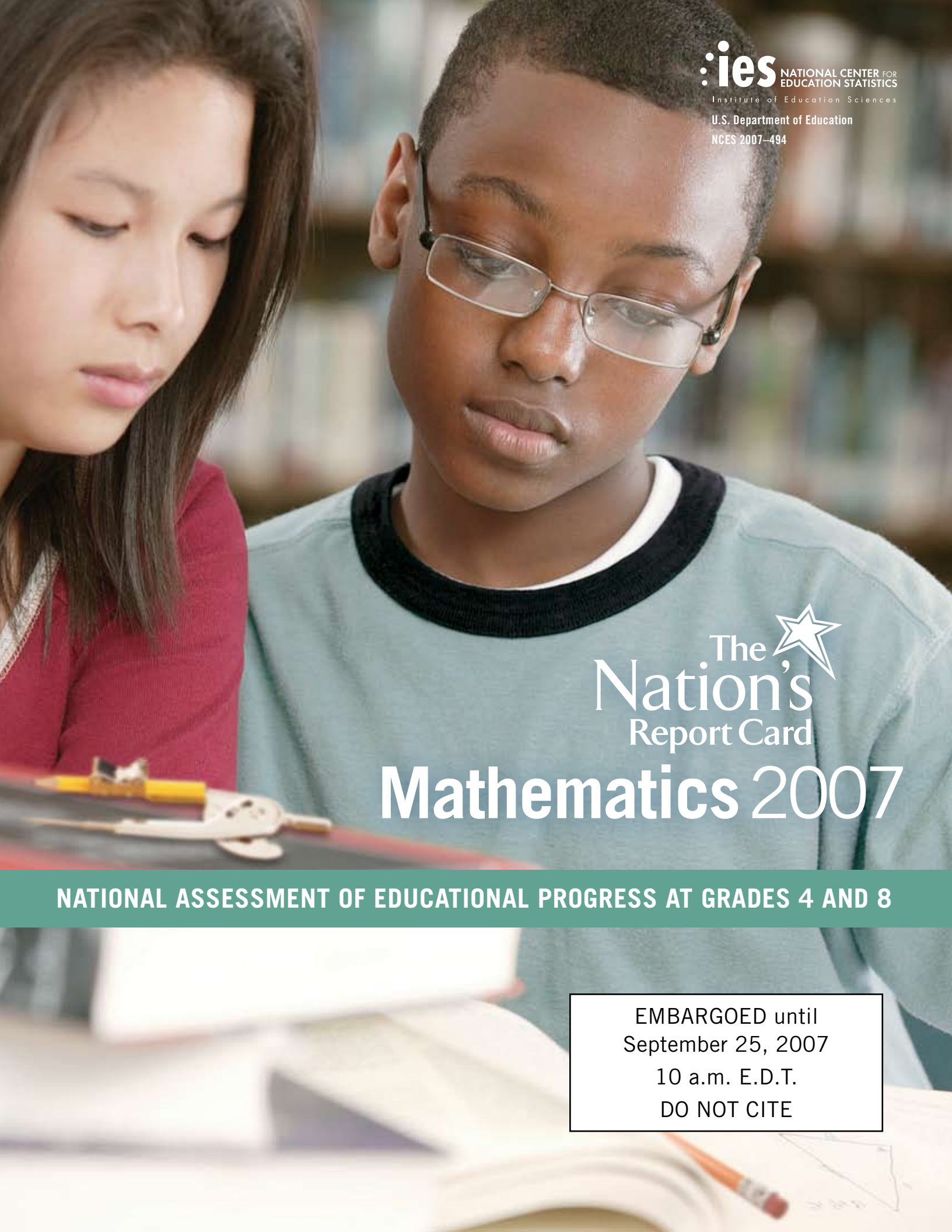


ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences
U.S. Department of Education
NCES 2007–494

The Nation's Report Card
Mathematics 2007

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS AT GRADES 4 AND 8

EMBARGOED until
September 25, 2007
10 a.m. E.D.T.
DO NOT CITE

CONTENTS

2 Executive Summary
4 Overview of the Mathematics Assessment
6 Reporting NAEP Results
8 4th Grade
24 8th Grade
40 Technical Notes
42 Appendix Tables

What is The Nation's Report Card™?

The Nation's Report Card™ informs the public about the academic achievement of elementary and secondary students in the United States. Report cards communicate the findings of the National Assessment of Educational Progress (NAEP), a continuing and nationally representative measure of achievement in various subjects over time.

For over three decades, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and other subjects. By collecting and reporting information on student performance at the national, state, and local levels, NAEP is an integral part of our nation's evaluation of the condition and progress of education. Only information related to academic achievement and relevant variables is collected. The privacy of individual students and their families is protected, and the identities of participating schools are not released.

NAEP is a congressionally authorized project of the National Center for Education Statistics (NCES) within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible for carrying out the NAEP project. The National Assessment Governing Board oversees and sets policy for NAEP.

Executive Summary

Both fourth- and eighth-graders reached a higher level of performance in 2007 compared to earlier assessment years.

The 2007 National Assessment of Educational Progress (NAEP) evaluated students' understanding of mathematics concepts and their ability to apply mathematics to everyday situations. Students demonstrated their knowledge of these critical skills by responding to questions about number properties and operations, measurement, geometry, data analysis and probability, and algebra.

A nationally representative sample of more than 350,000 students at grades 4 and 8 participated in the 2007 mathematics assessment. Comparing these results to results from previous years shows the progress fourth- and eighth-graders are making both in the nation and in individual states.

The average score for fourth-graders increased 27 points over the past 17 years, and the score for eighth-graders increased 19 points. Students at all levels of performance made gains, resulting in higher percentages of students at or above the *Basic* and *Proficient* achievement levels.

Student groups make gains, few gaps narrow

As indicated in the chart on the following page, improvements for minority students did not always result in narrower achievement gaps with White students. White, Black, and Hispanic students at both grades showed a better understanding of mathematics in 2007 when compared to all previous assessment years. However, when compared to the first assessment year in 1990, only the White – Black score gap at grade 4 narrowed in 2007. The White – Black score gap at grade 8 narrowed between 2005 and 2007.

The mathematics score for Asian/Pacific Islander students was higher in 2007 than in previous assessment years for grade 4, but at grade 8 showed no significant change from 2005 to 2007.

Student groups	Grade 4 Since 1990	Grade 4 Since 2005	Grade 8 Since 1990	Grade 8 Since 2005
Overall	↑	↑	↑	↑
White	↑	↑	↑	↑
Black	↑	↑	↑	↑
Hispanic	↑	↑	↑	↑
Asian/Pacific Islander	↑	↑	↑	↔
American Indian/ Alaska Native	‡	↔	‡	↔
Gaps				
White – Black	↓	↔	↔	↓
White – Hispanic	↔	↔	↔	↔

↑ Indicates the score was higher or the gap increased in 2007.

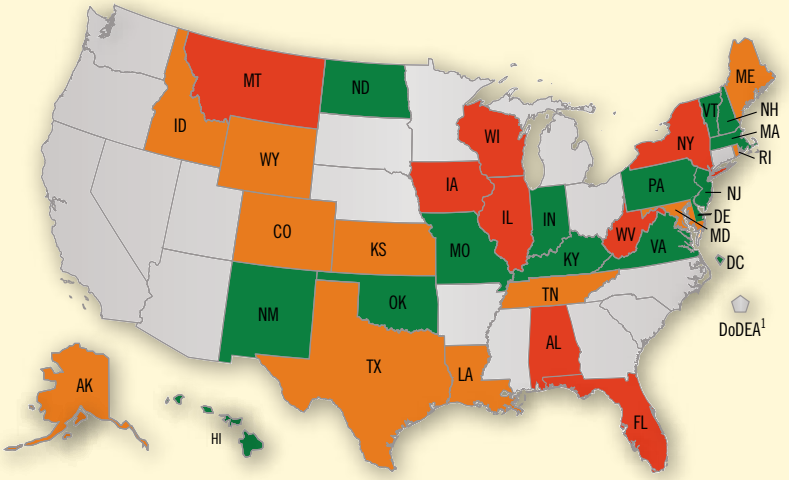
↓ Indicates the score was lower or the gap decreased in 2007.

