	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Kansas	–	–	–	‡	‡	‡	–	–	–	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Maryland	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Massachusetts	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Michigan	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Mississippi	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Missouri	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Montana	9 (2.8)	–	17 (3.4)	11 (3.3) !	11 (3.4) !	15 (3.2)	‡	–	‡	‡	‡	‡
Nebraska	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Nevada	–	–	–	‡	11 (6.1)	‡	–	–	–	‡	‡	‡
New Hampshire	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Jersey	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Mexico	2 (0.9)	1 (‡)	7 (1.8)	5 (1.7) !	7 (1.8) !	3 (1.0)	‡	‡	‡	‡	‡	‡
New York	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
North Carolina	2 (‡) !**	‡	‡	‡	‡	13 (2.9) !	‡	‡	‡	‡	‡	‡
North Dakota	3 (‡) !	10 (4.6) !	7 (4.6) !	6 (4.0)	5 (1.8) !	11 (2.6)	‡	‡	‡	‡	‡	‡
Ohio	‡	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡
Oklahoma	5 (2.0) *,**	12 (3.3)	–	11 (2.1)	12 (2.4)	14 (2.1)	‡	‡	–	‡	‡	21 (6.6) !
Oregon	‡	–	‡	‡	‡	14 (5.8) !	‡	–	‡	‡	‡	‡
Pennsylvania	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
Rhode Island	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Carolina	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	–	9 (2.3)	–	–	–	–	–	‡
Tennessee	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Texas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Utah	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Vermont	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Washington	–	–	8 (3.5) !	–	–	17 (5.4)	–	–	‡	–	–	‡
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Wyoming	7 (3.6)	‡	5 (2.9)	‡	3 (‡) !	14 (4.2)	19 (7.8)	‡	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DDESS[2]	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
DoDDS[3]	–	–	‡	‡	‡	‡	–	–	27 (2.8) *,**	30 (3.4) *	29 (3.3) *	42 (4.3)

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
! Interpret data with caution. The nature of the sample does not allow accurate determination of the variability of the statistic.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
(‡) Reporting standards not met. Standard error estimates cannot be accurately determined.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
[4] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self report racial/ethnic information.

NOTE: Standard errors of the estimated scale scores appear in parentheses. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Using confidence intervals based on the standard errors provides a way to take into account the uncertainty associated with sample estimates and to make inferences about the population averages and percentages in a manner that reflects that uncertainty. An estimated sample average scale score plus or minus 1.96 standard errors approximates a 95 percent confidence interval for the corresponding population quantity. This statement means that one can conclude with an approximately 95 percent level of confidence that the average performance of the entire population of interest (e.g., all fourth-grade students in public and nonpublic schools) is within plus or minus 1.96 standard errors of the sample average.

For example, suppose that the average mathematics scale score of the students in a particular group was 256 with an estimated standard error of 1.2. An approximately 95 percent confidence interval for the population quantity would be as follows:

$$\text{Average} \pm 1.96 \text{ standard errors}$$

$$256 \pm 1.96 \times 1.2$$

$$256 \pm 2.4$$

$$(253.6,\ 258.4)$$

Thus, one can conclude with a 95 percent level of confidence that the average scale score for the entire population of students in that group is between 253.6 and 258.4. It should be noted that this example and the examples in the following sections are illustrative. More precise estimates carried out to one or more decimal places are used in the actual analyses.

Similar confidence intervals can be constructed for percentages, if the percentages are not extremely large or extremely small. Extreme percentages should be interpreted with caution. Adding or subtracting the standard errors associated with extreme percentages could cause the confidence interval to exceed 100 percent or fall below 0 percent, resulting in numbers that are not meaningful.

Analyzing Group Differences in Averages and Percentages

Statistical tests determine whether, based on the data from the groups in the sample, there is strong enough evidence to conclude that the averages or percentages are actually different for those groups in the population. If the evidence is strong (i.e., the difference is statistically significant), the report describes the group averages or percentages as being different (e.g., one group performed higher or lower than another group), regardless of whether the sample averages or percentages appear to be approximately the same. The reader is cautioned to rely on the results of the statistical tests rather than on the apparent magnitude of the difference between sample averages or percentages when determining whether the sample differences are likely to represent actual differences among the groups in the population.

To determine whether a real difference exists between the average scale scores (or percentages of a certain attribute) for two groups in the population, one needs to obtain an estimate of the degree of uncertainty associated with the difference between the averages (or percentages) of these groups for the sample. This estimate of the degree of uncertainty, called the "standard error of the difference" between the groups, is obtained by taking the square of each group's standard error, summing the squared standard errors, and taking the square root of that sum.

Standard Error of the Difference =

$$SE_{A-B} = \sqrt{(SE_A^2 + SE_B^2)}$$

The standard error of the difference can be used, just like the standard error for an individual group average or percentage, to help determine whether differences among groups in the population are real. The difference between the averages or percentages of the two groups plus or minus 1.96 standard errors of the difference represents an approximately 95 percent confidence interval. If the resulting interval includes zero, there is insufficient evidence to claim a real difference between the groups in the population. If the interval does not contain zero, the difference between the groups is statistically significant at the .05 level.

The following example of comparing groups addresses the problem of determining whether the average mathematics scale score of group A is higher than that of group B. The sample estimates of the average scale scores and estimated standard errors are as follows:

Group	Average Scale Score	Standard Error
A	218	0.9
B	216	1.1

The difference between the estimates of the average scale scores of groups A and B is two points (218–216). The standard error of this difference is

$$\sqrt{(0.9^2 + 1.1^2)} = 1.4$$

Thus, an approximately 95 percent confidence interval for this difference is plus or minus 1.96 standard errors of the difference:

$$2 \pm 1.96 \times 1.4$$

$$2 \pm 2.7$$

$$(-0.7, 4.7)$$

The value zero is within the confidence interval; therefore, there is insufficient evidence to conclude that group A outperformed group B.

The procedure above is appropriate to use when it is reasonable to assume that the groups being compared have been independently sampled for the assessment. Such an assumption is clearly warranted when comparing results across assessment years (e.g., comparing the 2000 and 2003 results for a particular state or subgroup) or when comparing results for one state with another. This is the approach used for NAEP reports when comparisons involving independent groups are made. The assumption of independence is violated to some degree when comparing group results for the nation or a particular state (e.g., comparing national 2003 results for males and females), since these samples of students have been drawn from the same schools. When the groups being compared do not share students (as is the case, for example, comparing males and females) the impact of this violation of the independence assumption on the outcome of the statistical tests is assumed to be small, and NAEP, by convention, has, for computational convenience, routinely applied the procedures described above to those cases as well.

When making comparisons of results for groups that share a considerable proportion of students in common, it is not appropriate to ignore such dependencies. In such cases, NAEP has used procedures appropriate to comparing dependent groups. When the dependence in group results is due to the overlap in samples (e.g., when a subgroup is being compared to a total group), a simple modification of the usual standard error of the difference formula can be used. The formula for such cases is

$$SE_{Total-Subgroup} = \sqrt{(SE^2_{Total} + SE^2_{Subgroup} - 2pSE^2_{Subgroup})}$$

where p is the proportion of the total group contained in the subgroup.[21] This formula was used for this report when a state or district was compared to the aggregate nation.

Conducting Multiple Tests

The procedures used to determine whether group differences in the samples represent actual differences among the groups in the population and the certainty ascribed to intervals (e.g., a 95 percent confidence interval) are based on statistical theory that assumes that only one confidence interval or test of statistical significance is being performed. However, there are times when many different groups are being compared (i.e., multiple sets of confidence intervals are being analyzed). In sets of confidence intervals, statistical theory indicates that the certainty associated with the entire set of intervals is less than that attributable to each individual comparison from the set. To hold the significance level for the set of comparisons at a particular level (e.g., .05), the standard methods must be adjusted by multiple comparison procedures.[22] One such procedure, the Benjamini-Hochberg False Discovery Rate (FDR) procedure, was used to control the certainty level.[23]

Unlike other multiple comparison procedures that control the familywise error rate (i.e., the probability of making even one false rejection in the set of comparisons), the FDR procedure controls the expected proportion of falsely rejected hypotheses. Furthermore, the FDR procedure used in NAEP is considered appropriately less conservative than familywise procedures for large families of comparisons.[24] Therefore, the FDR procedure is more suitable for multiple comparisons in NAEP than are other procedures.

To illustrate how the FDR procedure is used, consider the comparisons of current and previous years' average scale scores for the five groups presented in table A.28. The test statistic shown is the difference in average scale scores divided by the estimated standard error of the difference. (Rounding of the data occurs after the test is done.)

[21] This is a special form of the common formula for standard error of dependent samples. The standard formula can be found, for example, in Kish, L. (1995). *Survey Sampling.* New York: John Wiley and Sons, Inc.

[22] Miller, R. G. (1981). *Simultaneous Statistical Inference* (2nd ed.). New York: Springer-Verlag.

[23] Benjamini, Y., and Hochberg, Y. (1995). Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *Journal of the Royal Statistical Society,* Series B, no. 1, 289–300.

[24] Williams, V. S. L., Jones, L. V., and Tukey, J. W. (1999). Controlling Error in Multiple Comparisons with Examples From State-to-State Differences in Educational Achievement. *Journal of Educational and Behavioral Statistics, 24*(1), 42–69.

Table A.28 Example of False Discovery Rate comparisons of average scale scores for different groups of students

	Previous year		Current year		Previous year and current year			
	Average scale score	Standard error	Average scale score	Standard error	Differences in averages	Standard error of differences	Test statistic	Percent confidence[1]
Group 1	224	1.3	226	1.0	2.08	1.62	1.29	20
Group 2	187	1.7	193	1.7	6.31	2.36	2.68	1
Group 3	191	2.6	197	1.7	6.63	3.08	2.15	4
Group 4	229	4.4	232	4.6	3.24	6.35	0.51	62
Group 5	201	3.4	196	4.7	-5.51	5.81	-0.95	35

[1]The percent confidence is 2(1-F(x)) where F(x) is the cumulative distribution of the t-distribution with the degrees of freedom adjusted to reflect the complexities of the sample design.

The difference in average scale scores and its estimated standard error can be used to find an approximately 95 percent confidence interval or they can be used to identify a confidence percentage. The confidence percentage for the test statistics is identified from statistical tables. The significance level from the statistical tables can be directly compared to 100 − 95 = 5 percent.

If the comparison of average scale scores across two years was made for only one of the five groups, there would be a significant difference between the average scale scores for the two years at a significance level of less than 5 percent. However, because we are interested in the difference in average scale scores across the two years for all five of the groups, comparing each of the significance levels to 5 percent is not adequate. Groups of students defined by shared characteristics, such as racial/ethnic groups, are treated as sets or families when making comparisons. However, comparisons of average scale scores for each pair of years were treated separately. The steps described in this example would be replicated for the comparison of other current and previous year average scale scores.

Using the FDR procedure to take into account that all comparisons are of interest to us, the percents of confidence in the example are ordered from largest to smallest: 62, 35, 20, 4, and 1. In the FDR procedure, 62 percent confidence for the group 4 comparison would be compared to 5 percent, 35 percent for the group 5 comparison would be compared to $0.05 \times (5-1)/5 = 0.04 = 4$ percent,[25] 20 percent for the group 1 comparison would be compared to $0.05 \times (5-2)/5 = 0.03 = 3$ percent, 4 percent for the group 3 comparison would be compared to $0.05 \times (5-3)/5 = 0.02 = 2$ percent, and 1 percent for the group 2 comparison (actually slightly smaller than 1 prior to rounding) would be compared to $0.05 \times (5-4)/5 = 0.01 = 1$ percent. The procedure stops with the first contrast found to be significant. The last of these comparisons is the only one for which the percent confidence is smaller than the FDR procedure value. The difference between the current year's and previous years' average scale scores for the group 2 students is significant; for all of the other groups, average scale scores for current and previous year are not significantly different from one another. In practice, a very small number

[25] The level of confidence times the number of comparisons minus one divided by the number of comparisons is $0.05 \times (5-1)/5 = 0.04 = 4$ percent.

of counterintuitive results occur when the FDR procedures are used to examine between-year differences in subgroup results by jurisdiction. In those cases, results were not included in this report.

Understanding NAEP Reporting Groups

NAEP results are provided for groups of students defined by shared characteristics—gender, race/ethnicity, parental education, region of the country, type of school, school's type of location, and eligibility for free/reduced-price school lunch. Based on participation rate criteria, results are reported for subpopulations only when sufficient numbers of students and adequate school representation are present. The minimum requirement is at least 62 students in a particular subgroup from at least five primary sampling units (PSUs).[26] However, the data for all students, regardless of whether their subgroup was reported separately, were included in computing overall results. Definitions of the subpopulations are presented below.

Gender: Results are reported separately for male students and female students.

Race/Ethnicity: In all NAEP assessments, data about student race/ethnicity is collected from two sources: school records and student self-reports. Prior to 2002, NAEP used students' self-reported race as the primary race/ethnicity reporting variable. As of 2002, the race/ethnicity variable presented in NAEP reports is based on the race reported by the school. When school-recorded information is missing, student-reported data are used to determine race/ethnicity. The mutually exclusive racial/ethnic categories are White, Black, Hispanic, Asian/Pacific Islander, American Indian (including Alaska Native), and Other. Information based on student self-reported race/ethnicity is available on the NAEP Data Tool (http://nces.ed.gov/nationsreportcard/naepdata/).

Parental Education: Eighth-graders were asked the following two questions, the responses to which were combined to derive the parental education variable.

How far in school did your mother go?

- She did not finish high school.
- She graduated from high school.
- She had some education after high school.
- She graduated from college.
- I don't know.

Students were also asked

How far in school did your father go?

- He did not finish high school.
- He graduated from high school.
- He had some education after high school.
- He graduated from college.
- I don't know.

The information was combined into one parental education reporting variable in the following way: if a student indicated the extent of education for only one parent, that level was included in the data. If a student indicated the extent of education for both parents, the higher of the two levels was included in the data. If a student responded "I don't know" for both parents, or responded "I don't know" for one parent and did not

[26] For the NAEP national assessments prior to 2002, a PSU is a selected geographic region (a county, group of counties, or metropolitan statistical area). Since 2002, the first-stage sampling units are schools (public and nonpublic) in the selection of the combined sample. Further details about the procedure for determining minimum sample size will appear in the technical documentation section of the NAEP web site (http://nces.ed.gov/nationsreportcard).

respond for the other, the parental education level was classified as "I don't know." If the student did not respond for either parent, the student was recorded as having provided no response.

Region of the Country: Prior to 2003, NAEP results were reported for four NAEP-defined regions of the nation: Northeast, Southeast, Central, and West. As of 2003, to align NAEP with other federal data collections, NAEP analysis and reports have used the U.S. Census Bureau's definition of "region". The four regions defined by the U.S. Census Bureau are Northeast, South, Midwest and West. The Midwest region defined by the Census includes the same states as the NAEP-defined Central region. The Northeast region defined by the Census is made up of the same states in the NAEP-defined region minus Delaware, the District of Columbia, Maryland, and the section of Virginia in the Washington, DC metropolitan area. The Census-defined West region includes the same states as the NAEP-defined West region except Oklahoma and Texas. The Census-defined South region includes all those states previously defined by NAEP as the Southeast region plus Delaware, the District of Columbia, Maryland, Oklahoma, Texas, and the section of Virginia in the Washington, DC metropolitan area. Due to this change in the region variable, no trend data for each region were provided in this report. Figure A.2 shows how states are subdivided into these census regions. All 50 states and the District of Columbia are listed. Other jurisdictions, including the two Department of Defense Educational Activities jurisdictions, are not assigned to any region.

Figure A.2 States within regions of the country defined by the U.S. Census Bureau

Northeast	South	Midwest	West
Connecticut	Alabama	Illinois	Alaska
Maine	Arkansas	Indiana	Arizona
Massachusetts	Delaware	Iowa	California
New Hampshire	District of Columbia	Kansas	Colorado
New Jersey	Florida	Michigan	Hawaii
New York	Georgia	Minnesota	Idaho
Pennsylvania	Kentucky	Missouri	Montana
Rhode Island	Louisiana	Nebraska	Nevada
Vermont	Maryland	North Dakota	New Mexico
	Mississippi	Ohio	Oregon
	North Carolina	South Dakota	Utah
	Oklahoma	Wisconsin	Washington
	South Carolina		Wyoming
	Tennessee		
	Texas		
	Virginia		
	West Virginia		

SOURCE: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau.

Type of School: Results are reported by the type of school that the student attends—public or nonpublic. Nonpublic schools include Catholic and other private schools.[27] Because they are funded by federal authorities (not state/local governments), Bureau of Indian Affairs (BIA) schools and Department of Defense Domestic Dependent Elementary and Secondary Schools (DDESS) are not included in either the public or nonpublic categories; they are included in the overall national results.

Type of Location: Results from the 2003 assessment are reported for students attending schools in three mutually exclusive location types: central city, urban fringe/large town, and rural/small town.

Central city: Following standard definitions established by the Federal Office of Management and Budget, the U.S. Census Bureau (see http://www.census.gov/) defines "central city" as the largest city of a Metropolitan Statistical Area (MSA) or a Consolidated Metropolitan Statistical Area (CMSA). Typically, an MSA contains a city with a population of at least 50,000 and includes its adjacent areas. An MSA becomes a CMSA if it meets the requirements to qualify as a Metropolitan Statistical Area, has a population of 1,000,000 or more, its component parts are recognized as primary metropolitan statistical areas, and local opinion favors the designation. In the NCES Common Core of Data (CCD), locale codes are assigned to schools. For the definition of central city used in this report, two locale codes of the survey are combined. The definition of each school's type of location is determined by the size of the place where the school is located and whether or not it is in an MSA or CMSA. School locale codes are assigned by the U.S. Census Bureau. For the definition of central city, NAEP reporting uses data from two CCD locale codes: large city (a central city of an MSA or CMSA with the city having a population greater than or equal to 25,000) and midsize city (a central city of an MSA or CMSA having a population less than 25,000). Central city is a geographical term and is not synonymous with "inner city."

Urban fringe/large town: The urban fringe category includes any incorporated place, census designated place, or nonplace territory within a CMSA or MSA of a large or mid-sized city and defined as urban by the U.S. Census Bureau, but which does not qualify as a central city. A large town is defined as a place outside a CMSA or MSA with a population greater than or equal to 25,000.

Rural/small town: Rural includes all places and areas with populations of less than 2,500 that are classified as rural by the U.S. Census Bureau. A small town is defined as a place outside a CMSA or MSA with a population of less than 25,000, but greater than or equal to 2,500. Results for each type of location are only compared across years 2000 and after. This is due to new methods used by NCES to identify the type of location assigned to each school in the Common Core of Data (CCD). The new methods were put into place by NCES in order to improve the quality of the assignments, and they take into account more information about the exact physical location of the school. The variable was revised in NAEP beginning with the 2000 assessments.

[27] A more detailed breakdown of nonpublic school results is available on the NAEP web site (http://nces.ed.gov/nationsreportcard/naepdata/).

Eligibility for Free/Reduced-Price School Lunch: As part of the Department of Agriculture's National School Lunch Program, schools can receive cash subsidies and donated commodities in turn for offering free or reduced-price lunches to eligible children. Based on available school records, students were classified as either currently eligible for free/reduced-price school lunch or not eligible. Eligibility for the program is determined by students' family income in relation to the federally established poverty level. Free lunch qualification is set at 130 percent of the poverty level, and reduced-price lunch qualification is set at between 130 and 185 percent of the poverty level. Additional information on eligibility may be found at the Department of Agriculture web site (http://www.fns.usda.gov/cnd/lunch/). The classification applies only to the school year when the assessment was administered (i.e., the 2002–2003 school year) and is not based on eligibility in previous years. If school records were not available, the student was classified as "Information not available." If the school did not participate in the program, all students in that school were classified as "Information not available."

Caution in Interpretations

As previously stated, the NAEP mathematics scale makes it possible to examine relationships between students' performance and various background factors measured by NAEP. However, a relationship that exists between achievement and another variable does not reveal its underlying cause, which may be influenced by a number of other variables. Similarly, the assessments do not reflect the influence of unmeasured variables. The results are most useful when they are considered in combination with other knowledge about the student population and the educational system, such as trends in instruction, changes in the school-age population, and societal demands and expectations. A caution is also warranted for some small population group estimates. At times in this report, smaller population groups show very large increases or decreases across years in average scores; however, it is necessary to interpret such score gains with extreme caution. The effects of exclusion-rate changes may be more marked for small subgroups than they are for the whole population. Another reason for caution is that the standard errors are often quite large around the score estimates for small groups, which in turn means the standard error around the gain is also large.

B Appendix B

Subgroup Percentage Appendix

Appendix B presents the percentages of students in each of the subgroups reported for the nation, states, and other jurisdictions, and other selected urban districts. There has been a shift in race/ethnicity composition of the student population and students participating in NAEP. The percentage of Hispanic students increased from 6 percent in 1990 to 18 percent in 2003 at grade 4, and from 7 percent to 15 percent at grade 8. The percentages of White students decreased from 75 percent in 1990 to 60 percent in 2003 at grade 4, and from 73 percent to 63 percent at grade 8. The percentage of Black students, which has changed less over the years, was approximately 17 percent in 2003 at grade 4 and 16 percent at grade 8.

Table B.1 Weighted percentage of students, by region of the country, grades 4 and 8: 2003

		2003
Grade 4		
	Northeast	18
	Midwest	23
	South	36
	West	24
Grade 8		
	Northeast	18
	Midwest	23
	South	36
	West	23

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table B.2 Weighted percentage of students, by gender, grades 4 and 8: 1990–2003

		Accommodations not permitted				Accommodations permitted		
		1990	1992	1996	2000	1996	2000	2003
Grade 4								
	Male	52	50	51	51	50	51	51
	Female	48	50	49	49	50	49	49
Grade 8								
	Male	51	51	52	51	51	50	50
	Female	49	49	48	49	49	50	50

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.3 Weighted percentage of students, by race/ethnicity, grades 4 and 8: 1990–2003

	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 4							
White	75	73	72	69	66	64	60
Black	18	17	16	16	16	16	17
Hispanic	6	6	8	10	11	15	18
Asian/Pacific Islander	1	2	3	‡	5	‡	4
American Indian/Alaska Native	1	1	1	1	1	1	1
Other[1]	#	1	1	1	1	1	1
Grade 8							
White	73	73	71	70	69	65	63
Black	16	16	15	14	17	16	16
Hispanic	7	8	9	11	10	13	15
Asian/Pacific Islander	2	2	‡	4	‡	4	4
American Indian/Alaska Native	1	1	1	1	1	2	1
Other[1]	#	1	#	1	#	1	1

The estimate rounds to zero.
‡ Reporting standards not met. Special analyses raised concerns about the accuracy and precision of national grade 8 Asian/Pacific Islander results in 1996 and grade 4 Asian/Pacific Islander results in 2000. As a result, they are omitted from this report.
[1] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.4 Weighted percentage of students, by eligibility for free/reduced-price school lunch, grades 4 and 8: 1996–2003

	Accommodations not permitted		Accommodations permitted		
	1996	2000	1996	2000	2003
Grade 4					
Eligible	31	32	34	36	40
Not eligible	53	49	51	47	50
Information not available	16	18	15	16	10
Grade 8					
Eligible	27	26	27	29	33
Not eligible	55	53	54	51	55
Information not available	17	21	19	20	11

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Table B.5 Weighted percentages of students, by eligibility for free/reduced-price school lunch and race/ethnicity, grades 4 and 8: 2003

	Eligible	Not eligible	Information not available
Grade 4			
White	23	65	12
Black	70	24	6
Hispanic	71	23	7
Asian/Pacific Islander	35	53	12
American Indian/Alaska Native	65	28	7
Grade 8			
White	19	69	12
Black	61	31	8
Hispanic	64	27	9
Asian/Pacific Islander	34	51	15
American Indian/Alaska Native	56	37	7

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table B.6 Weighted percentage of students, by student-reported parents' highest level of education, grade 8: 1990–2003

	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 8							
Less than high school	9	8	7	7	7	7	7
Graduated high school	24	24	22	20	23	20	17
Some education after high school	17	18	19	18	18	18	17
Graduated college	41	42	42	45	42	43	48
Unknown	9	9	11	11	10	12	11

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.7 Weighted percentage of students, by type of school, grades 4 and 8: 1990–2003

	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 4							
Public	89	88	89	89	89	90	90
Nonpublic	11	12	11	11	11	10	10
Catholic	7	8	7	6	8	5	5
Other	4	4	4	5	3	5	5
Grade 8							
Public	92	89	89	90	90	91	91
Nonpublic	8	11	11	10	10	9	9
Catholic	5	6	6	5	7	5	5
Other	3	5	4	4	3	4	4

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.8 Weighted percentages of students, by parents' highest level of education and type of school, grade 8: 2003

	Less than high school	Graduated high school	Some education after high school	Graduated college	Unknown
Grade 8					
Public	7	18	18	45	11
Nonpublic	1	9	13	71	5

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessments.