↔ Indicates there was no significant change in the score or the gap in 2007.

‡ Reporting standards not met. Sample size was insufficient to permit a reliable estimate.

At both grades 4 and 8, scores rose for students regardless of their eligibility for the free and reduced-price school lunch program, a measure of socioeconomic status. Average scores were higher in 2007 than in 2005 for students who were eligible as well as for students who were not eligible.

FIFTEEN STATES AND JURISDICTIONS MAKE GAINS AT BOTH GRADES



[1] Department of Defense Education Activity (overseas and domestic schools).

Compared with 2005,

- 14 states and the District of Columbia improved at both grades,
- 8 states improved at grade 4 only,
- 11 states improved at grade 8 only, and
- 17 states and Department of Defense schools showed no significant change at either grade.

No states showed score decreases.

Differing patterns emerged when results were examined by different mathematics content areas. For example, 9 of the 29 states and jurisdictions that showed no change in overall performance at grade 4 did show a gain in at least one of the five content areas.

EXAMPLES OF WHAT STUDENTS CAN DO IN MATHEMATICS

GRADE 4

80% identified a fraction modeled by a picture

64% determined the probability of a specific outcome

43% explained how to find the perimeter of a given shape

GRADE 8

71% estimated time given a rate and a distance

54% computed the measure of an angle in a figure

25% identified the graph of a linear equation

Overview of the Mathematics Assessment

With the belief that mathematics proficiency is integral to contemporary life, the NAEP mathematics assessment was designed to measure students' knowledge and skills in mathematics and their ability to apply their knowledge and skills in problem solving situations.

The Mathematics Framework

The NAEP mathematics framework serves as the blueprint for the assessment, describing the specific mathematical skills that should be assessed at grades 4 and 8. Developed under the direction of the National Assessment Governing Board, the framework incorporates ideas and input from mathematicians, school administrators, policymakers, teachers, parents, and others.

The current NAEP mathematics framework was first used to guide the development of the 1990 assessment and has continued to be used through 2007. Updates to the framework over the years have provided more detail regarding the assessment design but did not change the content, allowing students' performance in 2007 to be compared with previous years. For more information on the framework, visit http://www.nagb.org/frameworks/math_07.pdf.

The framework details the mathematics objectives appropriate for grades 4 and 8. The topics covered by the framework include properties of numbers and operations, proportional reasoning, systems of measurement, relationships between geometric figures, data representation, probability, algebraic representations, equations and inequalities, and mathematical reasoning in various content areas.

Two dimensions of mathematics, *content areas* and *mathematical complexity*, are used to guide the assessment. Each item is designed to measure one of the five content areas. However, certain aspects of mathematics, such as computation, occur in all content areas. The level of complexity of a mathematics question is determined by the cognitive demands that it places on students.

MATHEMATICS CONTENT AREAS

Number properties and operations measures students' understanding of ways to represent, calculate, and estimate with numbers.

Measurement measures students' knowledge of measurement attributes, such as capacity and temperature, and geometric attributes, such as length, area, and volume.

Geometry measures students' knowledge and understanding of shapes in a plane and in space.

Data analysis and probability measures students' understanding of data representation, characteristics of data sets, experiments and samples, and probability.

Algebra measures students' understanding of patterns, using variables, algebraic representation, and functions.

LEVELS OF MATHEMATICAL COMPLEXITY

Low complexity questions typically specify what a student is to do, which is often to carry out a routine mathematical procedure.

Moderate complexity questions involve more flexibility of thinking and often require a response with multiple steps.

High complexity questions make heavier demands and often require abstract reasoning or analysis in a novel situation.

Assessment Design

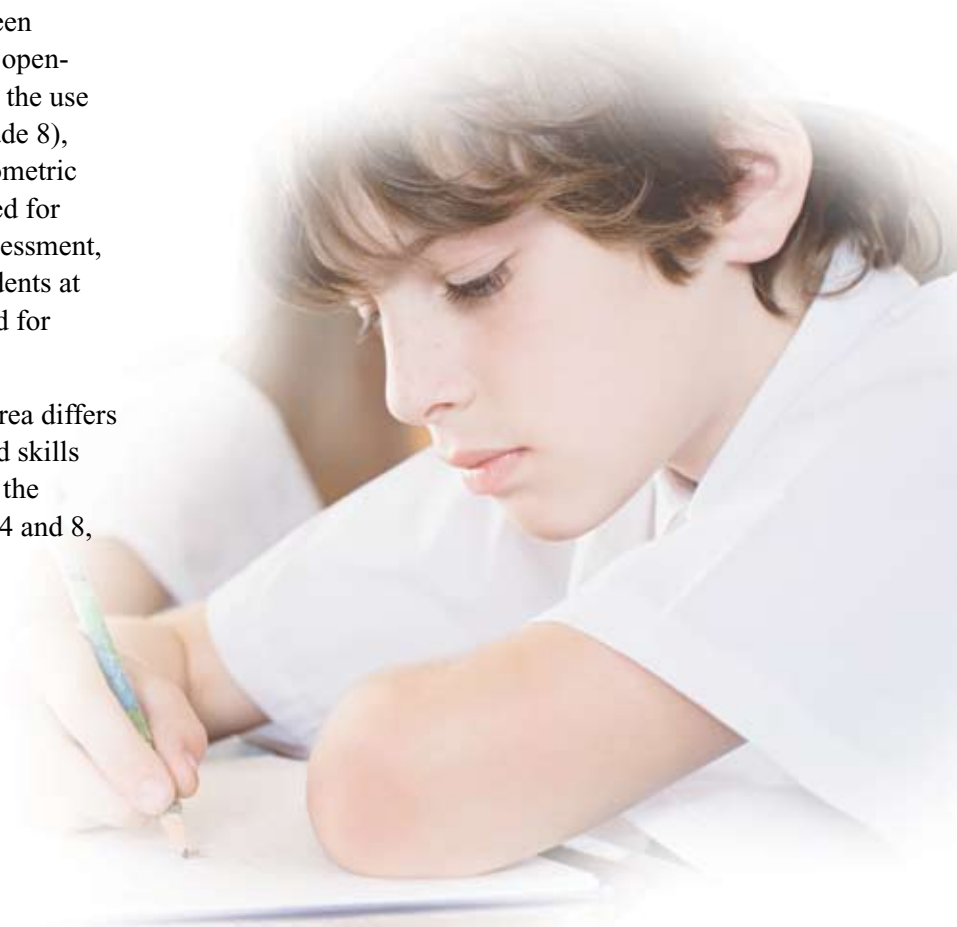
Because of the breadth of the content covered in the NAEP mathematics assessment, each student took just a portion of the test, consisting of two 25-minute sections. Testing time was divided evenly between multiple-choice and constructed-response (i.e., open-ended) questions. Some questions incorporated the use of rulers (at grade 4) or ruler/protractors (at grade 8), and some questions incorporated the use of geometric shapes or other manipulatives that were provided for students. On approximately one-third of the assessment, a four-function calculator was provided for students at grade 4, and a scientific calculator was provided for students at grade 8.

The distribution of items among each content area differs somewhat by grade to reflect the knowledge and skills appropriate for each grade level. Table 1 shows the distribution across the content areas for grades 4 and 8, as recommended in the framework.

Table 1. Target percentage distribution of NAEP mathematics questions, by grade and content area: 2007

Content area	Grade 4	Grade 8
Number properties and operations	40%	20%
Measurement	20%	15%
Geometry	15%	20%
Data analysis and probability	10%	15%
Algebra	15%	30%

SOURCE: U.S. Department of Education, National Assessment Governing Board, Mathematics Framework for the 2007 National Assessment of Educational Progress, 2006.



Reporting NAEP Results

The students selected to take the NAEP assessment represent all fourth- and eighth-grade students across the U.S. Students who participate in NAEP play an important role by demonstrating the achievement of our nation's students and representing the success of our schooling. NAEP data can only be obtained with the cooperation of schools, teachers, and students nationwide.