Table B.9 Weighted percentage of students, by type of location, grades 4 and 8: 2000–2003

	Accommodations not permitted	Accommodations permitted	
	2000	2000	2003
Grade 4			
Central city	31	32	31
Urban fringe/large town	46	46	41
Rural/small town	23	22	28
Grade 8			
Central city	30	31	29
Urban fringe/large town	45	44	42
Rural/small town	25	25	29

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2003 Mathematics Assessments.

Table B.10 Weighted percentage of students, by gender, grade 4 public schools: By state, 1992–2003

Grade 4	Male					Female				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)	50	51	51	51	51	50	49	49	49	49
Alabama	51	50	50	51	51	49	50	50	49	49
Alaska	–	50	–	–	52	–	50	–	–	48
Arizona	51	51	52	53	50	49	49	48	47	50
Arkansas	53	50	51	51	51	47	50	49	49	49
California	52	51	50	51	51	48	49	50	49	49
Colorado	50	51	–	–	51	50	49	–	–	49
Connecticut	49	50	51	52	51	51	50	49	48	49
Delaware	51	50	–	–	50	49	50	–	–	50
Florida	48	52	–	–	52	52	48	–	–	48
Georgia	51	50	48	49	51	49	50	52	51	49
Hawaii	49	53	49	49	50	51	47	51	51	50
Idaho	49	–	50	50	51	51	–	50	50	49
Illinois	–	–	50	52	52	–	–	50	48	48
Indiana	50	49	50	51	50	50	51	50	49	50
Iowa	51	51	50	52	52	49	49	50	48	48
Kansas	–	–	51	51	52	–	–	49	49	48
Kentucky	49	52	49	50	52	51	48	51	50	48
Louisiana	52	50	51	51	50	48	50	49	49	50
Maine	49	50	50	51	51	51	50	50	49	49
Maryland	50	50	49	51	51	50	50	51	49	49
Massachusetts	51	52	50	50	51	49	48	50	50	49
Michigan	52	51	50	51	52	48	49	50	49	48
Minnesota	50	51	49	50	53	50	49	51	50	47
Mississippi	52	50	48	48	48	48	50	52	52	52
Missouri	52	50	49	50	50	48	50	51	50	50
Montana	–	53	51	52	52	–	47	49	48	48
Nebraska	51	52	49	49	51	49	48	51	51	49
Nevada	–	50	51	51	52	–	50	49	49	48
New Hampshire	50	–	–	–	52	50	–	–	–	48
New Jersey	51	49	–	–	52	49	51	–	–	48
New Mexico	47	48	50	50	51	53	52	50	50	49
New York	52	50	48	49	50	48	50	52	51	50
North Carolina	51	50	49	50	50	49	50	51	50	50
North Dakota	53	50	51	51	52	47	50	49	49	48
Ohio	51	–	50	50	51	49	–	50	50	49
Oklahoma	51	–	48	50	50	49	–	52	50	50
Oregon	–	50	50	51	52	–	50	50	49	48
Pennsylvania	53	51	–	–	50	47	49	–	–	50
Rhode Island	51	52	50	51	50	49	48	50	49	50
South Carolina	50	50	52	52	50	50	50	48	48	50
South Dakota	–	–	–	–	51	–	–	–	–	49
Tennessee	52	51	50	51	51	48	49	50	49	49
Texas	49	51	47	49	51	51	49	53	51	49
Utah	51	50	52	52	52	49	50	48	48	48
Vermont	–	51	49	50	50	–	49	51	50	50
Virginia	51	50	49	50	51	49	50	51	50	49
Washington	–	52	–	–	51	–	48	–	–	49
West Virginia	49	52	50	51	52	51	48	50	49	48
Wisconsin	51	51	–	–	52	49	49	–	–	48
Wyoming	50	50	53	53	52	50	50	47	47	48
Other jurisdictions										
District of Columbia	48	49	48	49	50	52	51	52	51	50
DDESS [1]	–	50	52	52	52	–	50	48	48	48
DoDDS [2]	–	50	50	51	51	–	50	50	49	49

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: State-level data were not collected in 1990. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.11 Weighted percentage of students, by gender, grade 8 public schools: By state, 1990–2003

Grade 8	Male						Female					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public)	51	52	52	50	50	50	49	48	48	50	50	50
Alabama	50	52	49	50	51	51	50	48	51	50	49	49
Alaska	–	–	52	–	–	51	–	–	48	–	–	49
Arizona	50	51	48	50	51	51	50	49	52	50	49	49
Arkansas	50	51	50	50	51	52	50	49	50	50	49	48
California	51	49	49	51	51	51	49	51	51	49	49	49
Colorado	51	51	51	–	–	51	49	49	49	–	–	49
Connecticut	48	50	51	52	53	49	52	50	49	48	47	51
Delaware	52	50	49	–	–	51	48	50	51	–	–	49
Florida	51	49	47	–	–	51	49	51	53	–	–	49
Georgia	51	48	50	48	50	50	49	52	50	52	50	50
Hawaii	53	52	52	51	52	50	47	48	48	49	48	50
Idaho	52	51	–	52	53	51	48	49	–	48	47	49
Illinois	52	–	–	51	52	50	48	–	–	49	48	50
Indiana	51	51	51	48	50	50	49	49	49	52	50	50
Iowa	50	52	52	–	–	52	50	48	48	–	–	48
Kansas	–	–	–	49	51	51	–	–	–	51	49	49
Kentucky	51	50	51	49	51	50	49	50	49	51	49	50
Louisiana	50	47	48	46	47	49	50	53	52	54	53	51
Maine	–	51	50	50	51	50	–	49	50	50	49	50
Maryland	51	50	50	50	52	50	49	50	50	50	48	50
Massachusetts	–	50	52	51	52	51	–	50	48	49	48	49
Michigan	52	48	50	49	50	49	48	52	50	51	50	51
Minnesota	50	49	51	50	50	50	50	51	49	50	50	50
Mississippi	–	48	48	51	51	49	–	52	52	49	49	51
Missouri	–	52	49	51	52	49	–	48	51	49	48	51
Montana	51	–	49	52	52	51	49	–	51	48	48	49
Nebraska	52	53	51	53	53	52	48	47	49	47	47	48
Nevada	–	–	–	49	50	49	–	–	–	51	50	51
New Hampshire	53	50	–	–	–	51	47	50	–	–	–	49
New Jersey	51	49	–	–	–	51	49	51	–	–	–	49
New Mexico	50	50	48	50	50	49	50	50	52	50	50	51
New York	49	49	50	46	48	51	51	51	50	54	52	49
North Carolina	51	50	48	49	51	50	49	50	52	51	49	50
North Dakota	51	51	51	52	52	53	49	49	49	48	48	47
Ohio	53	50	–	50	51	50	47	50	–	50	49	50
Oklahoma	50	50	–	51	52	52	50	50	–	49	48	48
Oregon	52	–	51	52	52	50	48	–	49	48	48	50
Pennsylvania	51	50	–	–	–	50	49	50	–	–	–	50
Rhode Island	50	50	49	51	52	52	50	50	51	49	48	48
South Carolina	–	50	47	49	50	51	–	50	53	51	50	49
South Dakota	–	–	–	–	–	51	–	–	–	–	–	49
Tennessee	–	50	50	49	50	51	–	50	50	51	50	49
Texas	50	49	47	51	51	51	50	51	53	49	49	49
Utah	–	52	50	49	49	52	–	48	50	51	51	48
Vermont	–	–	51	51	51	51	–	–	49	49	49	49
Virginia	49	50	50	49	50	50	51	50	50	51	50	50
Washington	–	–	51	–	–	50	–	–	49	–	–	50
West Virginia	52	49	50	51	52	51	48	51	50	49	48	49
Wisconsin	50	51	51	–	–	52	50	49	49	–	–	48
Wyoming	51	50	51	50	51	53	49	50	49	50	49	47
Other jurisdictions												
District of Columbia	47	49	47	47	47	47	53	51	53	53	53	53
DDESS [1]	–	–	52	50	51	51	–	–	48	50	49	49
DoDDS [2]	–	–	52	50	50	50	–	–	48	50	50	50

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.12 Weighted percentage of students, by race/ethnicity, grade 4 public schools: By state, 1992–2003

Grade 4	White					Black				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)	72	71	67	62	58	18	17	17	17	17
Alabama	65	65	58	58	61	34	34	39	39	36
Alaska	–	66	–	–	56	–	4	–	–	5
Arizona	62	62	56	55	50	4	4	4	4	4
Arkansas	75	76	70	69	69	24	23	26	28	25
California	50	44	38	37	32	7	9	10	10	7
Colorado	73	74	–	–	65	6	4	–	–	5
Connecticut	76	76	72	72	67	11	12	14	14	14
Delaware	70	66	–	–	56	25	28	–	–	33
Florida	63	59	–	–	50	24	24	–	–	25
Georgia	60	59	52	52	50	38	36	41	41	39
Hawaii	23	18	17	18	16	3	3	2	2	3
Idaho	92	–	84	85	83	#	–	1	1	1
Illinois	–	–	57	56	59	–	–	22	22	20
Indiana	87	88	88	87	80	11	9	8	9	12
Iowa	95	93	90	91	87	2	3	4	3	5
Kansas	–	–	79	79	78	–	–	9	8	11
Kentucky	90	89	87	86	85	9	10	11	12	12
Louisiana	53	52	53	53	44	45	44	44	44	53
Maine	98	98	97	96	97	#	1	1	1	1
Maryland	62	57	52	51	51	32	37	39	39	37
Massachusetts	83	82	78	77	73	8	7	7	7	11
Michigan	79	79	77	77	70	16	15	17	17	21
Minnesota	91	87	82	82	81	3	5	6	6	8
Mississippi	42	47	49	49	44	58	51	50	49	55
Missouri	83	80	79	80	77	15	17	17	17	18
Montana	–	85	86	87	86	–	#	#	#	1
Nebraska	90	88	83	81	80	6	7	6	6	7
Nevada	–	66	60	59	53	–	9	10	11	10
New Hampshire	96	–	–	–	94	1	–	–	–	2
New Jersey	69	60	–	–	58	16	23	–	–	18
New Mexico	45	45	38	37	31	4	3	2	2	3
New York	63	62	52	52	54	15	18	22	21	19
North Carolina	65	68	62	61	58	31	28	32	31	30
North Dakota	95	93	91	90	88	#	1	1	2	1
Ohio	86	–	80	80	77	12	–	17	17	19
Oklahoma	77	–	67	65	59	9	–	10	10	12
Oregon	–	85	81	81	75	–	2	3	3	3
Pennsylvania	81	83	–	–	74	14	11	–	–	20
Rhode Island	82	82	75	75	70	7	5	8	8	9
South Carolina	58	57	56	55	55	41	41	42	42	40
South Dakota	–	–	–	–	84	–	–	–	–	1
Tennessee	73	75	74	74	71	25	22	23	24	26
Texas	49	53	44	43	40	14	14	16	15	13
Utah	93	91	86	84	82	1	1	1	1	1
Vermont	–	97	97	98	95	–	1	1	#	2
Virginia	71	69	63	64	62	25	25	29	28	26
Washington	–	79	–	–	71	–	5	–	–	6
West Virginia	96	95	94	94	95	2	4	4	5	4
Wisconsin	87	84	–	–	76	6	10	–	–	12
Wyoming	90	89	89	89	86	1	2	1	1	1
Other jurisdictions										
District of Columbia	5	5	5	5	4	91	89	87	87	87
DDESS [1]	–	51	46	45	47	–	28	26	26	25
DoDDS [2]	–	49	47	48	48	–	20	18	18	22

See notes at end of table. ▶

Table B.12 Weighted percentage of students, by race/ethnicity, grade 4 public schools: By state, 1992–2003—Continued

Grade 4	Hispanic					Asian/Pacific Islander				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)	7	9	11	16	19	3	3	‡	‡	4
Alabama	#	#	1	1	1	#	#	1	1	1
Alaska	–	3	–	–	5	–	5	–	–	7
Arizona	23	24	27	33	38	1	2	3	3	2
Arkansas	#	1	3	3	4	1	#	1	1	1
California	30	34	37	40	49	12	11	12	10	11
Colorado	17	16	–	–	25	2	3	–	–	3
Connecticut	10	8	11	11	15	2	2	3	3	3
Delaware	2	4	–	–	7	1	2	–	–	3
Florida	12	16	–	–	21	1	1	–	–	2
Georgia	1	3	3	3	7	1	2	2	2	2
Hawaii	2	3	2	2	3	62	63	67	67	67
Idaho	6	–	11	11	13	1	–	1	1	1
Illinois	–	–	17	20	18	–	–	3	2	2
Indiana	2	2	2	3	4	1	#	1	1	1
Iowa	1	3	3	3	5	2	1	2	2	2
Kansas	–	–	8	9	8	–	–	1	1	2
Kentucky	#	#	1	1	1	#	#	1	1	1
Louisiana	1	2	1	2	1	2	1	1	1	1
Maine	#	1	#	#	1	1	1	1	2	1
Maryland	2	3	4	5	6	3	3	4	4	6
Massachusetts	4	7	9	10	12	4	3	4	4	4
Michigan	3	3	3	3	4	1	2	1	1	2
Minnesota	2	2	3	2	4	3	3	5	7	5
Mississippi	#	#	1	1	1	#	1	1	1	1
Missouri	1	1	1	2	3	1	1	1	1	1
Montana	–	2	2	2	2	–	1	1	1	1
Nebraska	3	3	7	9	9	#	1	1	1	1
Nevada	–	16	21	21	30	–	4	7	6	5
New Hampshire	1	–	–	–	3	1	–	–	–	1
New Jersey	11	11	–	–	16	5	5	–	–	7
New Mexico	45	42	47	50	53	1	1	1	1	1
New York	17	15	20	21	20	4	5	5	5	6
North Carolina	1	1	3	3	6	1	2	1	1	2
North Dakota	1	1	1	1	1	1	1	1	1	1
Ohio	1	–	2	2	2	1	–	1	1	1
Oklahoma	3	–	6	7	7	#	–	1	1	2
Oregon	–	6	9	9	14	–	5	4	4	4
Pennsylvania	3	4	–	–	5	2	2	–	–	2
Rhode Island	7	8	14	14	16	4	4	3	3	4
South Carolina	#	1	1	2	3	1	1	1	1	1
South Dakota	–	–	–	–	2	–	–	–	–	1
Tennessee	#	1	1	2	2	1	1	1	1	1
Texas	34	30	35	38	44	2	2	3	3	3
Utah	4	5	7	9	11	2	2	3	3	4
Vermont	–	#	1	#	1	–	1	1	1	2
Virginia	2	3	4	4	7	3	3	4	4	5
Washington	–	6	–	–	12	–	7	–	–	7
West Virginia	#	1	1	1	1	#	1	#	#	1
Wisconsin	2	3	–	–	8	2	2	–	–	3
Wyoming	6	6	8	7	8	1	1	1	1	1
Other jurisdictions										
District of Columbia	3	4	7	8	8	1	1	1	1	1
DDESS [1]	–	13	13	14	19	–	2	4	4	3
DoDDS [2]	–	7	5	6	11	–	8	9	8	10

See notes at end of table. ▶

Table B.12 Weighted percentage of students, by race/ethnicity, grade 4 public schools: By state, 1992–2003—Continued

Grade 4	American Indian/Alaska Native					Other[3]				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)	1	1	1	1	1	#	1	1	1	1
Alabama	1	1	#	#	1	#	#	#	#	#
Alaska	–	22	–	–	26	–	#	–	–	1
Arizona	10	8	9	5	6	#	1	#	#	#
Arkansas	#	#	#	#	#	#	#	#	#	#
California	1	1	1	1	#	1	1	2	2	#
Colorado	1	1	–	–	1	1	1	–	–	#
Connecticut	#	1	#	#	#	#	1	1	#	1
Delaware	#	#	–	–	#	#	#	–	–	#
Florida	#	#	–	–	#	#	#	–	–	2
Georgia	#	#	#	#	#	1	1	1	1	2
Hawaii	#	#	#	#	1	10	12	11	11	11
Idaho	1	–	1	1	1	#	–	2	1	#
Illinois	–	–	#	#	#	–	–	1	#	#
Indiana	#	#	#	#	#	#	#	1	1	2
Iowa	#	#	1	#	1	#	#	1	1	#
Kansas	–	–	2	1	1	–	–	2	2	#
Kentucky	#	#	#	#	#	#	#	1	1	1
Louisiana	#	2	#	#	1	#	#	#	#	#
Maine	#	#	1	1	#	#	#	#	#	#
Maryland	#	#	#	#	#	#	#	#	#	1
Massachusetts	#	#	#	#	#	#	1	1	1	#
Michigan	1	2	1	1	1	#	1	2	2	1
Minnesota	1	2	4	3	2	1	#	#	#	#
Mississippi	#	#	#	#	#	#	#	#	#	#
Missouri	#	1	#	#	#	#	#	1	1	#
Montana	–	12	11	10	10	–	#	#	#	#
Nebraska	1	#	3	3	2	#	#	#	#	#
Nevada	–	4	2	2	2	–	#	#	#	#
New Hampshire	#	–	–	–	#	1	–	–	–	#
New Jersey	#	#	–	–	1	#	1	–	–	#
New Mexico	4	8	11	9	11	1	1	1	1	1
New York	#	#	#	#	1	1	#	1	1	#
North Carolina	2	1	2	2	1	#	#	1	1	2
North Dakota	3	4	5	6	8	#	#	#	#	1
Ohio	#	–	#	#	#	#	–	1	1	2
Oklahoma	9	–	16	16	18	1	–	#	#	2
Oregon	–	2	1	1	2	–	1	1	1	2
Pennsylvania	#	#	–	–	#	#	1	–	–	1
Rhode Island	#	#	#	#	1	#	1	#	#	#
South Carolina	#	#	#	#	#	#	#	#	#	#
South Dakota	–	–	–	–	12	–	–	–	–	#
Tennessee	#	#	#	#	#	#	#	#	#	#
Texas	#	1	1	1	#	1	#	#	#	#
Utah	1	1	2	1	1	#	#	#	#	#
Vermont	–	#	#	#	#	–	#	#	#	#
Virginia	#	#	#	#	#	#	#	#	#	1
Washington	–	3	–	–	3	–	#	–	–	1
West Virginia	#	#	#	#	#	#	#	#	#	#
Wisconsin	2	2	–	–	2	#	#	–	–	#
Wyoming	2	2	1	3	3	#	#	#	#	#
Other jurisdictions										
District of Columbia	#	#	#	#	#	#	#	#	#	#
DDESS[1]	–	#	#	#	1	–	5	11	11	4
DoDDS[2]	–	1	1	1	1	–	16	20	19	9

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
[3] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: State-level data were not collected in 1990. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.13 Weighted percentage of students, by race/ethnicity, grade 8 public schools: By state, 1990–2003

Grade 8	White						Black					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public)	73	72	70	69	63	62	16	17	16	14	17	17
Alabama	67	64	61	65	66	62	32	35	36	33	33	36
Alaska	–	–	72	–	–	58	–	–	4	–	–	5
Arizona	62	64	64	59	58	50	3	4	3	5	4	4
Arkansas	75	75	77	72	71	72	24	23	21	24	26	24
California	49	50	43	38	37	37	7	7	9	8	9	9
Colorado	77	78	74	–	–	70	5	4	6	–	–	5
Connecticut	79	75	78	74	74	71	11	12	10	13	13	13
Delaware	70	68	69	–	–	60	26	28	26	–	–	31
Florida	64	59	57	–	–	50	22	25	24	–	–	27
Georgia	62	60	59	57	57	53	36	37	37	38	39	39
Hawaii	20	21	16	17	17	15	2	2	2	2	2	2
Idaho	93	92	–	88	88	85	#	#	–	1	1	1
Illinois	70	–	–	61	61	62	19	–	–	19	20	20
Indiana	87	89	86	85	85	82	9	9	10	9	10	12
Iowa	95	95	95	–	–	90	2	2	2	–	–	4
Kansas	–	–	–	85	84	79	–	–	–	6	7	9
Kentucky	90	90	89	87	87	88	9	9	9	11	11	9
Louisiana	57	55	54	53	52	51	40	42	42	44	44	46
Maine	–	97	98	97	97	97	–	1	1	1	1	1
Maryland	62	63	57	57	57	58	31	31	35	33	33	31
Massachusetts	–	85	82	79	79	77	–	5	7	8	7	8
Michigan	82	76	79	79	79	70	14	19	16	14	14	22
Minnesota	93	94	88	89	88	83	2	2	4	4	4	6
Mississippi	–	51	50	55	55	49	–	49	49	43	43	48
Missouri	–	85	85	82	83	82	–	13	13	14	15	15
Montana	91	–	87	89	90	87	#	–	#	#	#	1
Nebraska	92	90	90	87	87	84	5	5	5	4	4	5
Nevada	–	–	–	62	60	57	–	–	–	8	9	9
New Hampshire	98	96	–	–	–	95	#	1	–	–	–	1
New Jersey	69	64	–	–	–	61	17	19	–	–	–	18
New Mexico	42	47	40	38	38	34	2	2	3	2	2	3
New York	61	64	62	56	56	56	19	19	18	24	23	20
North Carolina	63	70	66	65	65	59	32	28	29	28	29	30
North Dakota	93	96	94	92	91	90	#	#	1	1	1	1
Ohio	84	82	–	85	85	79	12	15	–	12	13	17
Oklahoma	77	78	–	69	69	63	11	8	–	9	9	10
Oregon	91	–	87	84	82	79	2	–	2	2	2	3
Pennsylvania	82	85	–	–	–	80	14	11	–	–	–	15
Rhode Island	86	85	82	81	79	76	5	6	5	6	7	7
South Carolina	–	60	55	58	57	56	–	39	43	40	41	40
South Dakota	–	–	–	–	–	89	–	–	–	–	–	1
Tennessee	–	77	80	76	75	74	–	22	18	22	22	23
Texas	50	51	51	48	48	44	14	12	13	13	12	16
Utah	–	93	92	90	88	86	–	1	1	1	1	1
Vermont	–	–	96	97	96	97	–	–	1	1	1	1
Virginia	70	72	69	66	66	64	25	23	25	26	25	27
Washington	–	–	81	–	–	75	–	–	4	–	–	5
West Virginia	96	95	96	95	95	96	3	5	3	4	4	4
Wisconsin	88	88	86	–	–	84	9	7	7	–	–	8
Wyoming	86	91	90	91	90	89	1	1	1	1	1	1
Other jurisdictions												
District of Columbia	3	3	4	4	4	3	93	92	89	87	87	87
DDESS [1]	–	–	44	47	44	39	–	–	31	22	22	22
DoDDS [2]	–	–	47	47	47	48	–	–	21	20	20	21

See notes at end of table. ▶

Table B.13 Weighted percentage of students, by race/ethnicity, grade 8 public schools: By state, 1990–2003—Continued

Grade 8	Hispanic						Asian/Pacific Islander					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public)	7	8	9	11	14	15	2	2	‡	4	4	4
Alabama	#	#	#	1	1	1	1	#	1	#	#	1
Alaska	–	–	2	–	–	3	–	–	5	–	–	7
Arizona	26	24	25	30	32	37	2	1	2	3	2	2
Arkansas	1	1	1	3	2	3	1	#	1	1	1	1
California	30	32	34	40	41	39	12	10	11	12	12	13
Colorado	15	15	16	–	–	21	2	2	2	–	–	4
Connecticut	8	10	9	10	10	12	2	2	2	2	2	3
Delaware	2	3	3	–	–	6	1	2	2	–	–	2
Florida	12	14	16	–	–	19	2	2	2	–	–	2
Georgia	1	1	1	1	2	4	1	1	2	2	2	3
Hawaii	2	3	3	2	2	3	67	66	67	68	67	69
Idaho	4	5	–	9	8	11	1	1	–	1	1	1
Illinois	8	–	–	16	15	15	2	–	–	3	3	3
Indiana	2	1	3	4	3	3	1	1	1	1	1	1
Iowa	1	1	1	–	–	4	1	1	1	–	–	1
Kansas	–	–	–	6	5	9	–	–	–	2	2	2
Kentucky	#	#	1	#	1	1	1	1	1	1	1	1
Louisiana	1	1	1	2	2	2	1	1	1	1	1	1
Maine	–	#	#	1	1	1	–	1	1	1	1	1
Maryland	2	2	2	4	4	6	4	3	5	6	6	5
Massachusetts	–	7	7	7	8	10	–	2	4	4	4	4
Michigan	2	3	2	3	3	3	2	1	2	1	2	2
Minnesota	#	1	1	3	4	3	3	2	5	3	4	5
Mississippi	–	#	#	1	1	1	–	#	1	1	1	1
Missouri	–	1	1	1	1	2	–	1	1	1	1	1
Montana	1	–	1	1	1	2	1	–	1	1	1	1
Nebraska	2	3	4	5	6	7	1	1	1	1	1	2
Nevada	–	–	–	21	21	25	–	–	–	6	6	7
New Hampshire	1	1	–	–	–	2	1	1	–	–	–	1
New Jersey	9	11	–	–	–	14	4	5	–	–	–	6
New Mexico	42	45	45	46	48	51	2	1	1	1	2	1
New York	13	11	12	14	14	17	4	3	6	5	6	6
North Carolina	1	1	2	2	2	5	1	1	2	2	2	2
North Dakota	1	1	1	1	1	1	1	1	1	1	1	1
Ohio	1	1	–	1	1	2	1	1	–	1	1	1
Oklahoma	2	3	–	5	5	6	1	1	–	1	2	1
Oregon	3	–	4	6	8	10	3	–	3	4	4	4
Pennsylvania	2	2	–	–	–	3	1	1	–	–	–	2
Rhode Island	5	6	8	9	10	13	2	3	3	4	3	3
South Carolina	–	#	1	1	1	2	–	1	1	1	1	1
South Dakota	–	–	–	–	–	1	–	–	–	–	–	1
Tennessee	–	#	1	1	1	2	–	#	1	2	1	1
Texas	33	33	32	35	36	38	2	3	4	3	3	3
Utah	–	4	4	6	6	9	–	2	2	2	3	3
Vermont	–	–	1	1	1	#	–	–	1	1	1	1
Virginia	2	2	2	3	4	5	3	3	3	4	4	4
Washington	–	–	6	–	–	9	–	–	6	–	–	8
West Virginia	#	#	#	#	#	#	1	#	#	1	1	#
Wisconsin	1	2	3	–	–	4	2	1	2	–	–	4
Wyoming	6	5	5	6	5	7	1	#	1	1	1	1
Other jurisdictions												
District of Columbia	3	4	6	8	7	9	1	1	1	2	2	1
DDESS [1]	–	–	19	17	20	27	–	–	3	4	4	7
DoDDS [2]	–	–	8	7	7	10	–	–	8	9	9	11

See notes at end of table. ▶

Table B.13 Weighted percentage of students, by race/ethnicity, grade 8 public schools: By state, 1990–2003—Continued

Grade 8	American Indian/Alaska Native						Other[3]					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public)	1	1	1	1	1	1	#	1	#	#	1	1
Alabama	#	#	2	1	1	#	#	#	#	#	#	#
Alaska	–	–	16	–	–	25	–	–	#	–	–	2
Arizona	7	6	6	3	3	7	#	#	#	#	#	#
Arkansas	#	#	#	#	#	#	#	#	#	#	#	#
California	1	#	1	1	#	1	1	1	2	1	1	1
Colorado	1	1	1	–	–	1	#	1	#	–	–	#
Connecticut	#	#	#	#	#	#	1	1	#	1	1	1
Delaware	#	#	#	–	–	#	#	#	#	–	–	#
Florida	#	#	1	–	–	#	#	#	#	–	–	1
Georgia	#	#	#	#	#	#	#	1	#	1	1	1
Hawaii	#	#	#	1	1	#	9	8	12	10	10	11
Idaho	1	1	–	1	1	1	#	#	–	#	1	#
Illinois	#	–	–	#	#	#	#	–	–	1	1	#
Indiana	#	#	#	#	#	#	1	#	#	1	1	2
Iowa	#	#	#	–	–	#	#	#	#	–	–	#
Kansas	–	–	–	1	1	1	–	–	–	#	#	#
Kentucky	#	#	#	#	#	#	#	#	#	#	#	1
Louisiana	#	#	1	1	1	#	#	#	#	#	#	#
Maine	–	1	#	#	#	#	–	#	#	#	#	#
Maryland	#	#	#	#	#	#	#	#	#	#	#	#
Massachusetts	–	#	#	#	#	#	–	#	#	1	1	#
Michigan	1	1	1	1	1	2	#	1	1	1	1	#
Minnesota	2	1	2	1	#	2	#	#	#	#	#	#
Mississippi	–	#	#	#	#	#	–	#	#	#	#	#
Missouri	–	#	#	#	#	#	–	#	#	#	#	#
Montana	7	–	10	9	8	9	#	–	#	#	#	#
Nebraska	#	1	1	2	2	2	#	#	#	#	#	#
Nevada	–	–	–	2	3	1	–	–	–	#	#	#
New Hampshire	#	#	–	–	–	#	#	2	–	–	–	#
New Jersey	#	#	–	–	–	#	1	1	–	–	–	#
New Mexico	11	4	9	12	10	10	1	1	2	1	1	1
New York	1	#	#	#	#	1	1	2	1	#	#	#
North Carolina	2	1	2	2	2	2	1	#	#	1	1	1
North Dakota	5	3	3	5	7	7	#	#	#	#	#	1
Ohio	#	1	–	#	#	#	1	1	–	1	1	1
Oklahoma	9	10	–	15	15	17	#	1	–	1	#	2
Oregon	2	–	3	2	2	2	#	–	1	1	2	1
Pennsylvania	#	#	–	–	–	#	1	#	–	–	–	#
Rhode Island	#	#	#	#	#	#	1	1	1	#	#	#
South Carolina	–	#	#	#	#	#	–	#	#	#	#	#
South Dakota	–	–	–	–	–	8	–	–	–	–	–	#
Tennessee	–	#	#	#	#	#	–	#	#	#	#	#
Texas	#	#	#	#	1	#	#	#	#	#	#	#
Utah	–	1	1	1	2	1	–	#	#	#	#	#
Vermont	–	–	1	#	#	1	–	–	#	1	1	#
Virginia	#	#	1	#	#	#	#	#	#	#	#	1
Washington	–	–	3	–	–	2	–	–	#	–	–	1
West Virginia	#	#	#	#	#	#	#	#	#	#	#	#
Wisconsin	1	1	1	–	–	1	#	#	#	–	–	#
Wyoming	2	3	3	2	3	3	3	#	#	#	#	#
Other jurisdictions												
District of Columbia	#	#	#	#	#	#	#	#	1	#	#	#
DDESS[1]	–	–	#	1	1	1	–	–	2	9	8	3
DoDDS[2]	–	–	1	#	1	1	–	–	16	17	17	9

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
[3] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table B.14 Weighted percentage of students, by eligibility for free/reduced-price school lunch, grade 4 public schools: By state, 1996–2003

Grade 4	Eligible				Not eligible				Information not available			
	Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted	
	1996	2000	2000	2003	1996	2000	2000	2003	1996	2000	2000	2003
Nation (public)	34	35	40	44	52	52	49	52	13	13	11	4
Alabama	49	51	52	57	48	44	42	43	3	6	6	#
Alaska	25	–	–	33	30	–	–	59	45	–	–	8
Arizona	36	40	41	47	44	49	47	42	20	11	12	11
Arkansas	45	51	51	54	52	47	46	43	3	2	2	3
California	44	49	52	52	40	40	38	44	16	12	10	4
Colorado	29	–	–	31	66	–	–	68	5	–	–	1
Connecticut	25	24	24	30	72	67	68	66	3	9	9	4
Delaware	30	–	–	38	47	–	–	53	23	–	–	9
Florida	47	–	–	49	48	–	–	48	5	–	–	3
Georgia	44	42	43	48	49	45	45	46	7	13	13	6
Hawaii	40	46	46	49	57	49	49	51	3	5	4	#
Idaho	–	41	42	43	–	52	52	50	–	7	6	6
Illinois	–	37	38	41	–	52	49	55	–	12	12	4
Indiana	29	25	28	34	69	65	63	65	2	10	9	1
Iowa	31	26	29	33	64	69	67	66	5	5	5	1
Kansas	–	34	35	40	–	62	62	59	–	4	4	1
Kentucky	47	47	47	51	51	48	48	47	3	5	5	2
Louisiana	58	53	54	65	32	32	32	31	10	14	13	3
Maine	32	31	32	34	62	64	63	64	6	5	6	2
Maryland	32	32	34	36	64	58	57	60	4	10	9	4
Massachusetts	24	26	26	29	66	67	67	63	11	7	7	8
Michigan	31	27	29	36	62	68	67	63	7	4	4	1
Minnesota	22	27	26	27	65	68	67	73	13	6	7	#
Mississippi	64	58	59	69	35	32	32	26	1	10	9	5
Missouri	36	34	35	42	63	62	60	53	1	5	5	5
Montana	35	31	31	38	60	53	53	57	5	16	16	5
Nebraska	33	34	37	36	57	61	57	59	10	6	6	5
Nevada	15	34	36	42	28	60	58	52	57	6	7	6
New Hampshire	–	–	–	17	–	–	–	73	–	–	–	9
New Jersey	33	–	–	29	65	–	–	63	2	–	–	8
New Mexico	50	54	52	65	37	34	31	25	13	12	17	9
New York	44	49	49	50	49	48	47	46	7	4	4	3
North Carolina	34	40	42	42	58	55	54	52	8	5	4	7
North Dakota	24	24	26	31	65	58	55	67	11	18	18	2
Ohio	–	34	35	35	–	57	57	56	–	9	8	9
Oklahoma	–	49	51	57	–	45	44	41	–	5	5	3
Oregon	31	35	35	36	60	58	56	61	9	8	9	4
Pennsylvania	33	–	–	37	58	–	–	60	9	–	–	3
Rhode Island	34	35	35	40	65	60	59	52	1	4	5	8
South Carolina	52	50	52	53	48	46	46	46	#	4	2	1
South Dakota	–	–	–	37	–	–	–	62	–	–	–	1
Tennessee	36	41	42	40	59	57	56	55	5	2	2	4
Texas	43	43	45	54	52	48	47	44	6	9	9	2
Utah	27	31	32	34	60	64	62	65	13	6	7	1
Vermont	26	26	28	29	65	66	64	69	9	8	9	2
Virginia	31	30	30	32	65	61	61	66	4	10	9	2
Washington	32	–	–	38	62	–	–	52	6	–	–	10
West Virginia	46	47	49	53	49	49	46	45	5	5	5	1
Wisconsin	25	–	–	32	64	–	–	65	10	–	–	4
Wyoming	33	32	33	35	64	60	59	63	3	8	8	2
Other jurisdictions												
District of Columbia	74	71	72	71	21	11	12	24	5	18	16	5
DDESS [1]	35	38	37	37	38	49	49	53	27	13	14	9
DoDDS [2]	12	20	21	–	36	49	49	–	52	30	30	–

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Table B.15 **Weighted percentage of students, by eligibility for free/reduced-price school lunch, grade 8 public schools: By state, 1996–2003**

Grade 8	Eligible				Not eligible				Information not available			
	Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted	
	1996	2000	2000	2003	1996	2000	2000	2003	1996	2000	2000	2003
Nation (public)	30	28	31	36	56	55	54	58	14	16	15	6
Alabama	39	39	37	47	59	52	53	53	2	9	10	#
Alaska	15	–	–	24	33	–	–	67	51	–	–	9
Arizona	27	31	32	41	50	54	52	47	23	15	16	12
Arkansas	32	38	40	46	60	55	53	49	7	7	7	5
California	36	35	35	41	47	49	52	46	17	16	13	13
Colorado	24	–	–	26	65	–	–	72	11	–	–	1
Connecticut	21	19	18	26	74	68	68	71	5	13	13	3
Delaware	20	–	–	33	59	–	–	58	21	–	–	9
Florida	39	–	–	43	53	–	–	52	8	–	–	5
Georgia	32	29	30	43	54	49	48	52	14	22	21	5
Hawaii	30	38	35	43	65	52	54	56	5	10	11	1
Idaho	–	29	29	35	–	62	61	56	–	9	10	9
Illinois	–	30	31	37	–	65	63	60	–	5	5	3
Indiana	23	18	18	29	77	71	70	67	1	11	12	3
Iowa	19	–	–	25	74	–	–	72	6	–	–	3
Kansas	–	24	23	32	–	64	66	66	–	11	11	2
Kentucky	34	40	41	42	58	58	57	55	8	1	1	2
Louisiana	48	50	49	50	44	37	36	38	8	14	15	12
Maine	22	23	23	28	73	71	71	70	6	6	5	2
Maryland	25	22	23	26	70	63	62	67	5	15	15	7
Massachusetts	18	20	22	23	75	74	71	65	7	6	7	12
Michigan	20	21	21	26	66	68	69	66	14	11	9	8
Minnesota	20	21	22	22	65	72	71	77	15	7	7	1
Mississippi	53	46	45	57	42	43	43	39	5	12	12	4
Missouri	26	27	28	31	66	65	65	66	8	8	8	3
Montana	25	25	26	30	59	55	55	65	16	20	19	5
Nebraska	27	28	29	28	69	69	68	68	5	3	3	4
Nevada	–	26	27	32	–	71	69	64	–	3	4	4
New Hampshire	–	–	–	13	–	–	–	79	–	–	–	8
New Jersey	–	–	–	24	–	–	–	68	–	–	–	8
New Mexico	42	40	43	51	43	35	35	40	15	25	22	9
New York	37	34	36	44	54	42	40	51	9	23	23	5
North Carolina	31	28	29	37	62	66	64	51	7	6	6	12
North Dakota	24	23	23	27	67	62	60	73	9	15	17	1
Ohio	–	16	18	23	–	74	74	65	–	10	8	12
Oklahoma	–	39	39	44	–	53	53	54	–	8	7	2
Oregon	22	24	24	26	62	60	60	68	16	16	16	6
Pennsylvania	–	–	–	28	–	–	–	69	–	–	–	3
Rhode Island	26	28	31	29	70	66	64	63	4	5	5	8
South Carolina	44	42	44	45	55	55	54	53	1	2	2	2
South Dakota	–	–	–	32	–	–	–	68	–	–	–	1
Tennessee	27	33	35	37	64	63	61	60	8	4	4	3
Texas	37	41	41	45	57	53	52	53	6	6	7	2
Utah	20	22	24	27	70	67	67	70	10	10	9	4
Vermont	19	19	20	25	73	71	70	75	8	9	9	1
Virginia	23	21	23	25	67	71	69	71	10	8	8	4
Washington	25	–	–	27	72	–	–	59	3	–	–	14
West Virginia	36	38	41	47	61	56	53	53	4	7	7	#
Wisconsin	20	–	–	22	67	–	–	68	14	–	–	10
Wyoming	21	24	26	27	73	72	70	72	6	4	5	1
Other jurisdictions												
District of Columbia	55	60	61	57	30	21	22	31	15	19	17	13
DDESS [1]	29	31	31	24	40	48	49	57	31	21	21	19
DoDDS [2]	8	15	15	–	47	51	53	–	44	34	32	–

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Table B.16 Weighted percentage of students, by gender, grades 4 and 8 public schools: By urban district, 2003

	Male	Female
Grade 4		
Nation (public)	51	49
Large central city (public)	50	50
Atlanta	50	50
Boston	51	49
Charlotte	52	48
Chicago	50	50
Cleveland	49	51
District of Columbia	50	50
Houston	49	51
Los Angeles	51	49
New York City	50	50
San Diego	48	52
Grade 8		
Nation (public)	50	50
Large central city (public)	50	50
Atlanta	49	51
Boston	48	52
Charlotte	51	49
Chicago	50	50
Cleveland	50	50
District of Columbia	47	53
Houston	49	51
Los Angeles	51	49
New York City	50	50
San Diego	49	51

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Table B.17 Weighted percentage of students, by race/ethnicity, grades 4 and 8 public schools: By urban district, 2003

	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/Alaska Native	Other[1]
Grade 4						
Nation (public)	58	17	19	4	1	1
Large central city (public)	22	34	35	7	1	#
Atlanta	10	87	2	#	#	#
Boston	12	46	33	8	1	#
Charlotte	41	46	7	4	1	2
Chicago	11	52	34	3	#	#
Cleveland	16	76	6	1	1	1
District of Columbia	4	87	8	1	#	#
Houston	7	35	56	2	#	#
Los Angeles	11	10	73	6	#	#
New York City	15	35	37	12	1	#
San Diego	23	17	42	18	#	#
Grade 8						
Nation (public)	62	17	15	4	1	1
Large central city (public)	24	35	32	8	1	#
Atlanta	5	93	1	#	#	#
Boston	16	46	28	9	#	#
Charlotte	42	46	6	5	1	1
Chicago	10	51	36	4	#	#
Cleveland	15	72	11	1	#	1
District of Columbia	3	87	9	1	#	#
Houston	8	33	55	3	#	#
Los Angeles	10	12	71	7	#	#
New York City	16	36	34	14	#	#
San Diego	27	16	38	19	#	#

The estimate rounds to zero.
1 "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Table B.18 **Weighted percentage of students, by eligibility for free/reduced-price school lunch, grades 4 and 8 public schools: By urban district, 2003**

	Eligible	Not eligible	Information not available
Grade 4			
Nation (public)	44	52	4
Large central city (public)	69	28	3
Atlanta	81	18	1
Boston	83	8	9
Charlotte	45	55	#
Chicago	85	7	8
Cleveland	100	0	0
District of Columbia	71	24	5
Houston	76	21	2
Los Angeles	83	5	12
New York City	88	10	2
San Diego	58	36	6
Grade 8			
Nation (public)	36	58	6
Large central city (public)	60	33	7
Atlanta	78	15	7
Boston	71	10	19
Charlotte	36	63	#
Chicago	88	6	6
Cleveland	100	0	0
District of Columbia	57	31	13
Houston	69	31	#
Los Angeles	65	6	29
New York City	83	14	4
San Diego	52	44	4

The estimate rounds to zero.
NOTE: Detail may not sum to totals because of rounding. In Cleveland, all students were categorized as eligible for the school lunch program.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Table B.19 Weighted percentage of students, by student-reported parents' highest level of education, grade 8 public schools: By urban district, 2003

	Less than high school	Graduated high school	Some education after high school	Graduated college	Unknown
Nation (public)	7	18	18	45	11
Large central city (public)	11	18	17	38	17
Atlanta	6	24	19	40	11
Boston	10	18	19	36	18
Charlotte	4	15	17	55	10
Chicago	11	20	20	30	19
Cleveland	11	23	20	32	14
District of Columbia	7	23	18	37	15
Houston	20	17	14	28	21
Los Angeles	19	15	15	24	27
New York City	9	17	13	43	19
San Diego	12	14	16	38	21

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

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C Appendix C

State and Urban District Subgroup Appendix

Appendix C includes tables with additional state-level and district-level subgroup results.

Table C.1 Gaps in average mathematics scale scores, by gender, grade 4 public schools: By state, 1992–2003

Grade 4	Male average score minus female average score				
	Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003
Nation (public) [1]	2	3	3	2	3
Alabama	#	#	−2	−3	#
Alaska	–	1	–	–	3
Arizona	−1	1	2	1	4
Arkansas	1	−1	#	#	−1
California	1	3	−2	−1	4
Colorado	2	3	–	–	4
Connecticut	3	5	2	2	5
Delaware	2	1	–	–	2
Florida	3	−3	–	–	2
Georgia	−1	1	2	3	2
Hawaii	−3	#	−3	−2	1
Idaho	3	–	1	#	3
Illinois	–	–	5	2	3
Indiana	3	4	2	1	2
Iowa	1	2	3	3	4
Kansas	–	–	1	2	4
Kentucky	#	1	2	2	3
Louisiana	1	−1	1	1	1
Maine	1	3	4	4	3
Maryland	4	2	2	3	3
Massachusetts	3	2	4	4	5
Michigan	5	2	3	2	5
Minnesota	1	3	4	4	3
Mississippi	−2	#	−1	−2	#
Missouri	−1	1	1	1	#
Montana	–	3	4	4	1
Nebraska	3	#	2	#	3
Nevada	–	4	4	2	2
New Hampshire	1	–	–	–	5
New Jersey	2	8	–	–	3
New Mexico	#	2	5	6	3
New York	7	2	4	3	3
North Carolina	−1	#	2	#	1
North Dakota	3	2	4	2	4
Ohio	3	–	5	5	2
Oklahoma	2	–	3	2	2
Oregon	–	#	5	3	2
Pennsylvania	2	1	–	–	4
Rhode Island	2	5	1	3	2
South Carolina	1	1	2	2	3
South Dakota	–	–	–	–	4
Tennessee	#	2	4	2	#
Texas	2	1	4	3	3
Utah	#	3	−2	#	3
Vermont	–	2	1	2	3
Virginia	2	3	6	4	1
Washington	–	3	–	–	3
West Virginia	2	1	3	1	2
Wisconsin	3	3	–	–	3
Wyoming	3	1	2	4	3
Other jurisdictions					
District of Columbia	1	#	−1	−2	−2
DDESS [2]	–	5	4	3	3
DoDDS [3]	–	2	4	4	3

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Score gaps are calculated based on differences between unrounded average scale scores. State-level data were not collected in 1990. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Negative numbers indicate that the average score for male students was lower than the score for female students.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.2 Gaps in average mathematics scale scores, by gender, grade 8 public schools: By state, 1990–2003

Grade 8	Male average score minus female average score					
	Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003
Nation (public)[1]	1	−1	#	3	2	2
Alabama	2	3	1	1	2	1
Alaska	–	–	−1	–	–	2
Arizona	6	1	5	6 *	5	#
Arkansas	2	1	−1	#	−4	−2
California	3	−2	3	#	−1	2
Colorado	4	3	4	–	–	1
Connecticut	3	2	#	5	5	2
Delaware	−2	1	4	–	–	3
Florida	3	1	3	–	–	4
Georgia	1	3	−1	3	#	1
Hawaii	−6 *	−6 *	−7 *	−3	−5	−1
Idaho	2	4	–	1	#	1
Illinois	#	–	–	−1	−6 *	2
Indiana	5	4	1	4	1	2
Iowa	5	2	−1	–	–	3
Kansas	–	–	–	2	#	#
Kentucky	3	2	#	4	3	#
Louisiana	3	4	−1	3	2	2
Maine	–	#	2	3	1	2
Maryland	#	2	2	1	#	3
Massachusetts	–	2	2	4	1	6
Michigan	1	5	4	1	1	1
Minnesota	1	#	3	#	#	−3
Mississippi	–	3	1	2	2	2
Missouri	–	2	1	4	1	3
Montana	6 *	–	#	#	−2	#
Nebraska	2	2	1	6	5	3
Nevada	–	–	–	2	1	#
New Hampshire	−1	1	–	–	–	1
New Jersey	3	7	–	–	–	1
New Mexico	6	3	#	−1	−1	1
New York	3	2	3	6	3	2
North Carolina	−1	2	3	3	2	−1
North Dakota	6 *	3	1	−1	#	#
Ohio	5	3	–	2	1	2
Oklahoma	5	3	–	4	2	1
Oregon	2	–	−1	2	3	2
Pennsylvania	6	5	–	–	–	4
Rhode Island	3	#	4	1	−3	1
South Carolina	–	1	3	−1 *	−1 *	6
South Dakota	–	–	–	–	–	2
Tennessee	–	5	1	4	3	#
Texas	4	5	5	−3	−2	2
Utah	–	2	3	−1	2	2
Vermont	–	–	3	#	−3	#
Virginia	3	1	6	2	2	3
Washington	–	–	−1	–	–	1
West Virginia	1	1	−2	−1	−3	#
Wisconsin	2	1	1	–	–	1
Wyoming	5 *	#	2	1	#	1
Other jurisdictions						
District of Columbia	−3	−2	−4	#	#	−3
DDESS[2]	–	–	4	4	4	4
DoDDS[3]	–	–	2	3	1	3

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Score gaps are calculated based on differences between unrounded average scale scores. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments. Negative numbers indicate that the average score for male students was lower than the score for female students.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.3 Percentages of students, by gender and mathematics achievement level, grade 4 public schools: By state, 2003