Representative samples of schools and students at grades 4 and 8 participated in the 2007 NAEP mathematics assessment (table 2). The national results reflect the performance of all fourth- and eighth-graders in public schools, private schools, Bureau of Indian Education schools, and Department of Defense schools. The state results reflect the performance of students in public schools only.

Table 2. **Number of participating schools and students in NAEP mathematics assessment, by grade: 2007**

Grade	Schools	Students
Grade 4	7,840	197,700
Grade 8	6,910	153,000

NOTE: The numbers of schools are rounded to the nearest ten, and the numbers of students are rounded to the nearest hundred.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

National results from the 2007 mathematics assessment are compared to results from six previous assessment years for both grades 4 and 8. The 2007 state results are compared to results from five earlier assessments at grade 4 and six earlier assessments at grade 8. Changes in students' performance over time are summarized by comparing the results in 2007 to the next most recent assessment and the first assessment, except when pointing out consistent patterns across all assessments.

Scale Scores

NAEP mathematics results are reported on a 0–500 scale, overall and for each of the five content areas. Because NAEP scales are developed independently for each subject and for each content area within a subject, the scores cannot be compared across subjects or across content areas within the same subject. Results are also reported at five percentiles (10th, 25th, 50th, 75th, and 90th) to show trends in performance for lower-, middle-, and higher-performing students.

Achievement Levels

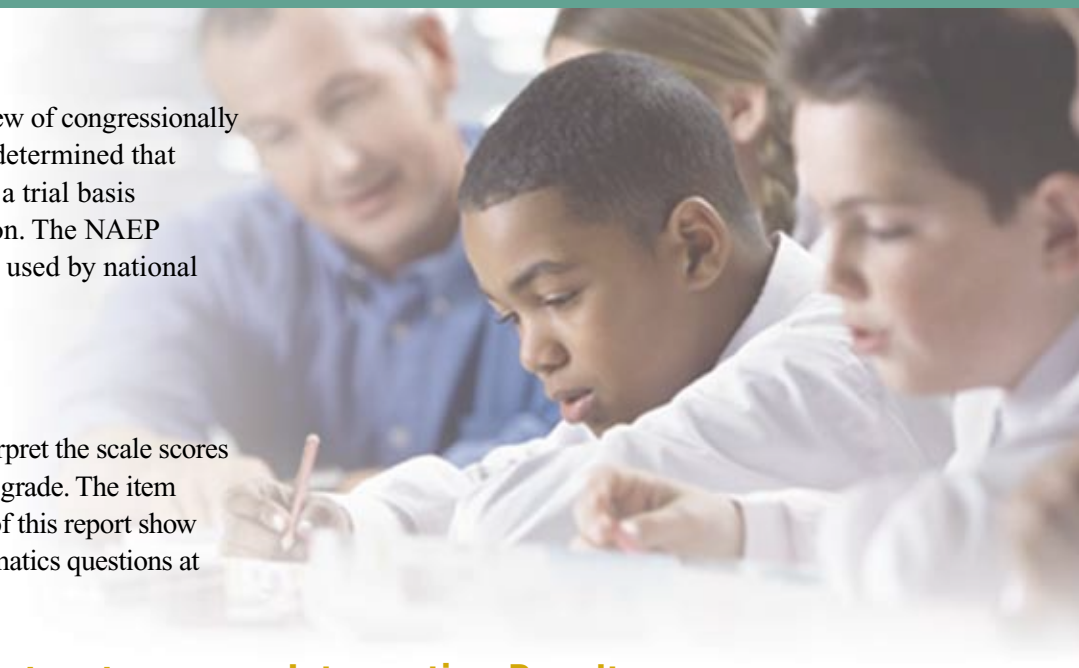
Based on recommendations from policymakers, educators, and members of the general public, the Governing Board sets specific achievement levels for each subject area and grade. Achievement levels are performance standards showing what students should know and be able to do. They provide another perspective with which to interpret student performance. NAEP results are reported as percentages of students performing at or above the *Basic* and *Proficient* levels and at the *Advanced* level.

NAEP ACHIEVEMENT LEVELS

Basic denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at a given grade.

Proficient represents solid academic performance. Students reaching this level have demonstrated competency over challenging subject matter.

Advanced represents superior performance.



As provided by law, NCES, upon review of congressionally mandated evaluations of NAEP, has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. The NAEP achievement levels have been widely used by national and state officials.

Item Maps

Item maps provide another way to interpret the scale scores and achievement-level results for each grade. The item maps displayed in each grade section of this report show student performance on NAEP mathematics questions at different points on the scale.

Accommodations and Exclusions in NAEP

Testing accommodations, such as extra testing time or individual rather than group administration, are provided for students with disabilities or English language learners who could not fairly and accurately demonstrate their abilities without modified test administration procedures. Prior to 1996, no testing accommodations were provided in the NAEP mathematics assessment. This resulted in the exclusion of some students. In 1996, administration procedures were introduced at the national level allowing certain accommodations for students requiring such accommodations to participate. Accommodations for state level assessments began in 2000.

Note that most figures in this report show two data points in 1996—one permitting and the other not permitting accommodations. Both 1996 data points are presented in this report, but comparisons between 1996 and 2007 are based on accommodated samples.

Even with the availability of accommodations, there still remains a portion of students excluded from the NAEP assessment. Variations in exclusion and accommodation rates, due to differences in policies and practices regarding the identification and inclusion of students with disabilities and English language learners, should be considered when comparing students' performance over time and across states. While the effect of exclusion is not precisely known, comparisons of performance results could be affected if exclusion rates are comparatively high or vary widely over time. See appendix tables A-1 through A-5 for the percentages of students accommodated and excluded at the national and state levels. More information about NAEP's policy on inclusion of special-needs students is available at http://nces.ed.gov/nationsreportcard/about/inclusion.asp.

Interpreting Results

Changes in performance results over time may reflect not only changes in students' knowledge and skills but also other factors, such as changes in student demographics, education programs and policies (including policies on accommodations and exclusions), and teacher qualifications.

NAEP results adopt widely accepted statistical standards; findings are reported based on a statistical significance level set at .05 with appropriate adjustments for multiple comparisons. In the tables and figures of this report that present results over time, the symbol (*) is used to indicate that a score or percentage in a previous assessment year is significantly different from the comparable measure in 2007. This symbol is also used in tables to highlight differences between male and female students within 2007. As a result of larger student sample sizes beginning in 2003, smaller differences (e.g., 1 or 2 points) can be found statistically significant than would have been detected with the smaller sample sizes used in earlier assessments.

Score differences or gaps cited in this report are calculated based on differences between unrounded numbers. Therefore, the reader may find that the score difference cited in the text may not be identical to the difference obtained from subtracting the rounded values shown in the accompanying tables or figures.

Not all of the data for results discussed in this report are presented in corresponding tables or figures. These and other results can be found in the NAEP Data Explorer at http://nces.ed.gov/nationsreportcard/nde.

For additional information, visit http://nationsreportcard.gov.

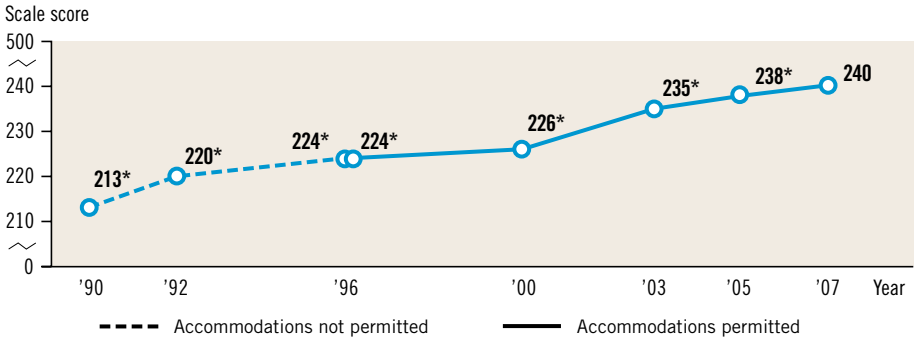
4th Grade

Score higher than in all previous assessments

Results from the 2007 NAEP mathematics assessment revealed that fourth-graders' mathematical skills have improved over the last 17 years. Fourth-graders in 2007 scored 2 points higher than in 2005 and 27 points higher than in 1990 (figure 1).