Grade 4	Male				Female			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	23	77	34	5	25	75	29	3
Alabama	35	65	19	2	36	64	18	1
Alaska	24	76	33	4	26	74	27	3
Arizona	28	72	28	2	32	68	23	2
Arkansas	30	70	27	2	27	73	25	2
California	31	69	28	4	35	65	22	2
Colorado	22	78	37	5	24	76	31	3
Connecticut	15	85	45	6	20	80	37	4
Delaware	20	80	34	4	19	81	29	2
Florida	24	76	33	5	25	75	29	3
Georgia	28	72	29	4	29	71	25	3
Hawaii	32	68	24	2	32	68	22	1
Idaho	19	81	34	3	22	78	27	2
Illinois	26	74	34	5	28	72	29	4
Indiana	17	83	37	4	18	82	34	3
Iowa	15	85	39	4	19	81	32	3
Kansas	14	86	44	7	17	83	39	4
Kentucky	26	74	24	2	30	70	20	1
Louisiana	33	67	22	2	33	67	20	1
Maine	16	84	37	4	19	81	31	3
Maryland	26	74	33	6	29	71	29	4
Massachusetts	14	86	44	7	18	82	38	4
Michigan	21	79	38	5	25	75	30	4
Minnesota	15	85	45	8	17	83	38	5
Mississippi	38	62	18	1	37	63	16	1
Missouri	22	78	30	3	20	80	29	2
Montana	19	81	33	3	19	81	29	1
Nebraska	19	81	36	3	22	78	31	3
Nevada	30	70	25	2	31	69	21	1
New Hampshire	11	89	46	7	15	85	39	4
New Jersey	19	81	41	6	20	80	36	4
New Mexico	36	64	21	1	39	61	14	1
New York	21	79	35	5	22	78	31	3
North Carolina	15	85	42	7	15	85	40	5
North Dakota	16	84	38	3	18	82	30	2
Ohio	19	81	37	4	19	81	34	3
Oklahoma	26	74	25	2	27	73	20	1
Oregon	20	80	35	5	22	78	31	3
Pennsylvania	21	79	39	6	23	77	32	3
Rhode Island	27	73	29	3	30	70	27	3
South Carolina	18	82	34	5	23	77	29	3
South Dakota	16	84	37	4	20	80	31	2
Tennessee	31	69	25	3	30	70	22	2
Texas	17	83	35	5	18	82	31	2
Utah	20	80	34	3	22	78	28	2
Vermont	14	86	44	7	17	83	39	4
Virginia	18	82	38	6	17	83	35	4
Washington	18	82	39	6	20	80	33	4
West Virginia	24	76	26	2	25	75	22	1
Wisconsin	20	80	38	5	21	79	32	3
Wyoming	12	88	41	4	14	86	36	2
Other jurisdictions								
District of Columbia	64	36	8	1	63	37	7	1
DDESS[1]	15	85	34	3	16	84	27	1
DoDDS[2]	14	86	34	3	18	82	29	1

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.4 Percentages of students, by gender and mathematics achievement level, grade 8 public schools: By state, 2003

Grade 8	Male				Female			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	33	67	29	6	34	66	26	4
Alabama	45	55	18	2	49	51	14	2
Alaska	29	71	32	7	31	69	28	5
Arizona	39	61	21	3	38	62	21	3
Arkansas	43	57	19	3	41	59	18	2
California	43	57	23	5	45	55	21	4
Colorado	26	74	35	8	26	74	34	7
Connecticut	27	73	37	10	27	73	33	7
Delaware	30	70	27	5	33	67	25	4
Florida	36	64	26	5	41	59	21	3
Georgia	40	60	24	5	41	59	20	3
Hawaii	44	56	17	3	45	55	16	2
Idaho	27	73	30	5	28	72	27	3
Illinois	33	67	31	7	34	66	28	5
Indiana	25	75	33	6	28	72	29	4
Iowa	23	77	35	6	24	76	31	5
Kansas	25	75	34	7	24	76	34	5
Kentucky	35	65	25	4	34	66	23	3
Louisiana	42	58	19	3	44	56	15	1
Maine	24	76	31	6	26	74	28	4
Maryland	32	68	33	7	34	66	27	6
Massachusetts	22	78	42	10	26	74	35	7
Michigan	33	67	30	5	32	68	26	4
Minnesota	20	80	43	9	16	84	44	8
Mississippi	51	49	14	1	55	45	11	1
Missouri	29	71	30	5	30	70	26	4
Montana	21	79	36	6	20	80	34	6
Nebraska	25	75	35	6	27	73	30	4
Nevada	41	59	21	3	41	59	19	3
New Hampshire	21	79	36	7	22	78	33	6
New Jersey	28	72	34	7	29	71	33	6
New Mexico	47	53	16	2	49	51	15	1
New York	29	71	33	6	30	70	31	5
North Carolina	29	71	32	7	28	72	32	7
North Dakota	19	81	37	5	19	81	36	4
Ohio	25	75	32	6	27	73	29	4
Oklahoma	36	64	22	3	35	65	18	1
Oregon	29	71	33	8	30	70	30	6
Pennsylvania	30	70	33	6	32	68	27	4
Rhode Island	37	63	26	3	38	62	22	3
South Carolina	30	70	29	6	35	65	23	4
South Dakota	21	79	35	5	23	77	34	4
Tennessee	42	58	22	3	41	59	20	2
Texas	31	69	27	5	32	68	23	3
Utah	28	72	33	7	28	72	29	4
Vermont	23	77	35	7	22	78	35	6
Virginia	26	74	33	7	29	71	30	5
Washington	28	72	33	7	29	71	31	5
West Virginia	38	62	21	2	37	63	18	1
Wisconsin	25	75	36	7	24	76	34	6
Wyoming	24	76	34	5	22	78	30	3
Other jurisdictions								
District of Columbia	71	29	7	1	71	29	5	1
DDESS[1]	21	79	31	6	23	77	22	3
DoDDS[2]	20	80	37	7	22	78	32	4

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.5 Percentage of students at or above *Basic* in mathematics, by gender, grade 4 public schools: By state, 1992–2003

Grade 4	Male					Female				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public) [1]	59 *	63 *	68 *	65 *	77	56 *	61 *	66 *	62 *	75
Alabama	44 *,**	48 *,**	56 *,**	53 *,**	65	42 *,**	47 *,**	57 *,**	58 *,**	64
Alaska	–	64 *,**	–	–	76	–	65 *,**	–	–	74
Arizona	53 *,**	57 *,**	59 *,**	57 *,**	72	54 *,**	56 *,**	58 *,**	57 *,**	68
Arkansas	48 *,**	54 *,**	56 *,**	55 *,**	70	46 *,**	54 *,**	55 *,**	54 *,**	73
California	47 *,**	47 *,**	51 *,**	49 *,**	69	46 *,**	44 *,**	53 *,**	50 *,**	65
Colorado	63 *,**	68 *,**	–	–	78	59 *,**	66 *,**	–	–	76
Connecticut	69 *,**	76 *,**	77 *,**	77 *,**	85	66 *,**	73 *,**	77	76	80
Delaware	56 *,**	54 *,**	–	–	80	53 *,**	53 *,**	–	–	81
Florida	53 *,**	53 *,**	–	–	76	50 *,**	56 *,**	–	–	75
Georgia	52 *,**	53 *,**	59 *,**	59 *,**	72	54 *,**	52 *,**	57 *,**	55 *,**	71
Hawaii	50 *,**	52 *,**	53 *,**	54 *,**	68	54 *,**	53 *,**	56 *,**	55 *,**	68
Idaho	65 *,**	–	71 *,**	67 *,**	81	60 *,**	–	70 *,**	68 *,**	78
Illinois	–	–	68	64 *,**	74	–	–	63 *,**	61 *,**	72
Indiana	63 *,**	75 *,**	80	77 *,**	83	57 *,**	70 *,**	77 **	76 *,**	82
Iowa	73 *,**	74 *,**	79 *,**	77 *,**	85	72 *,**	73 *,**	76	74 *,**	81
Kansas	–	–	75 *,**	76 *,**	86	–	–	76 *,**	75 *,**	83
Kentucky	51 *,**	60 *,**	62 *,**	60 *,**	74	51 *,**	60 *,**	59 *,**	58 *,**	70
Louisiana	40 *,**	44 *,**	57 *,**	57 *,**	67	38 *,**	44 *,**	57 *,**	56 *,**	67
Maine	75 *,**	76 *,**	77 *,**	76 *,**	84	75 *,**	75 *,**	72 *,**	71 *,**	81
Maryland	57 *,**	59 *,**	61 *,**	62 *,**	74	53 *,**	58 *,**	61 *,**	59 *,**	71
Massachusetts	70 *,**	73 *,**	80 *,**	78 *,**	86	67 *,**	70 *,**	77 *,**	75 *,**	82
Michigan	64 *,**	69 *,**	74	72 *,**	79	57 *,**	67 *,**	71	70	75
Minnesota	71 *,**	76 *,**	79 *,**	78 *,**	85	70 *,**	75 *,**	77 *,**	75 *,**	83
Mississippi	34 *,**	42 *,**	44 *,**	44 *,**	62	38 *,**	42 *,**	46 *,**	46 *,**	63
Missouri	61 *,**	65 *,**	73 *	72 *,**	78	63 *,**	67 *,**	72 *,**	71 *,**	80
Montana	–	72 *,**	75	74 *,**	81	–	69 *,**	71 *,**	70 *,**	81
Nebraska	67 *,**	70 *,**	68 *,**	65 *,**	81	66 *,**	70 *,**	66 *,**	65 *,**	78
Nevada	–	59 *,**	63 *,**	61 *,**	70	–	55 *,**	59 *,**	59 *,**	69
New Hampshire	72 *,**	–	–	–	89	73 *,**	–	–	–	85
New Jersey	69 *,**	72 *,**	–	–	81	67 *,**	64 *,**	–	–	80
New Mexico	50 *,**	52 *,**	55 *,**	54 *,**	64	49 *,**	50 *,**	47 *,**	46 *,**	61
New York	61 *,**	66 *,**	70 *,**	67 *,**	79	53 *,**	63 *,**	65 *,**	65 *,**	78
North Carolina	50 *,**	64 *,**	76 *,**	73 *,**	85	51 *,**	65 *,**	75 *,**	74 *,**	85
North Dakota	73 *,**	76 *,**	77 *,**	73 *,**	84	72 *,**	75 *,**	74 *,**	73 *,**	82
Ohio	59 *,**	–	76	75 *,**	81	55 *,**	–	71 *,**	71 *,**	81
Oklahoma	62 *,**	–	71	68 *,**	74	57 *,**	–	67 **	66 *,**	73
Oregon	–	65 *,**	70 *,**	66 *,**	80	–	65 *,**	65 *,**	64 *,**	78
Pennsylvania	66 *,**	69 *,**	–	–	79	64 *,**	68 *,**	–	–	77
Rhode Island	55 *,**	63 *,**	67 *,**	66 *,**	73	53 *,**	59 *,**	67	65	70
South Carolina	48 *,**	49 *,**	60 *,**	59 *,**	82	47 *,**	47 *,**	59 *,**	58 *,**	77
South Dakota	–	–	–	–	84	–	–	–	–	80
Tennessee	47 *,**	59 *,**	62 *,**	60 *,**	69	48 *,**	58 *,**	57 *,**	58 *,**	70
Texas	57 *,**	69 *,**	79	77 *,**	83	55 *,**	70 *,**	75 *,**	75 *,**	82
Utah	65 *,**	69 *,**	68 *,**	68 *,**	80	66 *,**	68 *,**	72 *,**	70 *,**	78
Vermont	–	68 *,**	74 *,**	74 *,**	86	–	66 *,**	73 *,**	72 *,**	83
Virginia	60 *,**	64 *,**	76 *,**	74 *,**	82	57 *,**	60 *,**	70 *,**	69 *,**	83
Washington	–	68 *,**	–	–	82	–	66 *,**	–	–	80
West Virginia	54 *,**	64 *,**	69 *,**	64 *,**	76	51 *,**	62 *,**	67 *,**	65 *,**	75
Wisconsin	72 *,**	75 *,**	–	–	80	70 *,**	73 *,**	–	–	79
Wyoming	70 *,**	64 *,**	75 *,**	73 *,**	88	67 *,**	64 *,**	71 *,**	70 *,**	86
Other jurisdictions										
District of Columbia	23 *,**	21 *,**	24 *,**	24 *,**	36	23 *,**	19 *,**	25 *,**	25 *,**	37
DDESS [2]	–	66 *,**	72 *,**	72 *,**	85	–	61 *,**	67 *,**	68 *,**	84
DoDDS [3]	–	65 *,**	72 *,**	70 *,**	86	–	63 *,**	68 *,**	66 *,**	82

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: State-level data were not collected in 1990. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.6 Percentage of students at or above *Basic* in mathematics, by gender, grade 8 public schools: By state, 1990–2003

Grade 8	Male						Female					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public) [1]	51 *	55 *	60 *	66	62 *	67	51 *	56 *	61 *	64	62 *	66
Alabama	41 *,**	40 *,**	46 *	52	53	55	40 *,**	37 *,**	44 *	51	53	51
Alaska	–	–	67	–	–	71	–	–	69	–	–	69
Arizona	51 *,**	55	61	65	63	61	44 *,**	54 *,**	54	59	57	62
Arkansas	45 *,**	45 *,**	51	52	47 *,**	57	43 *,**	44 *,**	53	52	50 *,**	59
California	46 *,**	50 *,**	52	53	50	57	44 *,**	51	51	51	50	55
Colorado	59 *,**	66 *,**	69 *	–	–	74	56 *,**	62 *,**	64 *,**	–	–	74
Connecticut	61 *,**	65 *,**	72	74	72	73	59 *,**	64 *,**	69	70	68	73
Delaware	47 *,**	53 *,**	58 *,**	–	–	70	49 *,**	50 *,**	53 *,**	–	–	67
Florida	44 *,**	48 *,**	55 *,**	–	–	64	41 *,**	49 *,**	52 *	–	–	59
Georgia	48 *,**	50 *,**	51 *,**	57	55	60	47 *,**	46 *,**	51 *,**	54	54	59
Hawaii	37 *,**	42 *,**	48 *,**	50	50 *,**	56	44 *,**	50 *,**	55	54	53	55
Idaho	64 *,**	70	–	71	69	73	62 *,**	66 *,**	–	72	72	72
Illinois	50 *,**	–	–	67	65	67	51 *,**	–	–	69	69	66
Indiana	59 *,**	63 *,**	68 *,**	78	73	75	54 *,**	57 *,**	68	74	75	72
Iowa	72 *,**	76	78	–	–	77	69 *,**	76	78	–	–	76
Kansas	–	–	–	79	76	75	–	–	–	76	77	76
Kentucky	44 *,**	52 *,**	57 *,**	65	61	65	42 *,**	51 *,**	56 *,**	61	59	66
Louisiana	32 *,**	39 *,**	39 *,**	50 *	50 *,**	58	31 *,**	35 *,**	38 *,**	46 *,**	46 *,**	56
Maine	–	71 **	78	77	73	76	–	72	77	76	73	74
Maryland	50 *,**	55 *,**	59 *,**	65	62 *	68	50 *,**	53 *,**	56 *,**	65	62	66
Massachusetts	–	63 *,**	69 *,**	77	70 *,**	78	–	62 *,**	68 *	74	70	74
Michigan	54 *,**	60 *,**	69	70	67	67	53 *,**	56 *,**	65	69	68	68
Minnesota	67 *,**	74 *,**	76	78	79	80	68 *,**	75 *,**	74 *,**	81	81	84
Mississippi	–	35 *,**	37 *,**	43 *	43 *	49	–	32 *,**	34 *,**	39 *	40 *	45
Missouri	–	63 *,**	64 *,**	69	65 *,**	71	–	62 *,**	63 *	64	62 *,**	70
Montana	76	–	74	79	77	79	73 *,**	–	76	80	81	80
Nebraska	69 *,**	71 **	76	76	76	75	67 *,**	69	76	70	71	73
Nevada	–	–	–	59	55	59	–	–	–	57	54	59
New Hampshire	64 *,**	72 *,**	–	–	–	79	65 *,**	71 *,**	–	–	–	78
New Jersey	60 *,**	66 *,**	–	–	–	72	57 *,**	59 *,**	–	–	–	71
New Mexico	47 *,**	50	50	49	48	53	40 *,**	45 *,**	51	50	48	51
New York	51 *,**	59 *,**	63 *,**	72	65	71	49 *,**	56 *,**	59 *,**	65	61 *,**	70
North Carolina	38 *,**	48 *,**	59 *,**	73	68	71	38 *,**	46 *,**	54 *,**	68	65 *,**	72
North Dakota	78	79	77	77	75 *,**	81	73 *,**	77	78	78	77	81
Ohio	55 *,**	60 *,**	–	75	72	75	50 *,**	58 *,**	–	75	74	73
Oklahoma	55 *,**	61	–	66	63	64	49 *,**	58 *,**	–	62	61	65
Oregon	61 *,**	–	67	72	73	71	62 *,**	–	67	71	69	70
Pennsylvania	59 *,**	65	–	–	–	70	53 *,**	59 *,**	–	–	–	68
Rhode Island	50 *,**	56 *,**	62	65	59	63	48 *,**	57 *,**	58	63	60	62
South Carolina	–	48 *,**	50 *,**	54 *,**	51 *,**	70	–	47 *,**	47 *,**	56 *,**	55 *,**	65
South Dakota	–	–	–	–	–	79	–	–	–	–	–	77
Tennessee	–	50 *,**	53	56	54	58	–	44 *,**	53	51 *	50 *,**	59
Texas	48 *,**	55 *,**	63 *,**	67	66	69	43 *,**	50 *,**	57 *,**	69	67	68
Utah	–	68	71	67	66	72	–	65 *,**	69	69	66 *,**	72
Vermont	–	–	73	75	71	77	–	–	71 *,**	76	74	78
Virginia	53 *,**	58 *,**	61 *,**	69	65 *,**	74	51 *,**	56 *,**	56 *,**	66	65 *	71
Washington	–	–	66 *,**	–	–	72	–	–	68	–	–	71
West Virginia	43 *,**	48 *,**	52 *,**	61	56 *	62	41 *,**	46 *,**	55 *,**	62	59	63
Wisconsin	66 *,**	72	74	–	–	75	65 *,**	70 **	76	–	–	76
Wyoming	66 *,**	66 *,**	69 *,**	70 *	68 *,**	76	61 *,**	68 *,**	68 *,**	69 *,**	69 *,**	78
Other jurisdictions												
District of Columbia	15 *,**	21 *,**	18 *,**	24	23 *,**	29	18 *,**	22 *,**	21 *,**	23 *	22 *,**	29
DDESS [2]	–	–	58 *,**	67 *,**	63 *	79	–	–	56 *,**	66	61 *,**	77
DoDDS [3]	–	–	66 *,**	72 *,**	70 *,**	80	–	–	65 *,**	70 *,**	69 *,**	78

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.7 Gaps in average mathematics scale scores, by race/ethnicity, grade 4 public schools: By state, 1992–2003

Grade 4	White average score minus Black average score					White average score minus Hispanic average score				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)[1]	35 *	31	30	30 *	27	26 *	26	25	26 *	21
Alabama	30 *	29	25	24	24	‡	‡	‡	‡	‡
Alaska	–	25	–	–	20	–	‡	–	–	14
Arizona	26	31	23	22	26	22	26	25	26	23
Arkansas	29	30	27	31	31	‡	‡	‡	‡	16
California	39 *	34	38	33	30	31	27	29	27	27
Colorado	28	35	–	–	26	23	23	–	–	26
Connecticut	40 *	35	31	32	32	34 *	39 *	32	32	27
Delaware	30 *	31 *	–	–	22	‡	31 *	–	–	19
Florida	34 *	33	–	–	28	16	19 *	–	–	11
Georgia	32 *	23	26	26	24	‡	19	19	13	22
Hawaii	18	18	21	15	16	16	16	‡	‡	18
Idaho	‡	–	‡	‡	‡	24	–	21	20	21
Illinois	–	–	33	33	34	–	–	21	24	27
Indiana	29	27	25	25	27	‡	‡	‡	‡	16
Iowa	‡	25	21	16	26	‡	‡	‡	‡	18
Kansas	–	–	34	29	29	–	–	22	24	16
Kentucky	17	19	25 *	27 *	16	‡	‡	‡	‡	‡
Louisiana	31	27	26	25	28	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	34 *	35 *	35 *	34 *	27	21	17	21	20	17
Massachusetts	36 *	26	31	27	26	34 *	27	32	36	25
Michigan	42	34	39	37	35	‡	28	‡	‡	21
Minnesota	38 *	40 *	29	30	28	‡	‡	‡	‡	26
Mississippi	30 *	25	26	24	24	‡	‡	‡	‡	‡
Missouri	32 *	29	34 *	31 *	24	‡	‡	‡	‡	20
Montana	–	‡	‡	‡	‡	–	‡	‡	‡	2
Nebraska	38 *	34	35	38	31	25	33	28	25	29
Nevada	–	29 *	19	23	21	–	21	19	20	20
New Hampshire	‡	–	–	–	‡	‡	–	–	–	19
New Jersey	38 *	35	–	–	31	32 *	33 *	–	–	23
New Mexico	22	‡	‡	‡	20	21	23	18	20	20
New York	31	31	27	27	26	32 *	33 *	30	30	25
North Carolina	30 *	30	23	23	26	‡	‡	‡	18	17
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	28	–	28	29	26	‡	–	‡	‡	18
Oklahoma	23	–	25	24	24	17	–	14	18	15
Oregon	–	‡	‡	31	17	–	29	23	25	22
Pennsylvania	36	34	–	–	31	29	29	–	–	27
Rhode Island	30	32	33	32	29	35	34	39 *	35	32
South Carolina	31 *	26	31 *	30 *	23	‡	‡	‡	‡	13
South Dakota	–	–	–	–	‡	–	–	–	–	18
Tennessee	26	28	29	29	27	‡	‡	‡	‡	17
Texas	31 *	29 *	23	22	22	22	24 *	19	19	18
Utah	‡	‡	‡	‡	‡	20	24	26	25	22
Vermont	–	‡	‡	‡	‡	–	‡	‡	‡	‡
Virginia	29 *	27	28 *	26	23	‡	15	14	13	16
Washington	–	27	–	–	19	–	25	–	–	19
West Virginia	15	19	23 *	20	10	‡	‡	‡	‡	‡
Wisconsin	37	38	–	–	35	25	25	–	–	22
Wyoming	‡	‡	‡	‡	‡	11	18	19	17	14
Other jurisdictions										
District of Columbia	62	65	63	66	60	56	51	51	64	57
DDESS[2]	–	24	20	22	17	–	18 *	15 *	19 *	7
DoDDS[3]	–	22 *	21 *	20 *	14	–	16 *	10	12	8

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).

NOTE: Score gaps are calculated based on differences between unrounded average scale scores. State-level data were not collected in 1990. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.8 Gaps in average mathematics scale scores, by race/ethnicity, grade 8 public schools: By state, 1990–2003

Grade 8	White average score minus Black average score						White average score minus Hispanic average score					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public) [1]	33	40 *	39	39 *	40 *	35	24	29	30	32	31	28
Alabama	30	34	38	36	35	34	‡	‡	‡	‡	‡	‡
Alaska	–	–	‡	–	–	27	–	–	‡	–	–	27
Arizona	26	22	22	36	37	28	29	28	29	33	33 *	26
Arkansas	34	35	35	38	41	36	‡	‡	‡	‡	‡	27
California	38	42	33	36	42	37	34	36	32	33	35	33
Colorado	36	36	26 *	–	–	37	27 *	26 *	27	–	–	33
Connecticut	37	41	43	46 *	45	38	42 *	44 *	36	41	42	34
Delaware	27	30	31	–	–	26	‡	‡	‡	–	–	30
Florida	34	36	42	–	–	37	19	26	23	–	–	22
Georgia	32	30	35	33	34	34	‡	‡	‡	‡	‡	21
Hawaii	‡	‡	‡	‡	‡	‡	‡	‡	23	‡	‡	9
Idaho	‡	‡	–	‡	‡	‡	23 *	22 *	–	33	30	33
Illinois	38	–	–	31 *	33	40	33	–	–	28	27	30
Indiana	28	32	33	26 *	29	35	‡	‡	‡	‡	‡	26
Iowa	‡	‡	29	–	–	30	‡	‡	‡	–	–	32
Kansas	–	–	–	28	43	38	–	–	–	28	24	27
Kentucky	18 *	24	21	24	22	27	‡	‡	‡	‡	‡	‡
Louisiana	30	31	31	36	36	31	‡	‡	‡	‡	‡	‡
Maine	–	9	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Maryland	35	39 *	43 *	41 *	42 *	33	18	‡	‡	18	23	27
Massachusetts	–	34	33	34	26	33	–	38	44	35	37	37
Michigan	39	44	39	44	45	41	‡	25	‡	‡	‡	19
Minnesota	41	‡	39	‡	‡	44	‡	‡	‡	‡	‡	33
Mississippi	–	33	31	31	30	29	–	‡	‡	‡	‡	‡
Missouri	–	34	34	37	39	34	–	‡	‡	‡	‡	‡
Montana	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡
Nebraska	45	44	32	39	37	41	‡	25	26	37	43	33
Nevada	–	–	–	26	29	30	–	–	–	26	24	29
New Hampshire	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Jersey	38	41	–	–	–	39	37	37	–	–	–	30
New Mexico	‡	‡	‡	‡	‡	28	24	24	25	26	22	28
New York	39	46	40	33	33	37	35	39	39	32	34	31
North Carolina	30	28 *	30	34	35	34	‡	‡	‡	‡	‡	30
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	35	41 *	–	32	34	30	‡	‡	–	‡	‡	17
Oklahoma	32	34	–	29	29	29	‡	‡	–	22	14	21
Oregon	‡	–	‡	‡	‡	20	16	–	21	27	36	26
Pennsylvania	36	39	–	–	–	38	‡	‡	–	–	–	32
Rhode Island	37	30	38	34	35	36	38	43	36	34	36	35
South Carolina	–	33	29	30	30	33	–	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	–	‡	–	–	–	–	–	‡
Tennessee	–	32	35	35	34	35	–	‡	‡	‡	‡	‡
Texas	38 *	35	35	35	37	30	28	29 *	29 *	22	24	23
Utah	–	‡	‡	‡	‡	‡	–	22 *	21 *	32	33	36
Vermont	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
Virginia	29	30	35	32	30	28	‡	‡	‡	11	20	22
Washington	–	–	38 *	–	–	22	–	–	33 *	–	–	22
West Virginia	23	17	21	21	20	18	‡	‡	‡	‡	‡	‡
Wisconsin	42	37	48	–	–	49	‡	‡	‡	–	–	28
Wyoming	‡	‡	‡	‡	‡	‡	16	15	20	25	21	20
Other jurisdictions												
District of Columbia	‡	‡	‡	74	69	‡	‡	‡	‡	78	64	‡
DDESS [2]	–	–	29	22	28	27	–	–	18	18	21	19
DoDDS [3]	–	–	28	26	26	22	–	–	14	15	16	12

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).