Although not shown here, gains were also made in each of the mathematics content areas for which comparisons could be made back to 1990. Score point increases from 1990 to 2007 ranged from a 20-point gain in the measurement content area to a 30-point gain in algebra.

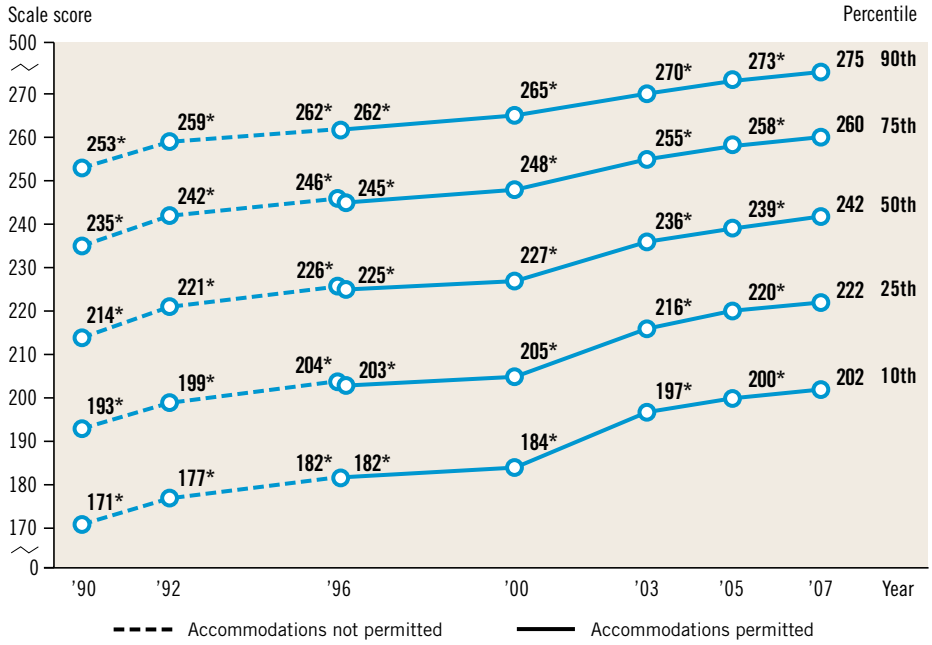
Figure 1. **Trend in fourth-grade NAEP mathematics average scores**



* Significantly different ($p < .05$) from 2007.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Improvement across all performance levels

Figure 2. **Trend in fourth-grade NAEP mathematics percentile scores**

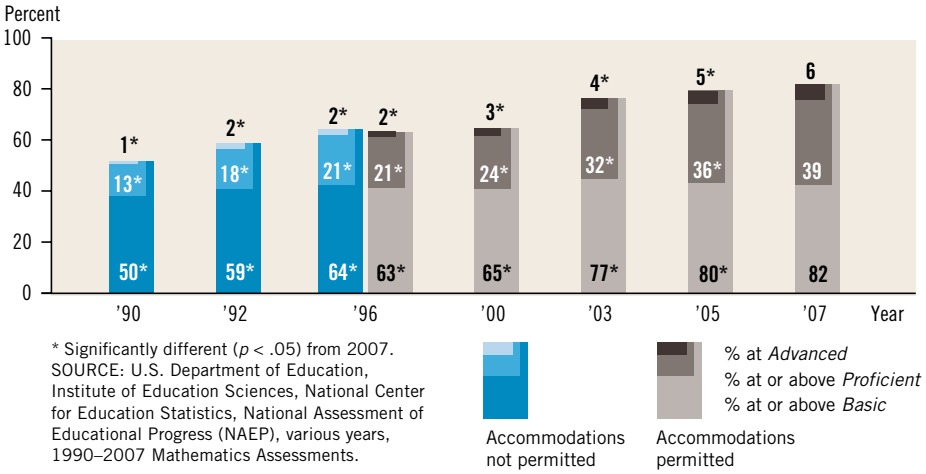


* Significantly different ($p < .05$) from 2007.

The overall increase was seen at all levels of student performance. Lower-performing students (at the 10th and 25th percentiles), middle-performing students (at the 50th percentile), and higher-performing students (at the 75th and 90th percentiles) all scored higher in 2007 than in any previous assessment (figure 2). Lower-performing students made greater gains than higher-performing students over the last 17 years.

Score increases across all performance levels were also reflected in the achievement-level results. The percentages of students at or above *Basic*, at or above *Proficient*, and at *Advanced* were higher in 2007 compared to the percentages for all previous assessment years (figure 3). The percentage of students at or above *Proficient* tripled from 13 percent in 1990 to 39 percent in 2007.

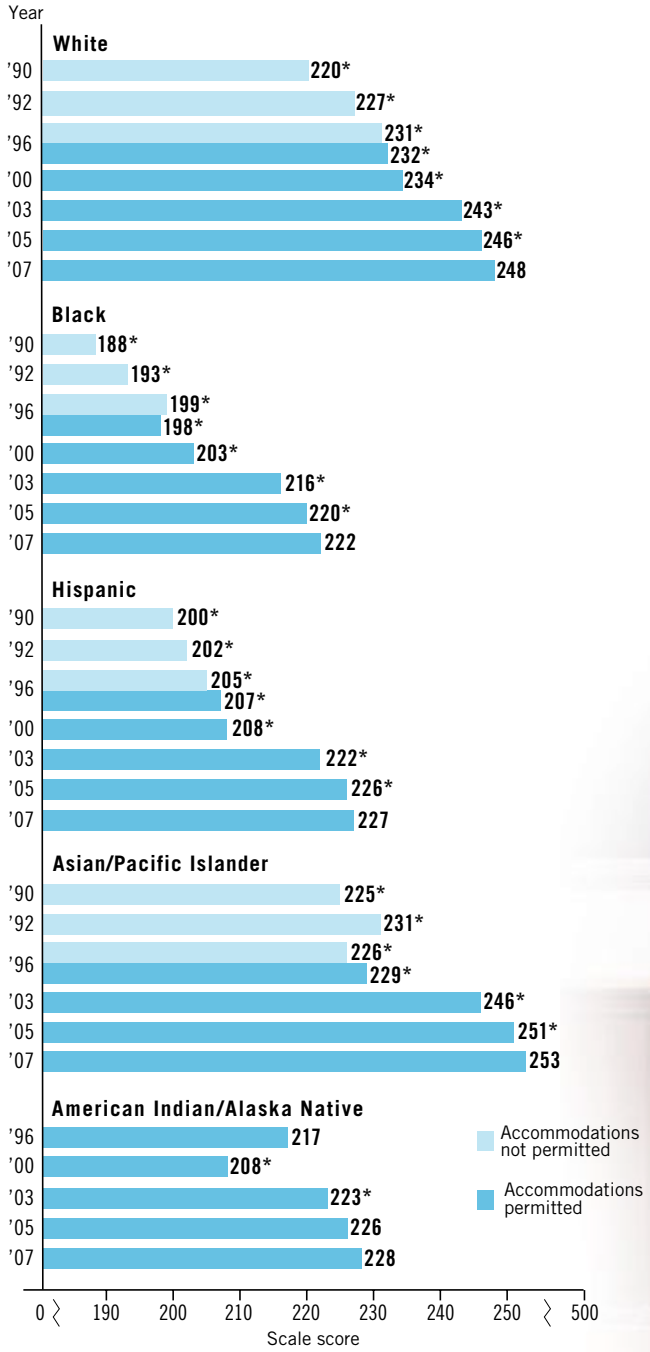
Figure 3. **Trend in fourth-grade NAEP mathematics achievement-level performance**



* Significantly different ($p < .05$) from 2007.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Most racial/ethnic groups show gains

Figure 4. **Trend in fourth-grade NAEP mathematics average scores, by race/ethnicity**



* Significantly different ($p < .05$) from 2007.
NOTE: Special analysis raised concerns about the accuracy and precision of national grade 4 Asian/Pacific Islander results in 2000. As a result, they are omitted from this figure. Sample sizes were insufficient to permit reliable estimates for American Indian/Alaska Native fourth-graders in 1990, 1992, and 1996 (accommodations not permitted sample). Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

White, Black, Hispanic, and Asian/Pacific Islander students all showed higher average mathematics scores in 2007 than in any of the previous assessments (figure 4). The 35-point[1] gain for Black students from 1990 to 2007 was greater than the gains for White (28 points) and Hispanic students (27 points).

American Indian/Alaska Native students showed no significant score change since 2005. However, although not shown here, the percentage of this group of students performing at or above *Proficient* increased from 21 percent in 2005 to 25 percent in 2007.

[1] The score-point gain is based on the difference of the unrounded scores as opposed to the rounded scores shown in the figure.

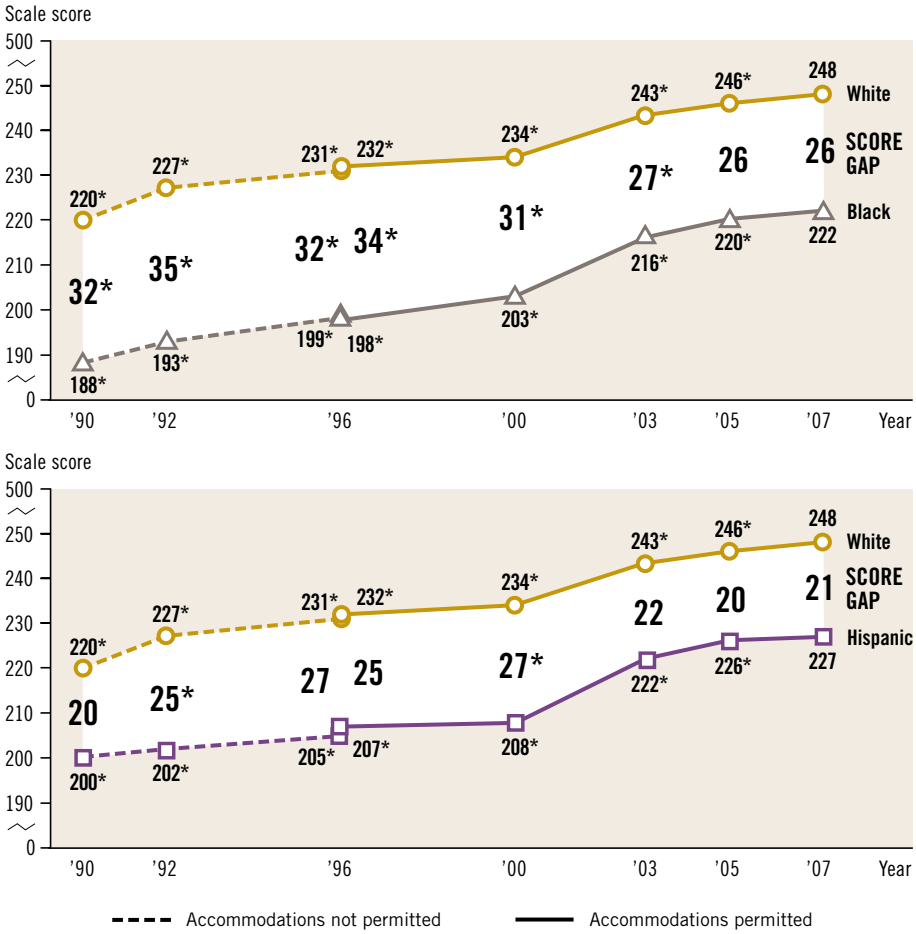
ACHIEVEMENT-LEVEL RESULTS...

Information is available on achievement-level results for racial/ethnic groups and other reporting categories at http://nationsreportcard.gov/math_2007/data.asp.

White – Black gap narrowing over time

Score increases did not consistently result in a significant closing of performance gaps between minority students and White students. There was no significant change in the White – Black score gap over the last two years (figure 5). Greater gains made by Black students resulted in a smaller performance gap in 2007 compared to 17 years ago. The White – Hispanic gap was not significantly different from the gaps in either 2005 or 1990.

Figure 5. Trend in fourth-grade NAEP mathematics average scores and score gaps, by selected racial/ethnic groups



* Significantly different ($p < .05$) from 2007.
NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores.

Table 3. Percentage of students assessed in fourth-grade NAEP mathematics, by race/ethnicity: Various years, 1990–2007

Race/ethnicity	1990	1992	1996	2000	2003	2005	2007
White	75*	73*	66*	64*	60*	58*	57
Black	18*	17*	16	16	17	16	16
Hispanic	6*	6*	11*	15*	18*	19*	20
Asian/Pacific Islander	1*	2*	5	—	4*	4	5
American Indian/ Alaska Native	1*	1	1	1	1	1	1

— Not available. Special analysis raised concerns about the accuracy and precision of national grade 4 Asian/Pacific Islander results in 2000. As a result, they are omitted from this table.
* Significantly different ($p < .05$) from 2007.
NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because results are not shown for the "unclassified" race/ethnicity category.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

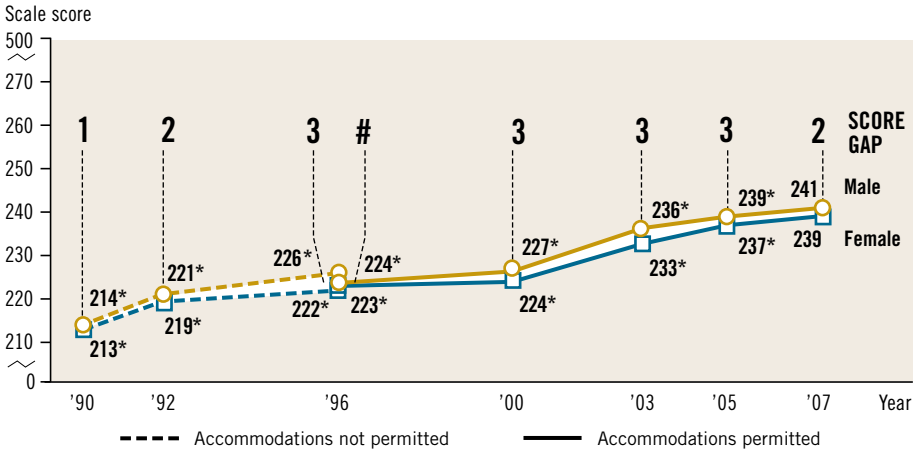
In each assessment year, NAEP collects information on student demographics. As shown in table 3, the percentage of White fourth-graders in the population was lower in 2007 than in previous assessment years, while the percentage of Hispanic students was higher. The percentage of Asian/Pacific Islander students was higher in 2007 than in 1990, and the percentage of Black students was lower.

Males score 2 points higher than females in 2007

Both male and female fourth-graders showed improved mathematical skills, with higher scores in 2007 than in any of the previous assessment years (figure 6). Although both groups showed increases in 2007, male students scored 2 points higher on average than their female counterparts. The gap between the two groups in 2007 was not significantly different from the gaps in 2005 or 1990.

Differences in performance between male and female students in 2007 varied somewhat when examined by content area. Male students scored higher on average than female students in all the mathematics content areas with the exception of geometry in which female students scored higher (table 4).

Figure 6. **Trend in fourth-grade NAEP mathematics average scores and score gaps, by gender**



Rounds to zero.
* Significantly different ($p < .05$) from 2007.
NOTE: Score gaps are calculated based on differences between unrounded average scores.

Table 4. **Average scores in fourth-grade NAEP mathematics, by content area and gender: 2007**

Gender	Number properties and operations	Measurement	Geometry	Data analysis and probability	Algebra
Male	239*	241*	238*	244*	245*
Female	237	237	239	243	243

* Significantly different ($p < .05$) from female students in 2007.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Public school students score lower than private school students

Ninety-one percent of fourth-graders attended public schools in 2007, and 9 percent attended private schools. The average mathematics score for fourth-graders in public schools (239) was lower than for students in private schools overall (246) and in Catholic schools specifically (246).