NOTE: Score gaps are calculated based on differences between unrounded average scale scores. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.9 Percentages of students, by race/ethnicity and mathematics achievement level, grade 4 public schools: By state, 2003

Grade 4	White				Black			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	13	87	42	5	46	54	10	#
Alabama	22	78	27	2	59	41	5	#
Alaska	14	86	41	5	36	64	15	1
Arizona	15	85	39	4	48	52	11	#
Arkansas	17	83	34	3	61	39	5	#
California	14	86	42	5	49	51	9	#
Colorado	12	88	44	6	46	54	12	1
Connecticut	8	92	53	7	45	55	10	#
Delaware	9	91	43	4	34	66	12	#
Florida	13	87	43	5	48	52	8	#
Georgia	16	84	40	6	44	56	11	#
Hawaii	18	82	35	3	36	64	16	#
Idaho	16	84	34	3	‡	‡	‡	‡
Illinois	13	87	44	7	56	44	7	#
Indiana	13	87	40	4	46	54	7	#
Iowa	14	86	39	4	50	50	9	1
Kansas	10	90	47	7	45	55	13	#
Kentucky	25	75	24	2	47	53	8	#
Louisiana	12	88	39	3	51	49	6	#
Maine	17	83	34	3	‡	‡	‡	‡
Maryland	15	85	44	8	47	53	11	#
Massachusetts	9	91	49	7	38	62	13	#
Michigan	12	88	43	6	58	42	7	#
Minnesota	11	89	47	8	46	54	16	1
Mississippi	17	83	30	2	54	46	6	#
Missouri	14	86	35	3	47	53	9	#
Montana	16	84	34	3	‡	‡	‡	‡
Nebraska	13	87	39	4	56	44	7	#
Nevada	19	81	32	2	48	52	10	#
New Hampshire	12	88	43	6	‡	‡	‡	‡
New Jersey	10	90	51	7	45	55	11	1
New Mexico	18	82	33	3	44	56	10	1
New York	9	91	45	6	42	58	12	#
North Carolina	6	94	55	9	32	68	14	#
North Dakota	13	87	37	3	‡	‡	‡	‡
Ohio	13	87	42	5	46	54	10	#
Oklahoma	18	82	29	2	53	47	6	#
Oregon	16	84	36	5	39	61	20	2
Pennsylvania	13	87	44	5	52	48	8	#
Rhode Island	17	83	37	4	55	45	7	#
South Carolina	10	90	46	6	35	65	13	1
South Dakota	13	87	38	3	‡	‡	‡	‡
Tennessee	20	80	30	3	59	41	6	#
Texas	8	92	49	7	29	71	15	1
Utah	16	84	35	3	‡	‡	‡	‡
Vermont	15	85	42	6	‡	‡	‡	‡
Virginia	10	90	46	7	34	66	13	#
Washington	14	86	40	5	38	62	17	1
West Virginia	24	76	24	2	38	62	13	#
Wisconsin	12	88	43	5	59	41	8	1
Wyoming	11	89	42	4	‡	‡	‡	‡
Other jurisdictions								
District of Columbia	3	97	71	21	67	33	4	#
DDESS [1]	9	91	40	3	29	71	13	1
DoDDS [2]	12	88	38	3	25	75	15	#

See notes at end of table. ▶

Table C.9 Percentages of students, by race/ethnicity and mathematics achievement level, grade 4 public schools: By state, 2003—Continued

Grade 4	Hispanic				Asian/Pacific Islander			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	38	62	15	1	13	87	48	10
Alabama	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	32	68	24	2	27	73	27	2
Arizona	44	56	11	1	11	89	41	7
Arkansas	38	62	15	1	‡	‡	‡	‡
California	47	53	11	#	13	87	49	9
Colorado	46	54	13	1	19	81	44	9
Connecticut	36	64	15	1	8	92	52	10
Delaware	31	69	17	1	13	87	59	10
Florida	26	74	27	3	10	90	53	12
Georgia	40	60	13	2	13	87	53	11
Hawaii	45	55	17	1	34	66	21	1
Idaho	45	55	11	1	‡	‡	‡	‡
Illinois	45	55	13	#	8	92	58	9
Indiana	31	69	18	1	‡	‡	‡	‡
Iowa	38	62	14	#	‡	‡	‡	‡
Kansas	22	78	19	1	‡	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	32	68	21	2	10	90	58	18
Massachusetts	37	63	13	1	11	89	49	13
Michigan	39	61	17	#	14	86	47	15
Minnesota	40	60	14	1	32	68	27	5
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	43	57	14	#	‡	‡	‡	‡
Montana	17	83	25	5	‡	‡	‡	‡
Nebraska	49	51	9	#	‡	‡	‡	‡
Nevada	47	53	10	#	18	82	34	3
New Hampshire	35	65	19	2	‡	‡	‡	‡
New Jersey	33	67	18	1	5	95	61	15
New Mexico	45	55	10	#	‡	‡	‡	‡
New York	38	62	15	1	9	91	51	10
North Carolina	21	79	30	2	7	93	60	13
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	34	66	16	1	‡	‡	‡	‡
Oklahoma	39	61	11	#	9	91	45	8
Oregon	46	54	15	1	12	88	46	9
Pennsylvania	48	52	12	#	‡	‡	‡	‡
Rhode Island	58	42	6	#	37	63	22	4
South Carolina	22	78	26	2	‡	‡	‡	‡
South Dakota	37	63	20	2	‡	‡	‡	‡
Tennessee	43	57	14	1	‡	‡	‡	‡
Texas	24	76	21	1	2	98	62	16
Utah	48	52	11	#	34	66	16	2
Vermont	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	25	75	20	2	6	94	60	14
Washington	39	61	18	1	15	85	44	10
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	37	63	13	1	28	72	26	3
Wyoming	24	76	20	1	‡	‡	‡	‡
Other jurisdictions								
District of Columbia	61	39	7	#	‡	‡	‡	‡
DDESS [1]	15	85	27	1	‡	‡	‡	‡
DoDDS [2]	21	79	25	1	14	86	38	2

See notes at end of table. ▶

Table C.9 Percentages of students, by race/ethnicity and mathematics achievement level, grade 4 public schools: By state, 2003—Continued

Grade 4	American Indian/Alaska Native				Other[3]			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	35	65	18	1	20	80	32	3
Alabama	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	46	54	13	1	‡	‡	‡	‡
Arizona	56	44	8	1	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡
California	‡	‡	‡	‡	‡	‡	‡	‡
Colorado	‡	‡	‡	‡	‡	‡	‡	‡
Connecticut	‡	‡	‡	‡	‡	‡	‡	‡
Delaware	‡	‡	‡	‡	‡	‡	‡	‡
Florida	‡	‡	‡	‡	10	90	51	6
Georgia	‡	‡	‡	‡	20	80	19	3
Hawaii	‡	‡	‡	‡	31	69	25	2
Idaho	‡	‡	‡	‡	‡	‡	‡	‡
Illinois	‡	‡	‡	‡	‡	‡	‡	‡
Indiana	‡	‡	‡	‡	18	82	29	2
Iowa	‡	‡	‡	‡	‡	‡	‡	‡
Kansas	‡	‡	‡	‡	‡	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	‡	‡	‡	‡	‡	‡	‡	‡
Massachusetts	‡	‡	‡	‡	‡	‡	‡	‡
Michigan	‡	‡	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	‡	‡	‡
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡
Montana	45	55	11	#	‡	‡	‡	‡
Nebraska	39	61	11	#	‡	‡	‡	‡
Nevada	45	55	10	#	‡	‡	‡	‡
New Hampshire	‡	‡	‡	‡	‡	‡	‡	‡
New Jersey	‡	‡	‡	‡	‡	‡	‡	‡
New Mexico	55	45	7	#	‡	‡	‡	‡
New York	‡	‡	‡	‡	‡	‡	‡	‡
North Carolina	‡	‡	‡	‡	9	91	48	4
North Dakota	48	52	9	#	‡	‡	‡	‡
Ohio	‡	‡	‡	‡	13	87	34	2
Oklahoma	32	68	16	#	‡	‡	‡	‡
Oregon	‡	‡	‡	‡	‡	‡	‡	‡
Pennsylvania	‡	‡	‡	‡	‡	‡	‡	‡
Rhode Island	‡	‡	‡	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	46	54	9	#	‡	‡	‡	‡
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡
Texas	‡	‡	‡	‡	‡	‡	‡	‡
Utah	‡	‡	‡	‡	‡	‡	‡	‡
Vermont	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	‡	‡	‡	‡	‡	‡	‡	‡
Washington	31	69	24	2	‡	‡	‡	‡
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	41	59	17	1	‡	‡	‡	‡
Wyoming	37	63	16	2	‡	‡	‡	‡
Other jurisdictions								
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡
DDESS[1]	‡	‡	‡	‡	‡	‡	‡	‡
DoDDS[2]	‡	‡	‡	‡	10	90	37	3

The estimate rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
1 Department of Defense Domestic Dependent Elementary and Secondary Schools.
2 Department of Defense Dependents Schools (Overseas).
3 "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: Detail may not sum to totals because of rounding. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.10 **Percentages of students, by race/ethnicity and mathematics achievement level, grade 8 public schools: By state, 2003**

Grade 8	White				Black			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	21	79	36	7	61	39	7	#
Alabama	32	68	23	3	73	27	3	#
Alaska	19	81	41	9	44	56	11	1
Arizona	22	78	32	4	55	45	7	1
Arkansas	31	69	24	3	74	26	3	#
California	26	74	34	7	65	35	6	1
Colorado	16	84	43	10	60	40	9	1
Connecticut	17	83	44	11	58	42	7	1
Delaware	19	81	35	6	52	48	8	#
Florida	22	78	34	7	64	36	7	1
Georgia	23	77	32	6	64	36	7	#
Hawaii	36	64	25	3	‡	‡	‡	‡
Idaho	23	77	31	5	‡	‡	‡	‡
Illinois	20	80	40	8	66	34	6	#
Indiana	21	79	35	6	60	40	7	#
Iowa	20	80	35	6	58	42	11	1
Kansas	17	83	39	8	65	35	8	#
Kentucky	32	68	25	4	62	38	5	#
Louisiana	25	75	28	3	64	36	5	#
Maine	25	75	30	5	‡	‡	‡	‡
Maryland	21	79	40	10	56	44	9	1
Massachusetts	17	83	44	9	52	48	10	1
Michigan	21	79	35	6	68	32	4	#
Minnesota	13	87	49	10	57	43	9	1
Mississippi	33	67	22	2	73	27	3	#
Missouri	23	77	32	5	65	35	6	1
Montana	17	83	37	6	‡	‡	‡	‡
Nebraska	20	80	36	6	65	35	7	#
Nevada	29	71	27	4	65	35	9	#
New Hampshire	20	80	35	7	‡	‡	‡	‡
New Jersey	16	84	42	8	59	41	7	#
New Mexico	24	76	31	4	60	40	5	1
New York	14	86	44	8	57	43	10	1
North Carolina	15	85	44	10	51	49	11	1
North Dakota	15	85	39	5	‡	‡	‡	‡
Ohio	20	80	35	6	55	45	8	#
Oklahoma	27	73	25	3	63	37	5	#
Oregon	25	75	35	7	47	53	17	2
Pennsylvania	24	76	35	6	68	32	4	#
Rhode Island	28	72	29	4	71	29	5	#
South Carolina	16	84	39	8	54	46	8	1
South Dakota	18	82	37	5	‡	‡	‡	‡
Tennessee	31	69	26	4	72	28	5	#
Texas	16	84	38	7	53	47	8	#
Utah	23	77	34	6	‡	‡	‡	‡
Vermont	22	78	35	7	‡	‡	‡	‡
Virginia	18	82	40	8	51	49	11	1
Washington	24	76	36	6	46	54	13	1
West Virginia	37	63	20	2	61	39	6	#
Wisconsin	18	82	40	7	76	24	5	#
Wyoming	20	80	35	5	‡	‡	‡	‡
Other jurisdictions								
District of Columbia	‡	‡	‡	‡	74	26	3	#
DDESS[1]	10	90	42	8	39	61	10	1
DoDDS[2]	14	86	42	8	37	63	15	1

See notes at end of table. ▶

Table C.10 Percentages of students, by race/ethnicity and mathematics achievement level, grade 8 public schools: By state, 2003—Continued

Grade 8	Hispanic				Asian/Pacific Islander			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	53	47	11	1	23	77	42	12
Alabama	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	49	51	11	2	30	70	29	5
Arizona	55	45	9	#	‡	‡	‡	‡
Arkansas	63	37	7	1	‡	‡	‡	‡
California	63	37	8	1	26	74	39	11
Colorado	52	48	12	1	20	80	38	10
Connecticut	52	48	11	1	21	79	51	19
Delaware	53	47	11	2	‡	‡	‡	‡
Florida	47	53	16	3	25	75	41	5
Georgia	51	49	14	2	27	73	40	13
Hawaii	52	48	16	2	46	54	15	2
Idaho	61	39	7	1	‡	‡	‡	‡
Illinois	52	48	9	#	11	89	58	15
Indiana	51	49	9	#	‡	‡	‡	‡
Iowa	56	44	10	1	‡	‡	‡	‡
Kansas	51	49	16	3	21	79	34	5
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	51	49	15	3	10	90	56	18
Massachusetts	59	41	9	1	12	88	57	20
Michigan	43	57	14	2	‡	‡	‡	‡
Minnesota	52	48	16	3	25	75	32	11
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡
Montana	‡	‡	‡	‡	‡	‡	‡	‡
Nebraska	60	40	10	1	‡	‡	‡	‡
Nevada	63	37	7	1	27	73	31	4
New Hampshire	‡	‡	‡	‡	‡	‡	‡	‡
New Jersey	50	50	14	2	10	90	61	21
New Mexico	59	41	7	#	‡	‡	‡	‡
New York	50	50	16	2	21	79	41	11
North Carolina	45	55	16	1	13	87	48	15
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	42	58	18	6	‡	‡	‡	‡
Oklahoma	53	47	9	1	‡	‡	‡	‡
Oregon	58	42	12	2	22	78	41	17
Pennsylvania	58	42	6	#	‡	‡	‡	‡
Rhode Island	71	29	5	#	46	54	20	2
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	‡	‡	‡	‡	‡	‡	‡	‡
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡
Texas	42	58	14	1	9	91	58	17
Utah	65	35	7	1	34	66	25	6
Vermont	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	41	59	17	4	14	86	48	14
Washington	50	50	17	3	28	72	37	11
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	50	50	16	1	33	67	17	3
Wyoming	46	54	13	1	‡	‡	‡	‡
Other jurisdictions								
District of Columbia	67	33	3	#	‡	‡	‡	‡
DDESS [1]	28	72	19	2	‡	‡	‡	‡
DoDDS [2]	28	72	29	3	18	82	38	5

See notes at end of table. ▶

Table C.10 Percentages of students, by race/ethnicity and mathematics achievement level, grade 8 public schools: By state, 2003—Continued

Grade 8	American Indian/Alaska Native				Other[3]			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	46	54	16	2	30	70	24	3
Alabama	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	51	49	12	1	‡	‡	‡	‡
Arizona	61	39	7	#	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡
California	‡	‡	‡	‡	‡	‡	‡	‡
Colorado	‡	‡	‡	‡	‡	‡	‡	‡
Connecticut	‡	‡	‡	‡	‡	‡	‡	‡
Delaware	‡	‡	‡	‡	‡	‡	‡	‡
Florida	‡	‡	‡	‡	‡	‡	‡	‡
Georgia	‡	‡	‡	‡	‡	‡	‡	‡
Hawaii	‡	‡	‡	‡	44	56	15	2
Idaho	‡	‡	‡	‡	‡	‡	‡	‡
Illinois	‡	‡	‡	‡	‡	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	‡	‡	‡	‡	‡
Kansas	‡	‡	‡	‡	‡	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	‡	‡	‡	‡	‡	‡	‡	‡
Massachusetts	‡	‡	‡	‡	‡	‡	‡	‡
Michigan	‡	‡	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	‡	‡	‡
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡
Montana	52	48	15	1	‡	‡	‡	‡
Nebraska	‡	‡	‡	‡	‡	‡	‡	‡
Nevada	‡	‡	‡	‡	‡	‡	‡	‡
New Hampshire	‡	‡	‡	‡	‡	‡	‡	‡
New Jersey	‡	‡	‡	‡	‡	‡	‡	‡
New Mexico	70	30	3	#	‡	‡	‡	‡
New York	‡	‡	‡	‡	‡	‡	‡	‡
North Carolina	52	48	13	#	‡	‡	‡	‡
North Dakota	50	50	11	#	‡	‡	‡	‡
Ohio	‡	‡	‡	‡	‡	‡	‡	‡
Oklahoma	44	56	14	1	26	74	21	4
Oregon	50	50	14	2	‡	‡	‡	‡
Pennsylvania	‡	‡	‡	‡	‡	‡	‡	‡
Rhode Island	‡	‡	‡	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	57	43	9	1	‡	‡	‡	‡
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡
Texas	‡	‡	‡	‡	‡	‡	‡	‡
Utah	‡	‡	‡	‡	‡	‡	‡	‡
Vermont	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	‡	‡	‡	‡	‡	‡	‡	‡
Washington	44	56	17	1	‡	‡	‡	‡
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	‡	‡	‡	‡	‡	‡	‡	‡
Wyoming	52	48	14	1	‡	‡	‡	‡
Other jurisdictions								
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡
DDESS[1]	‡	‡	‡	‡	‡	‡	‡	‡
DoDDS[2]	‡	‡	‡	‡	19	81	42	7

The estimate rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
[3] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: Detail may not sum to totals because of rounding. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.11 Percentage of students at or above *Basic* in mathematics, by race/ethnicity, grade 4 public schools: By state, 1992–2003

Grade 4	White					Black				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public) [1]	68 *	73 *	78 *	76 *	87	22 *	30 *	36 *	35 *	54
Alabama	56 *,**	62 *,**	73 *	70 *,**	78	16 *,**	20 *,**	34 *,**	33 *,**	41
Alaska	–	75 *,**	–	–	86	–	40 *,**	–	–	64
Arizona	67 *,**	71 *,**	74 *,**	72 *,**	85	27 *,**	24 *,**	38	36	52
Arkansas	56 *,**	64 *,**	67 *,**	68 *,**	83	18 *,**	21 *,**	27 *,**	24 *,**	39
California	60 *,**	64 *,**	72 *,**	72 *,**	86	20 *,**	18 *,**	23 *,**	25 *,**	51
Colorado	68 *,**	74 *,**	–	–	88	29 *,**	28 *,**	–	–	54
Connecticut	78 *,**	86 *,**	88 *,**	87 *,**	92	24 *,**	38 *,**	43 *,**	42 *,**	55
Delaware	66 *,**	66 *,**	–	–	91	25 *,**	27 *,**	–	–	66
Florida	65 *,**	70 *,**	–	–	87	20 *,**	24 *,**	–	–	52
Georgia	71 *,**	65 *,**	74 *,**	73 *,**	84	25 *,**	32 *,**	37 *,**	36 *,**	56
Hawaii	64 *,**	68 *,**	71 *,**	70 *,**	82	39 *,**	40 *,**	43	49	64
Idaho	65 *,**	–	75 *,**	71 *,**	84	‡	–	‡	‡	‡
Illinois	–	–	80	80 *,**	87	–	–	34 *,**	31 *,**	44
Indiana	65 *,**	77 *,**	82 *,**	80 *,**	87	22 *,**	35 *,**	46	46	54
Iowa	74 *,**	76 *,**	80 *,**	78 *,**	86	‡	37	49	50	50
Kansas	–	–	82 *,**	83 *,**	90	–	–	39	45	55
Kentucky	53 *,**	63 *,**	65 *,**	64 *,**	75	29 *,**	37 *,**	28 *,**	27 *,**	53
Louisiana	57 *,**	62 *,**	75 *,**	75 *,**	88	17 *,**	22 *,**	35 *,**	35 *,**	49
Maine	75 *,**	76 *,**	75 *,**	74 *,**	83	‡	‡	‡	‡	‡
Maryland	69 *,**	76 *,**	80 **	79 *,**	85	26 *,**	29 *,**	34 *,**	35 *,**	53
Massachusetts	75 *,**	77 *,**	86 *,**	85 *,**	91	25 *,**	35 *,**	45 *,**	51	62
Michigan	69 *,**	77 *,**	82 *,**	81 *,**	88	17 *,**	28 *,**	31 *,**	30 *,**	42
Minnesota	74 *,**	80 *,**	83 *,**	82 *,**	89	24 *,**	28 *,**	43	42	54
Mississippi	58 *,**	62 *,**	65 *,**	64 *,**	83	19 *,**	23 *,**	25 *,**	26 *,**	46
Missouri	69 *,**	73 *,**	81 *,**	79 *,**	86	25 *,**	31 *,**	33 *,**	34 *,**	53
Montana	–	75 *,**	78 *,**	75 *,**	84	–	‡	‡	‡	‡
Nebraska	71 *,**	75 *,**	73 *,**	73 *,**	87	18 *,**	28 *,**	21 *,**	22 *,**	44
Nevada	–	67 *,**	70 *,**	70 *,**	81	–	28 *,**	42	39 *,**	52
New Hampshire	73 *,**	–	–	–	88	‡	–	–	–	‡
New Jersey	81 *,**	84 *,**	–	–	90	28 *,**	35 *,**	–	–	55
New Mexico	65 *,**	69 *,**	69 *,**	69 *,**	82	33	‡	‡	‡	56
New York	71 *,**	79 *,**	85	85 *,**	91	28 *,**	36 *,**	45 *,**	44 *,**	58
North Carolina	64 *,**	77 *,**	86 *,**	84 *,**	94	23 *,**	36 *,**	56 *,**	52 *,**	68
North Dakota	74 *,**	77 *,**	78 *,**	77 *,**	87	‡	‡	‡	‡	‡
Ohio	62 *,**	–	81 *,**	80 *,**	87	21 *,**	–	38 *,**	38 *,**	54
Oklahoma	65 *,**	–	76 *,**	74 *,**	82	29 *,**	–	37	38	47
Oregon	–	68 *,**	72 *,**	69 *,**	84	–	‡	‡	32	61
Pennsylvania	73 *,**	76 *,**	–	–	87	23 *,**	25 *,**	–	–	48
Rhode Island	62 *,**	68 *,**	78 *,**	76 *,**	83	22 *,**	26 *,**	36	33 *	45
South Carolina	65 *,**	65 *,**	77 *,**	77 *,**	90	22 *,**	26 *,**	35 *,**	35 *,**	65
South Dakota	–	–	–	–	87	–	–	–	–	‡
Tennessee	56 *,**	67 *,**	69 *,**	69 *,**	80	20 *,**	28 *,**	31	29 *,**	41
Texas	72 *,**	84 *,**	89	88	92	29 *,**	46 *,**	61	61	71
Utah	68 *,**	71 *,**	74 *,**	74 *,**	84	‡	‡	‡	‡	‡
Vermont	–	67 *,**	74 *,**	74 *,**	85	–	‡	‡	‡	‡
Virginia	69 *,**	72 *,**	85	82 *,**	90	26 *,**	32 *,**	44 *,**	44 *,**	66
Washington	–	71 *,**	–	–	86	–	35 *,**	–	–	62
West Virginia	53 *,**	64 *,**	69 *,**	66 *,**	76	35 *,**	36 *,**	35 *,**	35 *,**	62
Wisconsin	76 *,**	81 *,**	–	–	88	24 *,**	26 *,**	–	–	41
Wyoming	71 *,**	66 *,**	76 *,**	75 *,**	89	‡	‡	‡	‡	‡
Other jurisdictions										
District of Columbia	88 **	86 **	91	92	97	19 *,**	15 *,**	20 *,**	20 *,**	33
DDESS [2]	–	77 *,**	79 *,**	82 *,**	91	–	43 *,**	54 *,**	55 *,**	71
DoDDS [3]	–	74 *,**	78 *,**	75 *,**	88	–	43 *,**	48 *,**	48 *,**	75