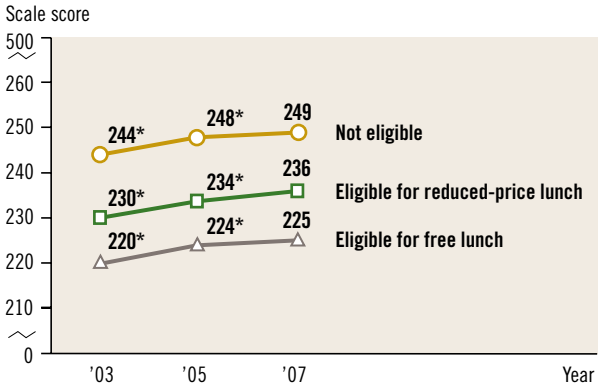
Sample sizes for private schools as a whole were not always large enough to produce reliable estimates of student performance in some of the previous assessments, limiting the comparisons that can be made in performance over time (see the section on School and Student Participation Rates in the Technical Notes for more information). Trend results for public and Catholic school students, and for private school students in those years in which sample sizes were sufficient, are available at: http://nationsreportcard.gov/math_2007/m0038.asp.

Both higher- and lower-income level students make gains

A student's eligibility for free or reduced-price school lunch is used as an indicator of socioeconomic status; students from low-income families are typically eligible (eligibility criteria are described in the Technical Notes), while students from higher-income families typically are not.

Students who were not eligible continued to score higher on average than students who were eligible for free or reduced-price lunch; however, average mathematics scores were higher in 2007 than in 2005 for all three groups (figure 7). In 2007, those students eligible for reduced-price lunch had an average score 11 points higher than students eligible for free lunch.

Figure 7. **Trend in fourth-grade NAEP mathematics average scores, by eligibility for free or reduced-price school lunch**



* Significantly different ($p < .05$) from 2007.

Table 5. **Percentage of students assessed in fourth-grade NAEP mathematics, by eligibility for free or reduced-price school lunch: 2003, 2005, and 2007**

Eligibility status	2003	2005	2007
Eligible for free lunch	33*	35	36
Eligible for reduced-price lunch	8*	7*	6
Not eligible	50*	50*	52
Information not available	10*	8*	7

* Significantly different ($p < .05$) from 2007.
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, 2005, and 2007 Mathematics Assessments.

More than one-third of fourth-graders assessed were eligible for free lunch in 2007 (table 5).

Changes in these percentages may reflect not only a shift in the population but also changes in the National School Lunch Program and improvements in data quality. See the Technical Notes for more information.

State Performance at Grade 4

State results for public school students make it possible to compare each state's performance to other states and to the nation. All 50 states and 2 jurisdictions (i.e., the District of Columbia and Department of Defense schools) participated in the 2007 mathematics assessment. These 52 states and jurisdictions are all referred to as "states" in the following summary of state results. All states also participated in 2005, and 42 participated in the 1992 assessment, allowing for comparisons over time.

Twenty-three states show score increases

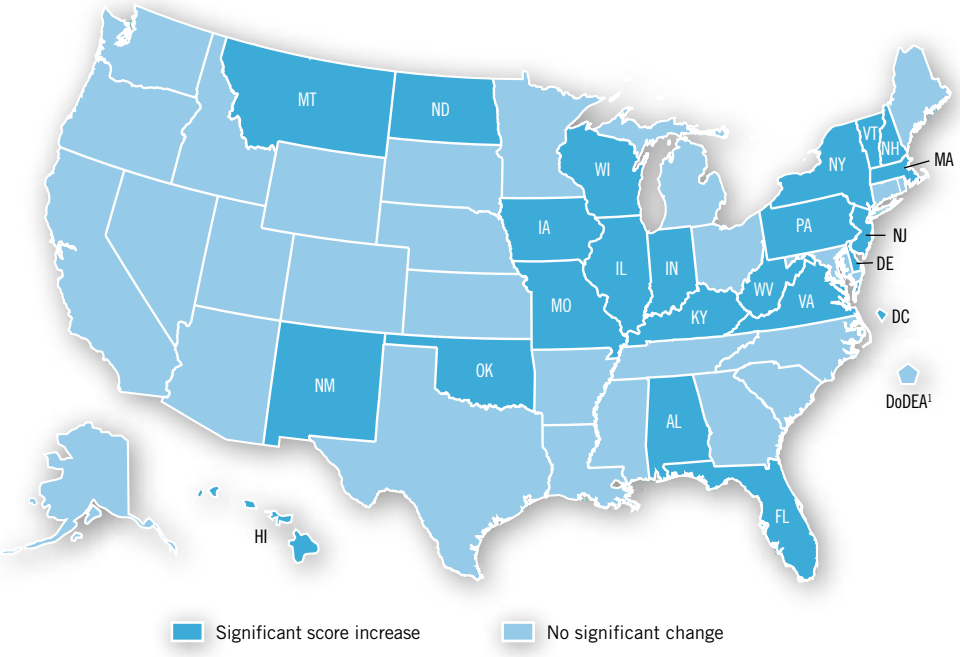
The map on the right highlights the 23 states in which overall average mathematics scores increased from 2005 to 2007 (figure 8). Of these 23 states, scores were also higher for White students in 14 states; Black students in Delaware and New Jersey; Hispanic students in Delaware, Florida, Missouri, and New Mexico; Asian/Pacific Islander students in Hawaii; and American Indian/Alaska Native students in Oklahoma.

In no state did scores decline since 2005 for students overall or for any of the racial/ethnic groups.

Scores increased since 1992 for all 42 states that participated in both 1992 and 2007. All of these states showed increases in the percentages of students both at or above *Basic* and at or above *Proficient*. These, and other state results for grade 4, are provided in figure 10, tables 6 and 7, and appendix tables A-7 through A-13.

When making state comparisons, it is important to remember that performance results may be affected by differences in demographic makeup and exclusion and accommodation rates for students with disabilities and English language learners. Differences in performance could be affected if exclusion rates are comparatively high or vary widely over time. See appendix tables A-3 through A-5 for state exclusion and accommodation rates.

Figure 8. **Changes in fourth-grade NAEP mathematics average scores between 2005 and 2007**



[1] Department of Defense Education Activity (overseas and domestic schools).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments.

States' progress varies by mathematics content areas

While scores for the mathematics content areas cannot be directly compared to one another, examining patterns in differences over time shows that changes in overall results for a state may not always be consistent with changes for any particular content area.

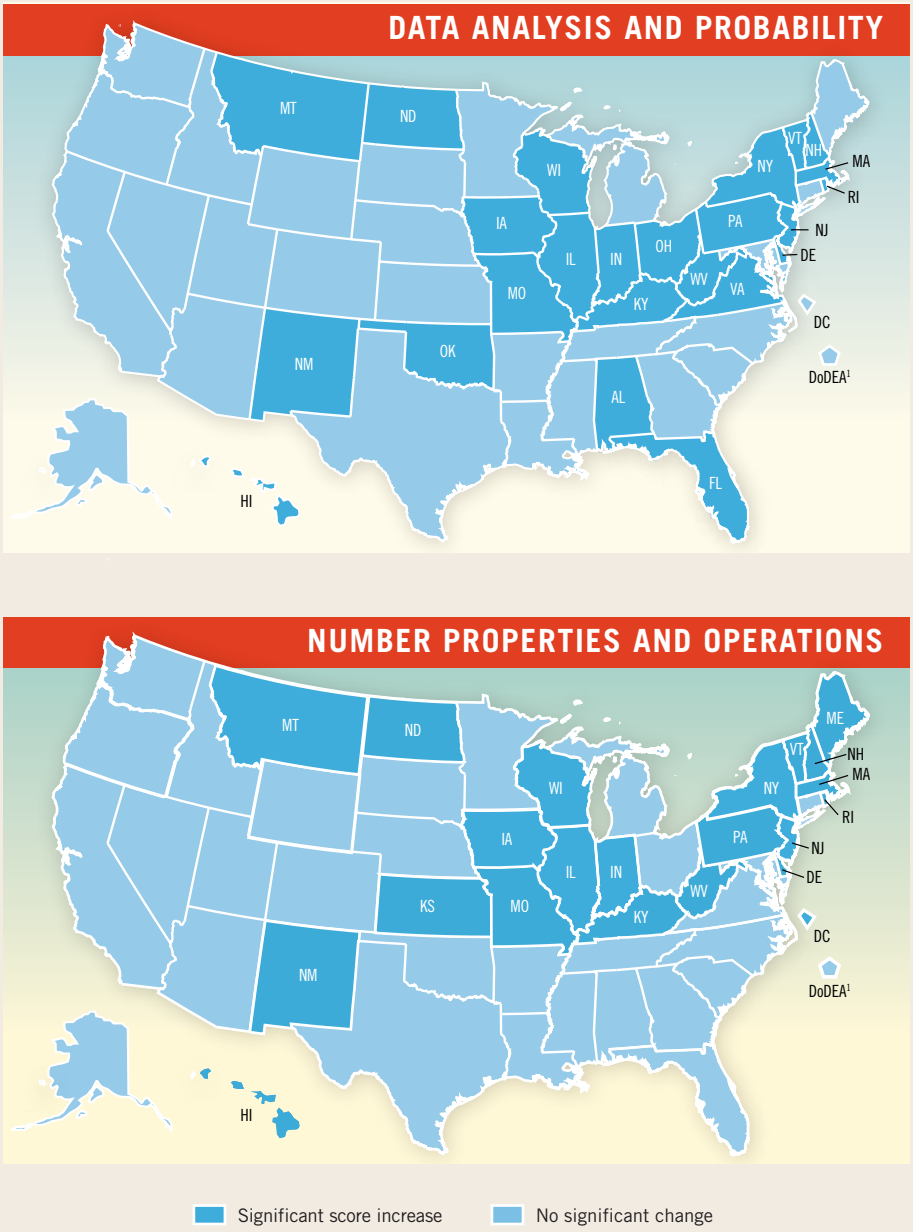
Among the 23 states posting overall gains between 2005 and 2007, 6 states—Indiana, Kentucky, Massachusetts, Missouri, New York, and West Virginia—scored higher in all five of the mathematics content areas.