See notes at end of table. ▶

Table C.11 **Percentage of students at or above *Basic* in mathematics, by race/ethnicity, grade 4 public schools: By state, 1992–2003—Continued**

Grade 4	Hispanic					Asian/Pacific Islander				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)[1]	32 *	37 *	45 *	41 *	62	74 *	65 *	‡	‡	87
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	–	‡	–	–	68	–	59	–	–	73
Arizona	36 *,**	34 *,**	40 *,**	35 *,**	56	‡	‡	74	‡	89
Arkansas	‡	‡	‡	‡	62	‡	‡	‡	‡	‡
California	25 *,**	27 *,**	34 *,**	32 *,**	53	57 *,**	51 *,**	68 *	62 *,**	87
Colorado	38 *,**	45 *,**	–	–	54	66	65	–	–	81
Connecticut	29 *,**	35 *,**	46 *,**	45 *,**	64	‡	78	87	85	92
Delaware	‡	28 *,**	–	–	69	‡	‡	–	–	87
Florida	40 *,**	44 *,**	–	–	74	‡	‡	–	–	90
Georgia	‡	38 *,**	53	58	60	‡	‡	‡	‡	87
Hawaii	40	47	‡	‡	55	49 *,**	50 *,**	51 *,**	51 *,**	66
Idaho	29 *,**	–	43	43	55	‡	–	‡	‡	‡
Illinois	–	–	54	47	55	–	–	‡	‡	92
Indiana	‡	‡	‡	‡	69	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	‡	62	‡	‡	‡	‡	‡
Kansas	–	–	52 *,**	52 *,**	78	–	–	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	43 *,**	51	53	53	68	80	84	75	70 *	90
Massachusetts	28 *,**	38 *,**	42 *,**	36 *,**	63	65 *,**	75	78	77	89
Michigan	‡	40	‡	‡	61	‡	‡	‡	‡	86
Minnesota	‡	‡	‡	‡	60	44 *	59	74	53	68
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	57	‡	‡	‡	‡	‡
Montana	–	‡	‡	‡	83	–	‡	‡	‡	‡
Nebraska	38	32 *,**	38	40	51	‡	‡	‡	‡	‡
Nevada	–	37 *,**	43 *,**	40 *,**	53	–	61 *,**	63 *,**	69	82
New Hampshire	‡	–	–	–	65	‡	–	–	–	‡
New Jersey	39 *,**	38 *,**	–	–	67	84	88	–	–	95
New Mexico	36 *,**	37 *,**	42 *,**	41 *,**	55	‡	‡	‡	‡	‡
New York	29 *,**	35 *,**	41 *,**	39 *,**	62	77 *,**	72 *,**	88	87	91
North Carolina	‡	‡	‡	65	79	‡	‡	‡	‡	93
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	‡	–	‡	‡	66	‡	–	‡	‡	‡
Oklahoma	40 *,**	–	54	46	61	‡	–	‡	‡	91
Oregon	–	29 *,**	40 *,**	39	54	–	68 *,**	74 *	77	88
Pennsylvania	31 *,**	29 *,**	–	–	52	‡	‡	–	–	‡
Rhode Island	15 *,**	23 *,**	28 *,**	29 *,**	42	16 *,**	39 *,**	‡	52	63
South Carolina	‡	‡	‡	‡	78	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	63	–	–	–	–	‡
Tennessee	‡	‡	‡	‡	57	‡	‡	‡	‡	‡
Texas	41 *,**	54 *,**	68 **	66 *,**	76	77 *,**	‡	89	91	98
Utah	41	39 *	40 *,**	39 *,**	52	‡	‡	54	58	66
Vermont	–	‡	‡	‡	‡	–	‡	‡	‡	‡
Virginia	‡	52	66	66	75	77 *,**	77 *,**	92	95	94
Washington	–	37 *,**	–	–	61	–	68 *,**	–	–	85
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	45 *,**	45	–	–	63	‡	‡	–	–	72
Wyoming	55 *,**	41 *,**	51 *,**	50 *,**	76	‡	‡	‡	‡	‡
Other jurisdictions										
District of Columbia	26	30	36	33	39	‡	‡	‡	‡	‡
DDESS[2]	–	52 *,**	62 *,**	57 *,**	85	–	‡	‡	‡	‡
DoDDS[3]	–	51 *,**	68	63 *,**	79	–	66 *,**	74 *,**	74 *,**	86

See notes at end of table. ▶

Table C.11 Percentage of students at or above *Basic* in mathematics, by race/ethnicity, grade 4 public schools: By state, 1992–2003—Continued

Grade 4	American Indian/Alaska Native					Other[4]				
	Accommodations not permitted			Accommodations permitted		Accommodations not permitted			Accommodations permitted	
	1992	1996	2000	2000	2003	1992	1996	2000	2000	2003
Nation (public)[1]	‡	‡	‡	39 *	65	‡	‡	‡	‡	80
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	–	40 *,**	–	–	54	–	‡	–	–	‡
Arizona	20 *,**	28	21 *,**	37	44	‡	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
California	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Colorado	‡	‡	–	–	‡	‡	‡	–	–	‡
Connecticut	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Delaware	‡	‡	–	–	‡	‡	‡	–	–	‡
Florida	‡	‡	–	–	‡	‡	‡	–	–	90
Georgia	‡	‡	‡	‡	‡	‡	‡	‡	‡	80
Hawaii	‡	‡	‡	‡	‡	51 *,**	52 *,**	58 *,**	55 *,**	69
Idaho	‡	–	‡	‡	‡	‡	–	‡	‡	‡
Illinois	–	–	‡	‡	‡	–	–	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	82
Iowa	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Kansas	–	–	‡	‡	‡	–	–	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Massachusetts	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Michigan	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Montana	–	38 *,**	42	43	55	–	‡	‡	‡	‡
Nebraska	‡	‡	‡	‡	61	‡	‡	‡	‡	‡
Nevada	–	39	‡	‡	55	–	‡	‡	‡	‡
New Hampshire	‡	–	–	–	‡	‡	–	–	–	‡
New Jersey	‡	‡	–	–	‡	‡	‡	–	–	‡
New Mexico	37	23 *,**	26 *,**	24 *,**	45	‡	‡	‡	‡	‡
New York	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
North Carolina	‡	‡	‡	‡	‡	‡	‡	‡	‡	91
North Dakota	42	42	38	37	52	‡	‡	‡	‡	‡
Ohio	‡	–	‡	‡	‡	‡	–	‡	‡	87
Oklahoma	47 *,**	–	68	64	68	‡	–	‡	‡	‡
Oregon	–	‡	‡	‡	‡	–	‡	‡	‡	‡
Pennsylvania	‡	‡	–	–	‡	‡	‡	–	–	‡
Rhode Island	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	54	–	–	–	–	‡
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Texas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Utah	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Vermont	–	‡	‡	‡	‡	–	‡	‡	‡	‡
Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Washington	–	56	–	–	69	–	‡	–	–	‡
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	‡	‡	–	–	59	‡	‡	–	–	‡
Wyoming	37 *,**	‡	‡	‡	63	‡	‡	‡	‡	‡
Other jurisdictions										
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DDESS[2]	–	‡	‡	‡	‡	–	‡	72	69	‡
DoDDS[3]	–	‡	‡	‡	‡	–	66 *,**	71 *,**	70 *,**	90

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
[4] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: State-level data were not collected in 1990. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.12 **Percentage of students at or above *Basic* in mathematics, by race/ethnicity, grade 8 public schools: By state, 1990–2003**

Grade 8	White						Black					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public) [1]	59 *	66 *	72 *	76 *	75 *	79	21 *	19 *	26 *	30 *	30 *	39
Alabama	51 *,**	52 *,**	62	66	66	68	17 *,**	14 *,**	17 *,**	24	25	27
Alaska	–	–	76	–	–	81	–	–	‡	–	–	56
Arizona	60 *,**	66 *,**	70 *,**	77	75	78	30	32	36	36	33	45
Arkansas	54 *,**	54 *,**	61 *,**	64 *	60 *,**	69	13 *,**	14 *,**	17 *,**	17 *	15 *,**	26
California	60 *,**	67 *,**	70	70	70	74	19 *,**	20 *,**	31	25	25	35
Colorado	65 *,**	71 *,**	75 *,**	–	–	84	22 *,**	26	40	–	–	40
Connecticut	68 *,**	76 *,**	79	85	83	83	28 *,**	26 *,**	29 *,**	29 *	29 *	42
Delaware	56 *,**	62 *,**	65 *,**	–	–	81	26 *,**	25 *,**	27 *,**	–	–	48
Florida	53 *,**	63 *,**	70 *,**	–	–	78	17 *,**	21 *,**	20 *,**	–	–	36
Georgia	61 *,**	63 *,**	68 *,**	72	71 *	77	24 *,**	23 *,**	24 *,**	30	28 *	36
Hawaii	49 *,**	52 *,**	66	67	67	64	‡	‡	‡	‡	‡	‡
Idaho	65 *,**	70 *,**	–	75	74	77	‡	‡	–	‡	‡	‡
Illinois	61 *,**	–	–	80	78	80	19 *,**	–	–	42	41	34
Indiana	60 *,**	63 *,**	73 *,**	80	77	79	23 *,**	26 *,**	31	49	47	40
Iowa	71 *,**	78	79	–	–	80	‡	‡	43	–	–	42
Kansas	–	–	–	82	81	83	–	–	–	46	38	35
Kentucky	45 *,**	54 *,**	59 *,**	66	64	68	23 *,**	23 *,**	30	37	35	38
Louisiana	45 *,**	52 *,**	55 *,**	69 *	69 *	75	13 *,**	16 *,**	16 *,**	22 *,**	22 *,**	36
Maine	–	72 *	78	77	74	75	–	64	‡	‡	‡	‡
Maryland	63 *,**	69 *,**	75	81	77	79	21 *,**	24 *,**	26 *,**	35 *	32 *,**	44
Massachusetts	–	68 *,**	75 *,**	82	76 *,**	83	–	28 *,**	35	45	43	48
Michigan	60 *,**	69 *,**	76	79	77	79	12 *,**	18 *,**	28	24	22	32
Minnesota	69 *,**	76 *,**	79 *,**	83 *	83 *	87	19 *,**	‡	32	‡	‡	43
Mississippi	–	52 *,**	55 *,**	59 *,**	58 *,**	67	–	14 *,**	15 *,**	19 *,**	20 *,**	27
Missouri	–	68 *,**	69 *,**	74	71 *,**	77	–	25 *,**	26	27	24 *	35
Montana	77 *,**	–	78 *,**	83	81	83	‡	–	‡	‡	‡	‡
Nebraska	72 *,**	74 *,**	79	78	79	80	19 *,**	19	38	30	32	35
Nevada	–	–	–	69	65 *,**	71	–	–	–	34	29	35
New Hampshire	65 *,**	71 *,**	–	–	–	80	‡	‡	–	–	–	‡
New Jersey	70 *,**	76 *,**	–	–	–	84	23 *,**	26 *,**	–	–	–	41
New Mexico	62 *,**	65 *,**	69 *,**	70	65 *,**	76	‡	‡	‡	‡	‡	40
New York	64 *,**	72 *,**	77 *,**	83	77 *,**	86	19 *,**	22 *,**	29 *,**	42	40	43
North Carolina	49 *,**	56 *,**	68 *,**	82	79 *,**	85	17 *,**	23 *,**	31 *,**	43	40 *,**	49
North Dakota	79 *,**	79 *,**	79 *,**	80 *	80 *	85	‡	‡	‡	‡	‡	‡
Ohio	58 *,**	66 *,**	–	80	78	80	17 *,**	19 *,**	–	41	39	45
Oklahoma	58 *,**	65 *,**	–	70	67 *,**	73	19 *,**	22 **	–	33	34	37
Oregon	63 *,**	–	69 *,**	74	75	75	‡	–	‡	‡	‡	53
Pennsylvania	63 *,**	68 *,**	–	–	–	76	19 *,**	23	–	–	–	32
Rhode Island	54 *,**	62 *,**	66 *,**	71	67	72	14 *,**	28	22	27	23	29
South Carolina	–	63 *,**	64 *,**	71 *,**	70 *,**	84	–	23 *,**	28 *,**	32 *,**	30 *,**	46
South Dakota	–	–	–	–	–	82	–	–	–	–	–	‡
Tennessee	–	56 *,**	61 *,**	62 *,**	61 *,**	69	–	16 *,**	19 *	23	22	28
Texas	63 *,**	70 *,**	78 *,**	82	82	84	17 *,**	27 *,**	31 *,**	40	36	47
Utah	–	69 *,**	72 *,**	71 *,**	71 *,**	77	–	‡	‡	‡	‡	‡
Vermont	–	–	73 *,**	75	73 *	78	–	–	‡	‡	‡	‡
Virginia	60 *,**	65 *,**	70 *,**	78	76 *	82	26 *,**	29 *,**	25 *,**	39 *	37 *,**	49
Washington	–	–	73	–	–	76	–	–	25 *,**	–	–	54
West Virginia	42 *,**	48 *,**	55 *,**	63	58	63	16 *,**	25	29	36	34	39
Wisconsin	71 *,**	75 *,**	81	–	–	82	19	31	20	–	–	24
Wyoming	66 *,**	70 *,**	71 *,**	72 *,**	72 *,**	80	‡	‡	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	‡	‡	‡	87	83	‡	14 *,**	19 *,**	17 *,**	20	19 *,**	26
DDESS [2]	–	–	71 *,**	78 *,**	76 *,**	90	–	–	40 *,**	52	46 *	61
DoDDS [3]	–	–	76 *,**	80 *	79 *	86	–	–	39 *,**	48 *,**	47 *,**	63

See notes at end of table. ▶

Table C.12 Percentage of students at or above *Basic* in mathematics, by race/ethnicity, grade 8 public schools: By state, 1990–2003—Continued

Grade 8	Hispanic						Asian/Pacific Islander					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public) [1]	33 *	33 *	38 *	40 *	40 *	47	64 *	75	‡	73	73	77
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	–	–	‡	–	–	51	–	–	‡	–	–	70
Arizona	27 *,**	31 *,**	32 *,**	38	36	45	‡	‡	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	37	‡	‡	‡	‡	‡	‡
California	22 *,**	26 *,**	30	32	30	37	55 *,**	66	65	72	73	74
Colorado	33 *,**	38 *,**	40	–	–	48	‡	‡	73	–	–	80
Connecticut	20 *,**	24 *,**	35 *,**	36 *	32 *	48	‡	‡	72	‡	‡	79
Delaware	‡	‡	‡	–	–	47	‡	‡	‡	–	–	‡
Florida	30 *,**	33 *,**	40 *,**	–	–	53	‡	‡	‡	–	–	75
Georgia	‡	‡	‡	‡	‡	49	‡	‡	‡	‡	‡	73
Hawaii	‡	‡	36	‡	‡	48	38 *,**	45 *,**	49 **	49 *	48 *,**	54
Idaho	36	41	–	34	39	39	‡	‡	–	‡	‡	‡
Illinois	24 *,**	–	–	49	51	48	68 *,**	–	–	‡	‡	89
Indiana	‡	‡	‡	‡	‡	49	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	–	–	44	‡	‡	‡	–	–	‡
Kansas	–	–	–	48	49	49	–	–	–	‡	‡	79
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Maryland	41	‡	‡	61	53	49	78	74 *,**	88	87	83	90
Massachusetts	–	22 *,**	24 *,**	42	34	41	–	‡	65 *,**	81	79	88
Michigan	‡	37	‡	‡	‡	57	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	48	57	‡	61	‡	‡	75
Mississippi	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Missouri	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Montana	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡
Nebraska	‡	41	49	36	34	40	‡	‡	‡	‡	‡	‡
Nevada	–	–	–	36	35	37	–	–	–	69	63	73
New Hampshire	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Jersey	25 *,**	31 *,**	–	–	–	50	84	87	–	–	–	90
New Mexico	31 *,**	32 *,**	38	38	37	41	‡	‡	‡	‡	‡	‡
New York	25 *,**	28 *,**	28 *,**	47	40	50	63 *,**	67	68	78	70	79
North Carolina	‡	‡	‡	‡	‡	55	‡	‡	‡	‡	‡	87
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	‡	‡	–	‡	‡	58	‡	‡	–	‡	‡	‡
Oklahoma	‡	‡	–	44	50	47	‡	‡	–	‡	‡	‡
Oregon	40	–	42	46	36	42	68	–	79	69	75	78
Pennsylvania	‡	‡	–	–	–	42	‡	‡	–	–	–	‡
Rhode Island	13 *,**	15 *,**	26	30	26	29	‡	‡	52	64	54	54
South Carolina	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	–	‡	–	–	–	–	–	‡
Tennessee	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Texas	29 *,**	33 *,**	41 *,**	58	55	58	79	82	66	85	82	91
Utah	–	41	46	34	31	35	–	‡	‡	‡	47	66
Vermont	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
Virginia	‡	‡	‡	65	52	59	79	71 *,**	68 *	92	79	86
Washington	–	–	32 *,**	–	–	50	–	–	61	–	–	72
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	‡	‡	‡	–	–	50	‡	‡	‡	–	–	67
Wyoming	42	49	46	42	46	54	‡	‡	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	‡	38	19	26	28	33	‡	‡	‡	‡	‡	‡
DDESS [2]	–	–	52 *	61	53	72	–	–	‡	‡	‡	‡
DoDDS [3]	–	–	59 *	63	58	72	–	–	70 *	73	72	82

See notes at end of table. ▶

Table C.12 Percentage of students at or above *Basic* in mathematics, by race/ethnicity, grade 8 public schools: By state, 1990–2003—Continued

Grade 8	American Indian/Alaska Native						Other[4]					
	Accommodations not permitted				Accommodations permitted		Accommodations not permitted				Accommodations permitted	
	1990	1992	1996	2000	2000	2003	1990	1992	1996	2000	2000	2003
Nation (public)[1]	‡	‡	‡	53	53	54	‡	45 *	‡	‡	‡	70
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	–	–	43	–	–	49	–	–	‡	–	–	‡
Arizona	17 *,**	38	36	‡	‡	39	‡	‡	‡	‡	‡	‡
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
California	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Colorado	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Connecticut	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Delaware	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Florida	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Georgia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Hawaii	‡	‡	‡	‡	‡	‡	39 *,**	50	48	52	50	56
Idaho	‡	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡
Illinois	‡	–	–	‡	‡	‡	‡	–	–	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Kansas	–	–	–	‡	‡	‡	–	–	–	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Maryland	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Massachusetts	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Michigan	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Minnesota	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Mississippi	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Missouri	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Montana	43	–	53	47	49	48	‡	–	‡	‡	‡	‡
Nebraska	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Nevada	–	–	–	‡	44	‡	–	–	–	‡	‡	‡
New Hampshire	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Jersey	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
New Mexico	20 *,**	27	36	30	32	30	‡	‡	‡	‡	‡	‡
New York	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
North Carolina	14 *,**	‡	‡	‡	‡	48	‡	‡	‡	‡	‡	‡
North Dakota	26 *,**	47	38	44	32	50	‡	‡	‡	‡	‡	‡
Ohio	‡	‡	–	‡	‡	‡	‡	‡	–	‡	‡	‡
Oklahoma	40 *,**	52	–	61	60	56	‡	‡	–	‡	‡	74
Oregon	‡	–	‡	‡	‡	50	‡	–	‡	‡	‡	‡
Pennsylvania	‡	‡	–	–	–	‡	‡	‡	–	–	–	‡
Rhode Island	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Carolina	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
South Dakota	–	–	–	–	–	43	–	–	–	–	–	‡
Tennessee	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Texas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Utah	–	‡	‡	‡	‡	‡	–	‡	‡	‡	‡	‡
Vermont	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Washington	–	–	46	–	–	56	–	–	‡	–	–	‡
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	‡	‡	‡	–	–	‡	‡	‡	‡	–	–	‡
Wyoming	43	‡	30	‡	27	48	72	‡	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DDESS[2]	–	–	‡	‡	‡	‡	–	–	‡	‡	‡	‡
DoDDS[3]	–	–	‡	‡	‡	‡	–	–	71 *,**	74	72	81

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
[4] "Other" comprises students whose race based on school records was "other race" or, if school data were missing, who self-reported their race as "multiracial" but not "Hispanic," or did not self-report racial/ethnic information.
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, and 2003 Mathematics Assessments.