Among the 29 states with no overall change, Kansas, Maine, Maryland, Nevada, Ohio, Texas, and the Department of Defense schools showed increases in one content area; Rhode Island and Wyoming increased in two content areas; and Oregon decreased in two content areas.

The two maps presented on the right show changes from 2005 to 2007 in states' scores for two of the five mathematics content areas: data analysis and probability and number properties and operations (figure 9).

The data analysis and probability content area had the most score increases, with 24 states making gains. In the number properties and operations content area, which accounts for the largest percentage of assessment questions, 22 states showed increases.

Figure 9. **Changes in fourth-grade NAEP mathematics average scores between 2005 and 2007, by selected content areas**



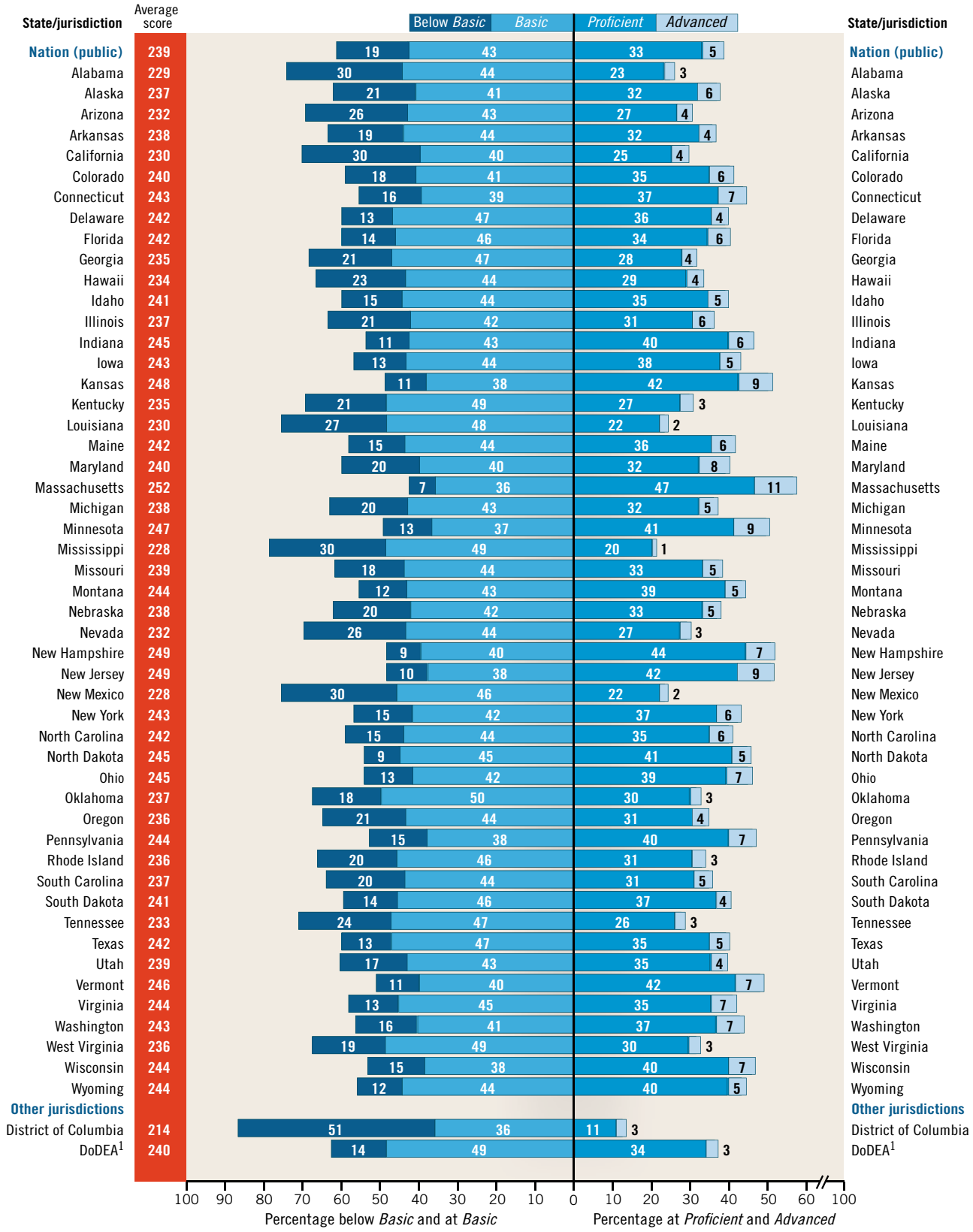
[1] Department of Defense Education Activity (overseas and domestic schools).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments.

FOR MORE INFORMATION...

State Comparison Tool orders states by students' performance overall and for student groups both within an assessment year and based on changes across years (http://nces.ed.gov/nationsreportcard/nde/statecomp).

State Profiles provide information on each state's school and student population and a summary of its NAEP results (http://nces.ed.gov/nationsreportcard/states).

Figure 10. **Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by state: 2007**



[1] Department of Defense Education Activity (overseas and domestic schools).
NOTE: The shaded bars are graphed using unrounded numbers. 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), 2007 Mathematics Assessment.