Table C.13 Percentages of students, by eligibility for free/reduced-price school lunch and mathematics achievement level, grade 4 public schools: By state, 2003

Grade 4	Eligible				Not eligible				Information not available			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	38	62	15	1	12	88	45	6	23	77	34	4
Alabama	50	50	8	#	16	84	33	2	‡	‡	‡	‡
Alaska	41	59	14	1	16	84	39	5	27	73	31	3
Arizona	45	55	12	1	14	86	39	4	28	72	29	3
Arkansas	39	61	18	1	16	84	37	4	35	65	22	2
California	46	54	11	1	16	84	41	6	40	60	23	2
Colorado	42	58	14	1	14	86	43	6	‡	‡	‡	‡
Connecticut	40	60	12	#	8	92	54	8	14	86	41	6
Delaware	31	69	16	1	12	88	42	5	14	86	34	3
Florida	37	63	16	1	12	88	46	7	27	73	24	#
Georgia	41	59	12	1	16	84	40	6	21	79	41	6
Hawaii	46	54	11	#	18	82	34	3	‡	‡	‡	‡
Idaho	31	69	20	1	13	87	38	3	12	88	43	3
Illinois	48	52	11	1	11	89	48	8	41	59	15	2
Indiana	31	69	17	1	10	90	45	5	‡	‡	‡	‡
Iowa	30	70	20	1	11	89	43	4	‡	‡	‡	‡
Kansas	25	75	24	2	9	91	53	8	‡	‡	‡	‡
Kentucky	38	62	12	#	17	83	32	3	‡	‡	‡	‡
Louisiana	41	59	13	#	15	85	41	4	57	43	9	1
Maine	29	71	21	1	11	89	41	4	‡	‡	‡	‡
Maryland	48	52	10	1	15	85	44	8	27	73	26	4
Massachusetts	31	69	17	1	9	91	52	8	16	84	44	4
Michigan	41	59	15	1	12	88	45	7	35	65	21	1
Minnesota	33	67	20	2	10	90	50	9	‡	‡	‡	‡
Mississippi	47	53	9	#	16	84	34	2	23	77	30	3
Missouri	32	68	15	1	12	88	41	4	14	86	33	3
Montana	29	71	20	1	11	89	39	3	26	74	23	2
Nebraska	37	63	17	1	10	90	44	4	15	85	34	5
Nevada	47	53	11	#	18	82	33	3	26	74	22	1
New Hampshire	28	72	24	2	9	91	48	6	16	84	37	6
New Jersey	40	60	15	1	11	89	49	7	18	82	44	5
New Mexico	45	55	11	#	19	81	31	3	33	67	21	2
New York	34	66	18	2	9	91	48	6	5	95	44	5
North Carolina	27	73	21	1	6	94	55	10	11	89	51	7
North Dakota	28	72	21	1	12	88	40	3	‡	‡	‡	‡
Ohio	36	64	17	1	9	91	47	5	13	87	39	4
Oklahoma	35	65	14	#	14	86	34	2	37	63	20	1
Oregon	32	68	19	1	15	85	40	6	17	83	48	9
Pennsylvania	40	60	16	1	12	88	48	6	20	80	42	10
Rhode Island	45	55	13	1	14	86	41	5	41	59	19	2
South Carolina	31	69	18	1	9	91	48	7	‡	‡	‡	‡
South Dakota	30	70	21	1	10	90	42	4	‡	‡	‡	‡
Tennessee	46	54	11	1	20	80	32	3	24	76	33	3
Texas	25	75	20	1	9	91	48	6	12	88	47	10
Utah	33	67	20	1	15	85	37	3	‡	‡	‡	‡
Vermont	29	71	23	2	9	91	50	7	‡	‡	‡	‡
Virginia	32	68	14	1	10	90	46	7	12	88	48	5
Washington	32	68	20	1	10	90	48	8	16	84	37	4
West Virginia	32	68	16	1	17	83	33	3	‡	‡	‡	‡
Wisconsin	39	61	17	1	12	88	44	6	21	79	44	7
Wyoming	20	80	25	2	8	92	47	5	31	69	22	3
Other jurisdictions												
District of Columbia	71	29	3	#	43	57	20	4	61	39	7	#
DDESS [1]	20	80	24	1	13	87	35	3	14	86	27	2
DoDDS [2]	–	–	–	–	–	–	–	–	–	–	–	–

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
1 Department of Defense Domestic Dependent Elementary and Secondary Schools.
2 Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.14 Percentages of students, by eligibility for free/reduced-price school lunch and mathematics achievement level, grade 8 public schools: By state, 2003

Grade 8	Eligible				Not eligible				Information not available			
	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*	Below *Basic*	At or above *Basic*	At or above *Proficient*	At *Advanced*
Nation (public)	53	47	11	1	22	78	37	7	32	68	29	6
Alabama	65	35	7	1	32	68	24	3	‡	‡	‡	‡
Alaska	49	51	13	1	24	76	36	7	29	71	31	6
Arizona	55	45	9	1	25	75	31	4	36	64	22	3
Arkansas	53	47	12	1	30	70	25	3	63	37	9	#
California	62	38	9	1	30	70	33	7	41	59	25	5
Colorado	50	50	13	2	17	83	43	10	‡	‡	‡	‡
Connecticut	50	50	12	1	18	82	44	11	21	79	38	9
Delaware	50	50	10	1	23	77	32	6	21	79	42	10
Florida	55	45	11	1	25	75	34	7	30	70	25	3
Georgia	61	39	8	1	23	77	34	7	48	52	12	1
Hawaii	58	42	8	1	34	66	24	4	‡	‡	‡	‡
Idaho	40	60	17	1	20	80	35	6	20	80	32	7
Illinois	57	43	10	1	19	81	41	9	43	57	24	4
Indiana	42	58	16	1	20	80	37	7	25	75	37	10
Iowa	43	57	15	1	17	83	39	7	17	83	39	7
Kansas	39	61	19	3	17	83	41	8	‡	‡	‡	‡
Kentucky	49	51	11	1	24	76	33	6	‡	‡	‡	‡
Louisiana	55	45	8	1	28	72	29	3	43	57	19	2
Maine	40	60	16	1	19	81	35	6	‡	‡	‡	‡
Maryland	58	42	10	1	25	75	36	8	19	81	43	16
Massachusetts	51	49	13	1	15	85	46	10	21	79	43	12
Michigan	53	47	13	1	23	77	34	6	39	61	25	4
Minnesota	36	64	24	3	13	87	50	11	‡	‡	‡	‡
Mississippi	67	33	5	#	34	66	23	2	35	65	26	1
Missouri	47	53	13	1	21	79	35	6	26	74	31	2
Montana	35	65	23	2	15	85	40	7	16	84	38	5
Nebraska	45	55	15	2	17	83	40	7	35	65	29	1
Nevada	57	43	10	1	33	67	25	4	37	63	30	3
New Hampshire	42	58	16	2	18	82	38	7	22	78	36	6
New Jersey	56	44	10	1	19	81	41	8	26	74	37	7
New Mexico	61	39	7	#	33	67	23	3	36	64	29	6
New York	48	52	16	1	15	85	45	9	19	81	41	12
North Carolina	47	53	14	2	18	82	42	10	17	83	45	12
North Dakota	33	67	23	2	13	87	41	6	‡	‡	‡	‡
Ohio	46	54	11	1	19	81	38	7	28	72	24	3
Oklahoma	50	50	10	#	24	76	28	3	‡	‡	‡	‡
Oregon	45	55	17	2	24	76	37	8	24	76	35	8
Pennsylvania	55	45	10	1	21	79	38	7	34	66	30	9
Rhode Island	59	41	8	1	23	77	33	5	66	34	9	1
South Carolina	49	51	12	1	19	81	38	8	‡	‡	‡	‡
South Dakota	37	63	22	2	15	85	41	6	‡	‡	‡	‡
Tennessee	61	39	9	1	30	70	28	4	33	67	33	9
Texas	46	54	12	1	19	81	36	7	‡	‡	‡	‡
Utah	44	56	18	2	22	78	36	7	27	73	27	3
Vermont	41	59	16	2	16	84	41	8	‡	‡	‡	‡
Virginia	51	49	11	1	19	81	38	8	29	71	28	5
Washington	44	56	16	1	21	79	40	8	25	75	32	6
West Virginia	49	51	10	1	27	73	28	3	‡	‡	‡	‡
Wisconsin	52	48	12	1	16	84	43	8	22	78	35	6
Wyoming	38	62	18	1	18	82	37	5	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	79	21	2	#	60	40	12	3	59	41	7	1
DDESS [1]	24	76	25	4	21	79	27	5	22	78	28	4
DoDDS [2]	–	–	–	–	–	–	–	–	–	–	–	–

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
The estimate rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
1 Department of Defense Domestic Dependent Elementary and Secondary Schools.
2 Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.15 Percentage of students at or above *Basic* in mathematics, by student eligibility for free/reduced-price school lunch, grade 4 public schools: By state, 1996–2003

Grade 4	Eligible				Not eligible				Information not available			
	Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted	
	1996	2000	2000	2003	1996	2000	2000	2003	1996	2000	2000	2003
Nation (public) [1]	41 *	46 *	43 *	62	73 *	79 *	77 *	88	72	77	78	77
Alabama	30 *,**	39 *,**	38 *,**	50	66 *,**	76 *,**	75 *,**	84	51	69	64	‡
Alaska	43 *,**	–	–	59	76 *,**	–	–	84	69	–	–	73
Arizona	34 *,**	40 *,**	38 *,**	55	75 *,**	75 *,**	75 *,**	86	58	53	46 *,**	72
Arkansas	37 *,**	41 *,**	39 *,**	61	70 *,**	73 *,**	72 *,**	84	‡	‡	‡	65
California	26 *,**	35 *,**	35 *,**	54	63 *,**	72 *,**	70 *,**	84	54	54	50	60
Colorado	45 *,**	–	–	58	77 *,**	–	–	86	71	–	–	‡
Connecticut	42 *,**	53	53	60	85 *,**	87 *,**	86 *,**	92	‡	63	61 *,**	86
Delaware	33 *,**	–	–	69	69 *,**	–	–	88	49 *,**	–	–	86
Florida	38 *,**	–	–	63	70 *,**	–	–	88	63	–	–	73
Georgia	33 *,**	37 *,**	36 *,**	59	68 *,**	77 *,**	77 *,**	84	66	60 *,**	59 *	79
Hawaii	37 *,**	40 *,**	39 *,**	54	64 *,**	70 *,**	70 *,**	82	48	51	55	‡
Idaho	–	59 *,**	55 *,**	69	–	80 *,**	77 *,**	87	–	74	78	88
Illinois	–	43 *,**	40 *,**	52	–	80 *,**	79 *,**	89	–	71	65	59
Indiana	49 *,**	64	59 *,**	69	82 *,**	85 *,**	85 *,**	90	‡	70	73	‡
Iowa	59 *,**	66	63	70	81 *,**	82 *,**	81 *,**	89	70	76	70	‡
Kansas	–	57 *,**	58 *,**	75	–	87 *	87 *,**	91	–	50	59	‡
Kentucky	46 *,**	46 *,**	44 *,**	62	73 *,**	74 *,**	72 *,**	83	58	69	71	‡
Louisiana	31 *,**	45 *,**	45 *,**	59	66 *,**	79	78	85	47	49	51	43
Maine	61 *,**	64	62 *,**	71	82 *,**	79 *,**	78 *,**	89	82	80	82	‡
Maryland	32 *,**	37 *,**	38 *,**	52	73 *,**	75 *,**	75 *,**	85	37 *,**	51	53	73
Massachusetts	50 *,**	51 *,**	47 *,**	69	79 *,**	90	89	91	70	75	74	84
Michigan	47 *,**	48 *,**	46 *,**	59	79 *,**	83 *,**	82 *,**	88	67	59	57	65
Minnesota	59	60	58 *,**	67	82 *,**	85 *,**	83 *,**	90	70	89	78	‡
Mississippi	28 *,**	33 *,**	33 *,**	53	67 *,**	67 *,**	67 *,**	84	‡	49 *,**	50 *,**	77
Missouri	45 *,**	51 *,**	51 *,**	68	78 *,**	83 *,**	82 *,**	88	‡	83	81	86
Montana	57 *,**	58 *,**	57 *,**	71	79 *,**	81 *,**	79 *,**	89	67	77	78	74
Nebraska	52 *,**	45 *,**	45 *,**	63	79 *,**	79 *,**	79 *,**	90	80	74	68	85
Nevada	35 *,**	43 *,**	41 *,**	53	64 *,**	71 *,**	72 *,**	82	59 *	55	56	74
New Hampshire	–	–	–	72	–	–	–	91	–	–	–	84
New Jersey	40 *,**	–	–	60	81 *,**	–	–	89	‡	–	–	82
New Mexico	35 *,**	38 *,**	40 *,**	55	70 *,**	71 *,**	72 *,**	81	59	53	44 *,**	67
New York	41 *,**	49 *,**	48 *,**	66	83 *,**	85	85 *,**	91	80	82	74 *,**	95
North Carolina	45 *,**	61 *,**	59 *,**	73	77 *,**	86 *,**	84 *,**	94	57 *,**	81	79	89
North Dakota	65	63	59 *,**	72	79 *,**	81 *,**	81 *,**	88	76	74	70	‡
Ohio	–	55	54	64	–	84 *,**	84 *,**	91	–	76	75	87
Oklahoma	–	57 **	54 *,**	65	–	83	81 *,**	86	–	67	68	63
Oregon	47 *,**	51 *,**	50 *,**	68	74 *,**	77 *,**	76 *,**	85	62 *,**	72	59 *,**	83
Pennsylvania	47 *,**	–	–	60	81 *,**	–	–	88	68	–	–	80
Rhode Island	40 *,**	44 *,**	43 *,**	55	72 *,**	82 *,**	81 *,**	86	‡	57	49	59
South Carolina	31 *,**	44 *,**	43 *,**	69	68 *,**	78 *,**	78 *,**	91	‡	43	‡	‡
South Dakota	–	–	–	70	–	–	–	90	–	–	–	‡
Tennessee	38 *,**	40 *,**	38 *,**	54	72 *,**	74 *,**	74	80	52	65	74	76
Texas	52 *,**	66 *,**	65 *,**	75	84 *,**	87	87	91	71	74	71	88
Utah	55 *,**	53 *,**	52 *,**	67	75 *,**	77 *,**	78 *,**	85	68	77	77	‡
Vermont	50 *,**	54 *,**	54 *,**	71	74 *,**	80 *,**	81 *,**	91	66	79	78	‡
Virginia	39 *,**	50 *,**	50 *,**	68	72 *,**	83 *,**	81 *,**	90	69	82	79	88
Washington	49 *,**	–	–	68	75 *,**	–	–	90	74	–	–	84
West Virginia	49 *,**	57 *,**	54 *,**	68	76 *,**	77 *,**	75 *,**	83	74	73	68	‡
Wisconsin	53 *,**	–	–	61	82 *,**	–	–	88	79	–	–	79
Wyoming	50 *,**	62 *,**	59 *,**	80	71 *,**	79 *,**	78 *,**	92	65	71	70	69
Other jurisdictions												
District of Columbia	11 *,**	18 *,**	18 *,**	29	49 *,**	58	57	57	34	30	29	39
DDESS [2]	56 *,**	65 *,**	67 *,**	80	69 *,**	73 *,**	72 *,**	87	66 *,**	72	69 *,**	86
DoDDS [3]	60	63	62	–	66	72	71	–	64	71	68	–

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: State-level data were not collected in 1990. Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Table C.16 Percentage of students at or above *Basic* in mathematics, by student eligibility for free/reduced-price school lunch, grade 8 public schools: By state, 1996–2003

Grade 8	Eligible				Not eligible				Information not available			
	Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted		Accommodations not permitted		Accommodations permitted	
	1996	2000	2000	2003	1996	2000	2000	2003	1996	2000	2000	2003
Nation (public) [1]	39 *	44	41 *	47	71 *	76	74 *	78	69	63	62	68
Alabama	22 *,**	30	32	35	60 *,**	66	66	68	43	60	62	‡
Alaska	44	–	–	51	72	–	–	76	72	–	–	71
Arizona	37	40	38	45	70	73	72	75	54	69	62	64
Arkansas	33 *,**	37 *	34 *,**	47	62 *,**	61 *,**	58 *,**	70	51	59	59	37
California	32	30 *	28 *,**	38	67	64	60	70	49	64	68	59
Colorado	46	–	–	50	75 *,**	–	–	83	60	–	–	‡
Connecticut	40	36 *	33 *,**	50	79	83	82	82	66	64	61	79
Delaware	33 *,**	–	–	50	64 *,**	–	–	77	52 *,**	–	–	79
Florida	35 *,**	–	–	45	67 *,**	–	–	75	55	–	–	70
Georgia	26 *,**	32 *	30 *,**	39	64 *,**	69 *	70 *,**	77	60	55	53	52
Hawaii	35 *	38	38	42	59 *,**	60 *	59 *,**	66	42	62	56	‡
Idaho	–	54	56	60	–	78	77	80	–	77	69	80
Illinois	–	47	45	43	–	77	77	81	–	70	70	57
Indiana	42 *,**	58	60	58	76 *	81	79	80	‡	71	65	75
Iowa	64	–	–	57	81	–	–	83	76	–	–	83
Kansas	–	58	56	61	–	84	83	83	–	78	80	‡
Kentucky	38 *,**	45	42 *,**	51	68 *,**	75	73	76	50	‡	‡	‡
Louisiana	24 *,**	32 *,**	32 *,**	45	54 *,**	69	69	72	36	48	45	57
Maine	64	65	62	60	81	80	77	81	80	78	74	‡
Maryland	28 *,**	39	35	42	68 *,**	76	73	75	60	57 *	55 *	81
Massachusetts	41	52	45	49	76 *,**	82	78 *,**	85	59	78	64	79
Michigan	45	45	45	47	75	79	76	77	60	60	61	61
Minnesota	60	65	64	64	80 *,**	84	85	87	72	80	83	‡
Mississippi	20 *,**	26 *	27 *,**	33	55 *,**	57 *	57 *,**	66	32	43	42	65
Missouri	46	46	40 *,**	53	72 *,**	74	73 *	79	55	70	68	74
Montana	55	68	65	65	82	84	83	85	79	81	83	84
Nebraska	60	53	52	55	81	82	82	83	84	‡	‡	65
Nevada	–	35	33 *	43	–	66	63	67	–	65	55	63
New Hampshire	–	–	–	58	–	–	–	82	–	–	–	78
New Jersey	–	–	–	44	–	–	–	81	–	–	–	74
New Mexico	36	38	35	39	64	64	61	67	53	48	52	64
New York	42 *,**	50	45	52	75 *,**	81	77 *,**	85	58 *,**	72	66	81
North Carolina	36 *,**	49	45 *	53	66 *,**	80	77 *,**	82	50 *,**	61 *,**	63	83
North Dakota	67	64	64	67	82 *,**	82	83	87	75	77	69	‡
Ohio	–	50	46	54	–	83	80	81	–	64	70	72
Oklahoma	–	49	48	50	–	74	71 *	76	–	71	71	‡
Oregon	50	51	52	55	74	78	78	76	64	77	76	76
Pennsylvania	–	–	–	45	–	–	–	79	–	–	–	66
Rhode Island	38	39	34	41	70 *,**	75	72	77	34	60 *,**	51	34
South Carolina	30 *,**	36 *,**	33 *,**	51	63 *,**	70 *,**	70 *,**	81	‡	‡	‡	‡
South Dakota	–	–	–	63	–	–	–	85	–	–	–	‡
Tennessee	32	33	30	39	63 *,**	64	64	70	46	51	52	67
Texas	36 *,**	53	53	54	74 *,**	79	78	81	66	70	67	‡
Utah	58	51	45 *,**	56	74	74	74 *	78	67	62	65	73
Vermont	55	58	52	59	76 *,**	80	79 *,**	84	75	75	70	‡
Virginia	29 *,**	46	42	49	67 *,**	74 *	73 *,**	81	67	66	62	71
Washington	45 *,**	–	–	56	74	–	–	79	73	–	–	75
West Virginia	39 *,**	48	41 *,**	51	62 *,**	70	69	73	62	67	67	‡
Wisconsin	51	–	–	48	82	–	–	84	77	–	–	78
Wyoming	54 *	56	54 *	62	72 *,**	75 *,**	75 *,**	82	78	67	60	‡
Other jurisdictions												
District of Columbia	14 *,**	16 *	15 *,**	21	30 *,**	47	44	40	21 *,**	21 *,**	22 *,**	41
DDESS [2]	48 *,**	59 *,**	53 *,**	76	64 *,**	71	66	79	56 *,**	69	66	78
DoDDS [3]	56	62	61	–	66	73	70	–	67	71	73	–

– Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
* Significantly different from 2003 when only one jurisdiction or the nation is being examined.
** Significantly different from 2003 when using a multiple-comparison procedure based on all jurisdictions that participated in both years.
[1] National results for assessments prior to 2003 are based on the national sample, not on aggregated state samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples. In addition to allowing for accommodations, the accommodations-permitted results for national public schools (2000 and 2003) differ slightly from previous years' results, and from previously reported results for 2000, due to changes in sample weighting procedures. See appendix A for more details. Significance tests were performed using unrounded numbers. NAEP sample sizes have increased in 2003, compared to previous years, resulting in smaller detectable differences than in previous assessments.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2003 Mathematics Assessments.

Table C.17 Average mathematics scale scores and achievement-level results, by students with and without disabilities and limited English proficiency, grade 4 public schools: By state, 2003

Grade 4	Students with disabilities										
	YES					NO					
	Weighted percentage of students assessed	Average scale scores	Percentage of students			Weighted percentage of students assessed	Average scale scores	Percentage of students			Weighted percentage of students excluded
			Below *Basic*	At or above *Basic*	At or above *Proficient*			Below *Basic*	At or above *Basic*	At or above *Proficient*	
Nation (public)	11	214	50	50	12	89	236	21	79	34	3
Alabama	10	192	78	22	3	90	227	31	69	20	2
Alaska	16	212	54	46	11	84	237	20	80	34	1
Arizona	9	210	56	44	8	91	231	27	73	27	3
Arkansas	13	202	65	35	6	87	233	24	76	29	1
California	8	208	59	41	12	92	229	30	70	26	2
Colorado	11	209	57	43	9	89	238	19	81	37	2
Connecticut	10	219	44	56	17	90	243	15	85	44	3
Delaware	10	215	50	50	11	90	238	16	84	33	6
Florida	17	214	50	50	13	83	238	19	81	35	2
Georgia	11	209	57	43	11	89	233	25	75	29	2
Hawaii	10	197	73	27	5	90	230	27	73	25	2
Idaho	11	208	59	41	7	89	238	16	84	33	1
Illinois	13	215	49	51	14	87	236	24	76	34	3
Indiana	13	221	42	58	17	87	240	14	86	38	2
Iowa	13	213	54	46	7	87	242	11	89	40	2
Kansas	12	219	43	57	13	88	245	11	89	45	1
Kentucky	11	208	60	40	8	89	231	24	76	24	3
Louisiana	19	208	60	40	6	81	230	27	73	25	3
Maine	15	215	51	49	10	85	242	12	88	38	3
Maryland	10	215	51	49	13	90	235	25	75	33	3
Massachusetts	16	224	35	65	19	84	245	12	88	46	2
Michigan	7	219	41	59	14	93	237	21	79	36	3
Minnesota	12	220	43	57	17	88	245	13	87	45	2
Mississippi	5	212	53	47	12	95	223	37	63	17	5
Missouri	13	222	39	61	15	87	237	18	82	32	3
Montana	12	212	53	47	6	88	239	14	86	35	2
Nebraska	14	220	40	60	15	86	239	17	83	37	2
Nevada	11	206	60	40	9	89	230	27	73	25	3
New Hampshire	16	222	37	63	15	84	247	8	92	48	3
New Jersey	13	212	51	49	10	87	243	15	85	43	2
New Mexico	16	207	61	39	12	84	225	33	67	18	2
New York	11	215	49	51	11	89	239	18	82	36	3
North Carolina	14	230	30	70	26	86	244	13	87	43	4
North Dakota	14	215	49	51	9	86	241	12	88	38	2
Ohio	9	214	49	51	9	91	240	16	84	38	4
Oklahoma	14	209	57	43	8	86	232	21	79	25	3
Oregon	15	218	46	54	13	85	239	17	83	36	4
Pennsylvania	11	209	58	42	12	89	239	18	82	39	2
Rhode Island	19	210	56	44	9	81	235	22	78	33	2
South Carolina	11	221	38	62	14	89	238	19	81	34	6
South Dakota	13	219	44	56	15	87	240	14	86	37	1
Tennessee	11	206	61	39	12	89	230	27	73	25	2
Texas	8	224	35	65	16	92	239	16	84	34	7
Utah	10	213	50	50	9	90	237	18	82	34	2
Vermont	14	221	40	60	16	86	245	11	89	46	4
Virginia	9	220	41	59	15	91	241	15	85	38	4
Washington	12	214	53	47	11	88	242	14	86	40	2
West Virginia	13	208	61	39	7	87	234	20	80	26	3
Wisconsin	12	211	55	45	9	88	240	16	84	39	3
Wyoming	14	221	39	61	13	86	244	9	91	43	1
Other jurisdictions											
District of Columbia	10	177	91	9	2	90	208	61	39	8	4
DDESS [1]	10	220	39	61	11	90	239	13	87	33	2
DoDDS [2]	8	215	52	48	11	92	239	13	87	33	1

See notes at end of table. ▶

Table C.17 **Average mathematics scale scores and achievement-level results, by students with and without disabilities and limited English proficiency, grade 4 public schools: By state, 2003—Continued**

Grade 4

Limited-English-proficient students

	YES					NO					
	Weighted percentage of students assessed	Average scale scores	Percentage of students Below *Basic*	Percentage of students At or above *Basic*	Percentage of students At or above *Proficient*	Weighted percentage of students assessed	Average scale scores	Percentage of students Below *Basic*	Percentage of students At or above *Basic*	Percentage of students At or above *Proficient*	Weighted percentage of students excluded
Nation (public)	9	214	51	49	9	91	236	21	79	34	1
Alabama	1	‡	‡	‡	‡	99	224	35	65	19	#
Alaska	18	215	52	48	12	82	237	20	80	34	#
Arizona	18	207	62	38	6	82	234	23	77	30	2
Arkansas	3	221	37	63	16	97	229	28	72	27	1
California	32	212	53	47	8	68	235	23	77	32	2
Colorado	9	206	65	35	5	91	238	19	81	37	1
Connecticut	3	211	54	46	3	97	242	16	84	42	1
Delaware	2	‡	‡	‡	‡	98	236	19	81	31	1
Florida	9	222	38	62	16	91	235	23	77	33	2
Georgia	4	208	59	41	8	96	231	27	73	28	1
Hawaii	5	197	77	23	2	95	228	29	71	24	2
Idaho	6	211	56	44	7	94	237	18	82	32	1
Illinois	7	204	66	34	5	93	235	24	76	34	2
Indiana	3	216	45	55	8	97	239	17	83	36	#
Iowa	3	217	46	54	6	97	239	16	84	36	1
Kansas	3	224	33	67	16	97	242	15	85	42	#
Kentucky	1	‡	‡	‡	‡	99	229	27	73	22	1
Louisiana	2	‡	‡	‡	‡	98	226	33	67	21	#
Maine	1	‡	‡	‡	‡	99	238	17	83	34	1
Maryland	3	219	44	56	15	97	234	27	73	32	2
Massachusetts	4	217	45	55	9	96	243	14	86	43	1
Michigan	5	228	37	63	24	95	236	22	78	35	1
Minnesota	5	213	50	50	7	95	244	14	86	44	1
Mississippi	#	‡	‡	‡	‡	100	223	38	62	17	1
Missouri	2	‡	‡	‡	‡	98	235	20	80	30	1
Montana	4	208	60	40	2	96	237	17	83	32	#
Nebraska	4	204	66	34	5	96	238	18	82	35	1
Nevada	15	208	61	39	6	85	231	25	75	26	2
New Hampshire	2	224	40	60	19	98	244	12	88	43	1
New Jersey	4	213	52	48	7	96	240	18	82	40	1
New Mexico	28	209	59	41	7	72	228	29	71	21	2
New York	5	206	61	39	6	95	237	19	81	34	3
North Carolina	5	231	26	74	25	95	243	15	85	42	1
North Dakota	4	211	54	46	5	96	239	15	85	35	#
Ohio	1	213	53	47	18	99	238	19	81	36	1
Oklahoma	6	220	41	59	16	94	230	26	74	23	1
Oregon	11	212	54	46	9	89	239	17	83	36	1
Pennsylvania	2	‡	‡	‡	‡	98	236	22	78	36	1
Rhode Island	8	196	77	23	3	92	233	24	76	30	2
South Carolina	2	‡	‡	‡	‡	98	236	21	79	32	#
South Dakota	4	206	66	34	5	96	238	16	84	35	#
Tennessee	1	‡	‡	‡	‡	99	228	30	70	24	#
Texas	15	219	40	60	11	85	241	14	86	37	2
Utah	11	215	49	51	10	89	237	18	82	34	1
Vermont	2	‡	‡	‡	‡	98	242	15	85	42	#
Virginia	6	226	32	68	19	94	240	16	84	37	2
Washington	6	212	55	45	7	94	240	17	83	38	1
West Virginia	#	‡	‡	‡	‡	100	231	25	75	24	#
Wisconsin	6	215	48	52	10	94	238	19	81	37	1
Wyoming	4	215	46	54	10	96	242	11	89	40	#
Other jurisdictions											
District of Columbia	6	200	72	28	3	94	205	63	37	7	1
DDESS [1]	3	‡	‡	‡	‡	97	237	15	85	31	1
DoDDS [2]	6	221	40	60	14	94	238	14	86	32	1

#The estimate rounds to zero.
‡Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
[1]Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2]Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding. The results for students with disabilities and limited-English-proficient students are based on students who were assessed and cannot be generalized to the total population of such students. The weighted percentages of students with and without disabilities and limited English proficiency are based on the total number of students assessed while the percentages excluded are based on the number of students sampled.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.18 Average mathematics scale scores and achievement-level results, by students with and without disabilities and limited English proficiency, grade 8 public schools: By state, 2003

Grade 8	Students with disabilities										
	YES					NO					
	Weighted percentage of students assessed	Average scale scores	Percentage of students Below *Basic*	At or above *Basic*	At or above *Proficient*	Weighted percentage of students assessed	Average scale scores	Percentage of students Below *Basic*	At or above *Basic*	At or above *Proficient*	Weighted percentage of students excluded
Nation (public)	11	242	71	29	6	89	280	29	71	30	3
Alabama	11	213	88	12	2	89	268	42	58	17	2
Alaska	14	248	66	34	9	86	284	25	75	33	1
Arizona	9	240	75	25	3	91	274	35	65	23	3
Arkansas	13	219	88	12	1	87	273	35	65	21	1
California	10	232	80	20	5	90	271	40	60	24	1
Colorado	11	249	65	35	7	89	287	22	78	38	1
Connecticut	12	252	60	40	8	88	288	22	78	39	3
Delaware	9	237	80	20	3	91	281	27	73	28	8
Florida	12	235	76	24	5	88	277	33	67	26	2
Georgia	10	234	76	24	6	90	274	37	63	23	2
Hawaii	13	228	87	13	1	87	271	38	62	19	3
Idaho	10	241	75	25	5	90	284	22	78	31	1
Illinois	12	241	72	28	5	88	282	28	72	33	4
Indiana	12	244	69	31	4	88	286	21	79	34	2
Iowa	14	245	72	28	4	86	290	16	84	38	2
Kansas	11	252	61	39	6	89	288	20	80	38	2
Kentucky	9	230	83	17	3	91	279	30	70	26	4
Louisiana	12	233	79	21	4	88	271	38	62	19	4
Maine	13	253	62	38	7	87	286	20	80	33	4
Maryland	11	248	65	35	12	89	281	29	71	32	3
Massachusetts	15	254	59	41	9	85	292	18	82	43	2
Michigan	9	240	73	27	5	91	280	28	72	30	4
Minnesota	11	251	61	39	6	89	296	13	87	48	2
Mississippi	4	231	86	14	2	96	262	51	49	13	5
Missouri	12	247	70	30	5	88	283	24	76	31	4
Montana	11	246	69	31	4	89	291	15	85	39	2
Nebraska	12	250	65	35	4	88	287	20	80	36	3
Nevada	11	233	78	22	4	89	272	37	63	22	2
New Hampshire	16	258	56	44	8	84	292	15	85	40	3
New Jersey	15	247	66	34	7	85	287	22	78	38	1
New Mexico	18	238	74	26	6	82	269	42	58	17	2
New York	13	243	68	32	7	87	285	24	76	36	4
North Carolina	13	255	56	44	13	87	285	24	76	35	3
North Dakota	13	253	59	41	6	87	292	13	87	41	1
Ohio	8	245	67	33	5	92	285	22	78	33	5
Oklahoma	14	238	76	24	4	86	277	29	71	23	2
Oregon	12	249	66	34	7	88	285	25	75	35	3
Pennsylvania	13	244	73	27	6	87	284	25	75	33	1
Rhode Island	18	244	69	31	8	82	278	30	70	27	3
South Carolina	8	249	62	38	5	92	280	30	70	28	7
South Dakota	9	246	69	31	5	91	289	17	83	38	2
Tennessee	12	242	70	30	16	88	272	37	63	22	3
Texas	10	245	72	28	4	90	281	27	73	27	6
Utah	9	243	73	27	5	91	284	24	76	34	2
Vermont	15	258	54	46	10	85	291	17	83	39	3
Virginia	9	255	58	42	10	91	285	24	76	33	6
Washington	11	240	74	26	5	89	286	22	78	36	2
West Virginia	14	232	86	14	1	86	277	30	70	23	3
Wisconsin	13	247	69	31	7	87	289	18	82	39	3
Wyoming	14	248	70	30	4	86	289	16	84	37	1
Other jurisdictions											
District of Columbia	11	204	96	4	1	89	248	67	33	7	5
DDESS [1]	11	249	66	34	6	89	286	17	83	29	1
DoDDS [2]	6	236	75	25	2	94	289	18	82	36	1

See notes at end of table. ▶

Table C.18 Average mathematics scale scores and achievement-level results, by students with and without disabilities and limited English proficiency, grade 8 public schools: By state, 2003—Continued

Grade 8	Limited-English-proficient students										
	YES					NO					
	Weighted percentage of students assessed	Average scale scores	Percentage of students Below *Basic*	Percentage of students At or above *Basic*	Percentage of students At or above *Proficient*	Weighted percentage of students assessed	Average scale scores	Percentage of students Below *Basic*	Percentage of students At or above *Basic*	Percentage of students At or above *Proficient*	Weighted percentage of students excluded
Nation (public)	5	241	74	26	5	95	278	31	69	29	1
Alabama	1	‡	‡	‡	‡	99	262	47	53	16	#
Alaska	11	251	63	37	9	89	283	26	74	33	#
Arizona	14	246	73	27	4	86	275	33	67	24	2
Arkansas	2	‡	‡	‡	‡	98	266	41	59	19	1
California	19	239	76	24	4	81	274	37	63	26	2
Colorado	4	243	75	25	5	96	285	24	76	36	1
Connecticut	3	241	69	31	11	97	285	26	74	35	1
Delaware	1	‡	‡	‡	‡	99	278	31	69	26	1
Florida	6	236	78	22	2	94	273	36	64	25	1
Georgia	2	239	75	25	4	98	270	40	60	22	1
Hawaii	5	238	79	21	2	95	267	42	58	18	1
Idaho	5	241	74	26	3	95	282	25	75	30	#
Illinois	3	237	80	20	4	97	279	31	69	30	1
Indiana	2	‡	‡	‡	‡	98	282	26	74	31	#
Iowa	2	245	68	32	9	98	285	23	77	34	#
Kansas	3	249	67	33	9	97	285	23	77	35	1
Kentucky	1	‡	‡	‡	‡	99	275	34	66	24	1
Louisiana	1	‡	‡	‡	‡	99	266	43	57	17	1
Maine	1	‡	‡	‡	‡	99	282	25	75	30	#
Maryland	2	‡	‡	‡	‡	98	278	32	68	30	1
Massachusetts	2	242	71	29	4	98	287	23	77	39	1
Michigan	2	‡	‡	‡	‡	98	277	32	68	28	1
Minnesota	3	253	56	44	4	97	292	17	83	45	1
Mississippi	1	‡	‡	‡	‡	99	261	53	47	12	#
Missouri	1	‡	‡	‡	‡	99	279	29	71	28	#
Montana	2	‡	‡	‡	‡	98	287	20	80	36	#
Nebraska	2	‡	‡	‡	‡	98	283	25	75	33	1
Nevada	7	234	78	22	3	93	270	38	62	21	1
New Hampshire	1	‡	‡	‡	‡	99	286	21	79	35	#
New Jersey	2	‡	‡	‡	‡	98	282	27	73	34	1
New Mexico	19	240	75	25	3	81	269	41	59	18	1
New York	4	237	79	21	3	96	282	27	73	33	2
North Carolina	3	250	62	38	7	97	282	27	73	33	1
North Dakota	2	‡	‡	‡	‡	98	288	18	82	37	#
Ohio	1	235	78	22	3	99	282	26	74	31	#
Oklahoma	5	251	60	40	12	95	273	34	66	20	1
Oregon	6	246	70	30	4	94	283	27	73	34	1
Pennsylvania	2	‡	‡	‡	‡	98	279	31	69	30	#
Rhode Island	4	228	87	13	3	96	274	35	65	25	2
South Carolina	1	‡	‡	‡	‡	99	277	32	68	26	#
South Dakota	3	239	75	25	4	97	286	20	80	36	#
Tennessee	2	‡	‡	‡	‡	98	269	41	59	21	1
Texas	6	243	75	25	4	94	279	29	71	26	2
Utah	7	248	67	33	7	93	283	26	74	33	1
Vermont	1	‡	‡	‡	‡	99	286	23	77	35	#
Virginia	2	‡	‡	‡	‡	98	282	27	73	31	2
Washington	4	246	69	31	6	96	283	26	74	33	1
West Virginia	#	‡	‡	‡	‡	100	271	37	63	20	#
Wisconsin	3	‡	‡	‡	‡	97	285	23	77	36	1
Wyoming	3	254	64	36	7	97	285	22	78	33	#
Other jurisdictions											
District of Columbia	4	231	79	21	3	96	244	70	30	6	1
DDESS [1]	6	‡	‡	‡	‡	94	283	20	80	28	1
DoDDS [2]	3	256	59	41	9	97	287	20	80	35	1

#The estimate rounds to zero.
‡Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
[1]Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2]Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding. The results for students with disabilities and limited-English-proficient students are based on students who were assessed and cannot be generalized to the total population of such students. The weighted percentages of students with and without disabilities and limited English proficiency are based on the total number of students assessed while the percentages excluded are based on the number of students sampled.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessment.

Table C.19 Average mathematics scale score and achievement-level results, by students with disabilities and limited-English-proficient students, grade 4 public schools: By urban district, 2003

Grade 4	Weighted percentage of students assessed	Average scale scores	Percentage of students: Below *Basic*	Percentage of students: At or above *Basic*	Percentage of students: At or above *Proficient*
Students with disabilities					
Nation (public)	11	214	50	50	12
Large central city (public)	10	204	63	37	7
Atlanta	7	200	67	33	8
Boston	17	201	71	29	3
Charlotte	14	225	36	64	16
Chicago	11	194	74	26	4
Cleveland	7	195	78	22	1
District of Columbia	10	177	91	9	2
Houston	12	216	47	53	10
Los Angeles	9	198	73	27	4
New York City	12	203	65	35	4
San Diego	10	210	58	42	8
Limited-English-proficient students					
Nation (public)	9	214	51	49	9
Large central city (public)	19	212	54	46	7
Atlanta	2	‡	‡	‡	‡
Boston	16	209	59	41	5
Charlotte	6	226	33	67	17
Chicago	17	204	67	33	3
Cleveland	3	‡	‡	‡	‡
District of Columbia	6	200	72	28	3
Houston	34	221	39	61	10
Los Angeles	55	207	61	39	4
New York City	7	203	66	34	7
San Diego	33	211	55	45	5

‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

Table C.20 Average mathematics scale score and achievement-level results, by students with disabilities and limited-English-proficient students, grade 8 public schools: By urban district, 2003

Grade 8	Weighted percentage of students assessed	Average scale scores	Percentage of students: Below *Basic*	At or above *Basic*	At or above *Proficient*
Students with disabilities					
Nation (public)	11	242	71	29	6
Large central city (public)	11	229	81	19	4
Atlanta	9	210	95	5	#
Boston	21	227	89	11	2
Charlotte	12	253	58	42	16
Chicago	13	217	92	8	1
Cleveland	9	223	90	10	2
District of Columbia	11	204	96	4	1
Houston	10	241	77	23	4
Los Angeles	11	215	91	9	2
New York City	14	223	89	11	#
San Diego	10	228	86	14	2
Limited-English-proficient students					
Nation (public)	5	241	74	26	5
Large central city (public)	11	238	76	24	4
Atlanta	1	‡	‡	‡	‡
Boston	9	229	88	12	2
Charlotte	6	258	59	41	19
Chicago	5	228	82	18	2
Cleveland	5	‡	‡	‡	‡
District of Columbia	4	231	79	21	3
Houston	12	240	79	21	2
Los Angeles	32	223	90	10	2
New York City	10	238	78	22	4
San Diego	21	235	82	18	2

The estimate rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Trial Urban District Mathematics Assessment.

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D Appendix D

State- and District-Level Contextual Variables

To help place results from the NAEP 2003 state and Trial Urban District assessment programs into context, this appendix presents selected state- and district-level data from sources other than NAEP. These data are taken from the *Digest of Education Statistics 2002*.

Table D.1 Population and public-school enrollment, from non-NAEP sources: By state, April 2000 and Fall 2000

	Estimated resident populations: April 1, 2000		Enrollment in public elementary and secondary schools: Fall 2000		
	Total (in thousands)	5- to 17-year-olds (in thousands)	Total (in thousands)	Kindergarten through grade 8[1] (in thousands)	Grades 9–12 (in thousands)
Nation	281,422	53,118	47,223	33,709	13,514
Alabama	4,447	827	740	539	201
Alaska	627	143	133	94	39
Arizona	5,131	985	878	641	237
Arkansas	2,673	499	450	318	132
California	33,872	6,763	6,142	4,409	1,733
Colorado	4,301	803	725	517	208
Connecticut	3,406	618	562	406	156
Delaware	784	143	115	81	34
Florida	15,982	2,701	2,435	1,760	675
Georgia	8,186	1,574	1,445	1,060	385
Hawaii	1,212	218	184	132	52
Idaho	1,294	271	245	170	75
Illinois	12,419	2,369	2,049	1,474	575
Indiana	6,080	1,151	989	703	286
Iowa	2,926	545	495	334	161
Kansas	2,688	524	471	323	147
Kentucky	4,042	729	666	472	194
Louisiana	4,469	902	743	547	197
Maine	1,275	231	207	146	61
Maryland	5,296	1,003	853	609	244
Massachusetts	6,349	1,103	975	703	273
Michigan	9,938	1,924	1,743	1,256	488
Minnesota	4,919	957	854	578	277
Mississippi	2,845	571	498	364	134
Missouri	5,595	1,058	913	645	268
Montana	902	175	155	105	50
Nebraska	1,711	333	286	195	91
Nevada	1,998	366	341	251	90
New Hampshire	1,236	234	208	147	61
New Jersey	8,414	1,524	1,308	953	355
New Mexico	1,819	378	320	225	95
New York	18,976	3,451	2,882	2,029	853
North Carolina	8,049	1,425	1,294	945	348
North Dakota	642	121	109	72	37
Ohio	11,353	2,133	1,835	1,294	541
Oklahoma	3,451	656	623	445	178
Oregon	3,421	624	546	379	167
Pennsylvania	12,281	2,194	1,814	1,258	556
Rhode Island	1,048	184	157	114	44
South Carolina	4,012	745	677	493	184
South Dakota	755	152	129	88	41
Tennessee	5,689	1,024	909	668	241
Texas	20,852	4,262	4,060	2,943	1,117
Utah	2,233	509	482	333	148
Vermont	609	114	102	70	32
Virginia	7,079	1,276	1,145	816	329
Washington	5,894	1,120	1,005	694	310
West Virginia	1,808	301	286	201	85
Wisconsin	5,364	1,026	879	595	285
Wyoming	494	98	90	60	30
Other Jurisdictions					
District of Columbia	572	82	69	54	15
DDESS [2]	–	–	34	31	3
DoDDS [3]	–	–	74	59	14

– Not available.
[1] Includes a number of prekindergarten students.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, *Digest of Education Statistics, 2002* (NCES 2003-060), tables 17 and 37 (pp. 24, 50–51), 2003; U.S. Department of Commerce, U.S. Census Bureau, *Current Population Reports*, Series P-25, No. 1095 at the national level, SF1-P12 and unpublished data; and Common Core of Data surveys.

Table D.2 Poverty status of school-age children and children served under Individuals with Disabilities Education Act and Chapter 1, from non-NAEP sources: By state, 2001 and school years 1990–1991 through 2000–2001

	Poverty status of 5- to 17-year-olds: 2001		Children (birth to 21-year-olds) served under IDEA[1] and Chapter 1 of the Education Consolidation and Improvement Act, State Operated Programs	
	Number in poverty (in thousands)	Percent in poverty	Number of children: 2000–2001 school year	Percent change: 1990–1991 to 2000–2001
Nation	7,891	15.1	6,292,930	32.2
Alabama	174	21.1	99,828	5.1
Alaska	14	10.3	17,691	20.0
Arizona	214	20.1	96,442	68.5
Arkansas	124	25.0	62,222	30.1
California	1,101	15.4	645,287	37.5
Colorado	90	10.5	78,806	38.0
Connecticut	58	9.6	73,886	14.4
Delaware	13	8.5	16,760	17.3
Florida	499	17.5	367,335	55.6
Georgia	301	18.4	171,292	67.9
Hawaii	32	14.6	23,951	81.9
Idaho	36	13.1	29,174	32.5
Illinois	342	15.3	297,316	24.3
Indiana	105	9.6	156,320	36.4
Iowa	32	6.1	72,461	19.4
Kansas	58	12.3	61,267	35.5
Kentucky	108	15.5	94,572	19.1
Louisiana	188	21.3	97,938	33.0
Maine	22	11.2	35,633	27.3
Maryland	73	6.8	112,077	22.8
Massachusetts	110	11.3	162,216	4.9
Michigan	206	11.6	221,456	32.7
Minnesota	70	8.1	109,955	35.9
Mississippi	131	24.0	62,281	2.2
Missouri	108	10.7	137,381	34.7
Montana	22	13.7	19,129	11.6
Nebraska	39	12.5	42,793	30.6
Nevada	37	8.9	38,160	106.9
New Hampshire	16	7.1	30,077	53.0
New Jersey	124	8.9	221,715	22.3
New Mexico	85	24.1	52,256	45.0
New York	624	19.0	438,465	42.6
North Carolina	216	14.7	173,067	40.6
North Dakota	16	16.7	13,652	9.2
Ohio	294	15.0	237,643	15.7
Oklahoma	113	18.0	85,577	30.3
Oregon	87	13.8	75,204	36.4
Pennsylvania	257	12.7	242,655	10.6
Rhode Island	16	9.1	30,727	45.8
South Carolina	169	22.2	105,922	36.2
South Dakota	9	6.9	16,825	12.3
Tennessee	169	17.3	125,863	20.0
Texas	897	20.4	491,642	40.2
Utah	54	10.8	53,921	12.9
Vermont	9	9.9	13,623	11.1
Virginia	99	7.4	162,212	42.3
Washington	134	12.1	118,851	39.2
West Virginia	56	20.5	50,333	16.7
Wisconsin	111	12.1	125,358	44.2
Wyoming	7	8.9	13,154	17.4
Other Jurisdictions				
District of Columbia	24	30.9	10,559	67.9

[1] Individuals with Disabilities Education Act.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, *Digest of Education Statistics, 2002* (NCES 2003-060), tables 20 and 55 (pp. 27, 68), 2003; U.S. Department of Commerce, U.S. Census Bureau, Decennial Census, *Minority Economic Profiles*, unpublished data; *Current Population Reports*, Series P-60, "Poverty in the United States," "Money Income of Households, Families, and Persons in the United States," and "Income, Poverty, and Valuation of Noncash Benefits," various years, and "Money Income in the U.S.: 2001," P60-218; U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of The Individuals with Disabilities Education Act*, various years; and unpublished tabulations.

Table D.3 **Expenditure per pupil, average teacher salary, and pupil/teacher ratio, in public schools, from non-NAEP sources: By state, school years 1999–2000, 2001–2002, and fall 2000**

	In public elementary and secondary schools		
	Expenditure per pupil: 1999–2000	Estimated average annual salary of teachers: 2001–2002	Pupil/teacher ratio: fall 2000
Nation	$6,911	$44,604	16 [1]
Alabama	5,638	39,268	15 [1]
Alaska	8,806	49,418	17
Arizona	4,999	36,966	20
Arkansas	5,277	35,389	14
California	6,314	53,870	21 [1]
Colorado	6,215	40,222	17
Connecticut	9,753	54,300	14
Delaware	8,310	48,363	15
Florida	5,831	38,719	18
Georgia	6,437	44,073	16
Hawaii	6,530	41,951	17
Idaho	5,315	37,482	18
Illinois	7,133	50,000	16
Indiana	7,192	44,195	17
Iowa	6,564	38,230	14
Kansas	6,294	36,673	14
Kentucky	5,921	37,847	17
Louisiana	5,804	35,437	17
Maine	7,667	37,100	13
Maryland	7,731	46,200	16
Massachusetts	8,761	50,293	14
Michigan	8,110	52,037	18 [1]
Minnesota	7,190	43,330	16
Mississippi	5,014	32,800	16
Missouri	6,187	37,695	14
Montana	6,314	34,379	15
Nebraska	6,683	36,236	14
Nevada	5,760	41,524	19
New Hampshire	6,860	38,911	15
New Jersey	10,337	54,575	13
New Mexico	5,825	36,490	15
New York	9,846	53,081	14
North Carolina	6,045	42,959	15
North Dakota	5,667	31,709	13
Ohio	7,065	44,492	16
Oklahoma	5,395	35,412	15
Oregon	7,149	43,886	19
Pennsylvania	7,772	50,599	16
Rhode Island	8,904	49,758	15
South Carolina	6,130	38,943	15
South Dakota	5,632	31,295	14
Tennessee	5,383	38,554	15 [1]
Texas	6,288	39,293	15
Utah	4,378	37,414	22
Vermont	8,323	38,802	12
Virginia	6,841	41,262	13 [1]
Washington	6,376	43,483	20
West Virginia	7,152	36,751	14
Wisconsin	7,806	43,114	14
Wyoming	7,425	37,841	13
Other Jurisdictions			
District of Columbia	10,107	47,049	14
DDESS [2]	–	–	14
DoDDS [3]	–	–	14

– Not available.
[1] Includes imputations for underreporting.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, *Digest of Education Statistics, 2002* (NCES 2003–060), tables 67, 78, and 169 (pp. 79, 88, 198-99), 2003; U.S. Department of Education, National Center for Education Statistics, *Revenues and Expenditures for Public Elementary and Secondary Schools,* various years; *Statistics of State School Systems*, various years; Common Core of Data surveys; National Education Association, Estimates of School Statistics; and unpublished data, 2002.

Table D.4 Enrollment, expenditure per pupil, and pupil/teacher ratio in public schools, from non-NAEP sources: By urban district, fall 2000 and school year 1999–2000

	In public elementary and secondary schools		
	Total enrollment: fall 2000 (in thousands)	Expenditure per pupil:[1] 1999–2000	Pupil/teacher ratio: fall 2000
Atlanta	58	$8,623	15
Boston	63	11,503	11
Charlotte	103	6,617	16
Chicago	435	7,214	18
Cleveland	76	7,679	14
District of Columbia	69	10,874	14
Houston	208	6,196	19
Los Angeles	721	6,740	21
New York City	1,067	9,472	16
San Diego	142	6,765	19

[1] Expenditure per pupil based on fall enrollment collected by the Bureau of the Census.
NOTE: Total enrollment reflects totals reported by school districts and may differ from data derived from summing school-level data to school district aggregates.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, *Digest of Education Statistics, 2002* (NCES 2003–060), tables 90 and 91 (pp. 99–116), 2003; U.S. Department of Education, National Center for Education Statistics, Common Core of Data survey; and U.S. Department of Commerce, "Survey of Local Government Finances."

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Appendix E

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