Table 6. **Average scores in NAEP mathematics for fourth-grade public school students, by state: Various years, 1992–2007**

State/jurisdiction	Accommodations not permitted			Accommodations permitted			
	1992	1996	2000	2000	2003	2005	2007
Nation (public)[1]	**219***	**222***	**226***	**224***	**234***	**237***	**239**
Alabama	208*	212*	218*	217*	223*	225*	229
Alaska	—	224*	—	—	233*	236	237
Arizona	215*	218*	219*	219*	229*	230	232
Arkansas	210*	216*	217*	216*	229*	236	238
California	208*	209*	214*	213*	227*	230	230
Colorado	221*	226*	—	—	235*	239	240
Connecticut	227*	232*	234*	234*	241	242	243
Delaware	218*	215*	—	—	236*	240*	242
Florida	214*	216*	—	—	234*	239*	242
Georgia	216*	215*	220*	219*	230*	234	235
Hawaii	214*	215*	216*	216*	227*	230*	234
Idaho	222*	—	227*	224*	235*	242	241
Illinois	—	—	225*	223*	233*	233*	237
Indiana	221*	229*	234*	233*	238*	240*	245
Iowa	230*	229*	233*	231*	238*	240*	243
Kansas	—	—	232*	232*	242*	246	248
Kentucky	215*	220*	221*	219*	229*	231*	235
Louisiana	204*	209*	218*	218*	226*	230	230
Maine	232*	232*	231*	230*	238*	241	242
Maryland	217*	221*	222*	222*	233*	238	240
Massachusetts	227*	229*	235*	233*	242*	247*	252
Michigan	220*	226*	231*	229*	236	238	238
Minnesota	228*	232*	235*	234*	242*	246	247
Mississippi	202*	208*	211*	211*	223*	227	228
Missouri	222*	225*	229*	228*	235*	235*	239
Montana	—	228*	230*	228*	236*	241*	244
Nebraska	225*	228*	226*	225*	236	238	238
Nevada	—	218*	220*	220*	228*	230	232
New Hampshire	230*	—	—	—	243*	246*	249
New Jersey	227*	227*	—	—	239*	244*	249
New Mexico	213*	214*	214*	213*	223*	224*	228
New York	218*	223*	227*	225*	236*	238*	243
North Carolina	213*	224*	232*	230*	242	241	242
North Dakota	229*	231*	231*	230*	238*	243*	245
Ohio	219*	—	231*	230*	238*	242	245
Oklahoma	220*	—	225*	224*	229*	234*	237
Oregon	—	223*	227*	224*	236	238	236
Pennsylvania	224*	226*	—	—	236*	241*	244
Rhode Island	215*	220*	225*	224*	230*	233	236
South Carolina	212*	213*	220*	220*	236	238	237
South Dakota	—	—	—	—	237*	242	241
Tennessee	211*	219*	220*	220*	228*	232	233
Texas	218*	229*	233*	231*	237*	242	242
Utah	224*	227*	227*	227*	235*	239	239
Vermont	—	225*	232*	232*	242*	244*	246
Virginia	221*	223*	230*	230*	239*	240*	244
Washington	—	225*	—	—	238*	242	243
West Virginia	215*	223*	225*	223*	231*	231*	236
Wisconsin	229*	231*	—	—	237*	241*	244
Wyoming	225*	223*	229*	229*	241*	243	244
Other jurisdictions							
District of Columbia	193*	187*	193*	192*	205*	211*	214
DoDEA[2]	—	224*	228*	227*	237*	239	240

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.
NOTE: State-level data were not collected in 1990.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2007 Mathematics Assessments.

Table 7. **Percentage of fourth-grade public school students and average scores in NAEP mathematics, by selected student groups and state: 2007**

State/jurisdiction	Race/ethnicity									
	White		Black		Hispanic		Asian/Pacific Islander		American Indian/ Alaska Native	
	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score
Nation (public)	**55**	**248**	**17**	**222**	**21**	**227**	**5**	**254**	**1**	**229**
Alabama	58	238	37	213	3	218	1	‡	1	‡
Alaska	55	247	5	227	4	232	7	237	25	218
Arizona	43	246	5	219	44	220	3	253	5	216
Arkansas	67	245	22	217	9	230	2	236	1	‡
California	27	247	7	218	54	218	11	251	1	‡
Colorado	60	249	6	224	30	224	4	247	1	‡
Connecticut	64	252	13	220	18	223	5	255	#	‡
Delaware	54	249	33	230	10	234	3	261	#	‡
Florida	48	250	21	225	25	238	2	255	#	‡
Georgia	46	246	38	222	9	229	4	255	#	‡
Hawaii	17	244	3	230	4	224	63	233	1	‡
Idaho	81	245	1	‡	13	224	2	‡	3	215
Illinois	56	248	19	216	19	223	4	257	#	‡
Indiana	78	249	10	224	7	233	1	‡	#	‡
Iowa	86	245	5	224	6	230	2	‡	#	‡
Kansas	73	252	8	226	13	234	2	260	1	‡
Kentucky	84	238	11	219	2	221	1	‡	#	‡
Louisiana	47	240	49	219	2	234	1	‡	1	‡
Maine	95	243	2	221	1	‡	2	‡	#	‡
Maryland	50	251	35	223	8	233	6	261	#	‡
Massachusetts	75	257	7	232	11	231	6	259	#	‡
Michigan	71	244	21	216	3	230	3	261	1	‡
Minnesota	78	252	8	222	7	229	5	239	2	234
Mississippi	45	239	52	217	2	‡	1	‡	#	‡
Missouri	77	245	19	218	3	234	1	‡	#	‡
Montana	83	247	1	‡	3	241	1	‡	12	222
Nebraska	75	244	7	211	14	220	1	‡	2	‡
Nevada	43	243	8	219	40	221	7	242	1	‡
New Hampshire	91	250	2	226	4	232	3	258	#	‡
New Jersey	57	255	14	232	20	234	8	267	#	‡
New Mexico	29	242	3	220	58	222	2	‡	9	222
New York	53	251	19	225	20	230	8	260	#	‡
North Carolina	55	251	28	224	10	235	2	253	1	229
North Dakota	87	248	2	‡	2	‡	1	‡	9	224
Ohio	75	250	18	225	3	231	2	‡	#	‡
Oklahoma	58	242	11	220	9	227	2	247	20	234
Oregon	71	241	3	219	17	217	5	249	2	220
Pennsylvania	77	249	14	222	6	229	3	259	#	‡
Rhode Island	70	242	8	219	19	220	3	244	1	‡
South Carolina	57	248	36	221	4	227	1	‡	#	‡
South Dakota	83	245	2	221	2	228	1	‡	12	218
Tennessee	69	240	26	214	3	222	1	‡	#	‡
Texas	36	253	15	230	45	236	3	263	#	‡
Utah	80	244	1	‡	15	220	2	244	2	‡
Vermont	94	247	2	‡	1	‡	2	‡	1	‡
Virginia	58	251	26	228	8	235	5	256	#	‡
Washington	65	248	6	222	15	225	11	250	2	227
West Virginia	93	237	5	223	1	‡	1	‡	#	‡
Wisconsin	77	250	10	212	8	229	3	245	1	‡
Wyoming	84	246	2	‡	10	229	1	‡	3	227
Other jurisdictions										
District of Columbia	6	262	84	209	9	220	2	‡	#	‡
DoDEA[1]	51	246	17	227	14	233	7	239	1	‡

See notes at end of table.

Table 7. **Percentage of fourth-grade public school students and average scores in NAEP mathematics, by selected student groups and state: 2007—Continued**

State/jurisdiction	Eligibility for free/reduced-price school lunch				Gender			
	Eligible		Not eligible		Male		Female	
	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score
Nation (public)	**46**	**227**	**53**	**249**	**51**	**240**	**49**	**238**
Alabama	55	217	45	242	51	229	49	228
Alaska	44	225	56	247	51	238	49	237
Arizona	52	219	45	245	51	233	49	230
Arkansas	57	229	43	249	51	238	49	237
California	53	219	44	243	50	231	50	229
Colorado	40	225	60	251	51	242	49	239
Connecticut	31	222	69	252	51	243	49	242
Delaware	39	232	61	248	50	242	50	241
Florida	48	233	51	251	51	243	49	241
Georgia	52	224	46	247	50	236	50	234
Hawaii	42	224	58	242	51	233	49	236
Idaho	44	232	55	248	51	242	49	240
Illinois	44	223	56	249	50	239	50	235
Indiana	41	235	58	253	53	246	47	244
Iowa	34	231	66	249	51	244	49	241
Kansas	41	237	59	255	51	249	49	247
Kentucky	53	226	47	245	50	237	50	234
Louisiana	70	225	30	243	50	230	50	230
Maine	36	232	64	248	50	244	50	241
Maryland	34	225	66	248	50	242	50	239
Massachusetts	27	237	72	258	51	254	49	251
Michigan	38	224	62	246	51	238	49	237
Minnesota	30	232	70	253	52	249	48	245
Mississippi	69	222	29	241	51	228	49	227
Missouri	42	228	58	247	51	240	49	238
Montana	38	234	60	250	51	245	49	242
Nebraska	39	225	61	246	52	240	48	236
Nevada	45	221	51	242	50	233	50	230
New Hampshire	19	236	79	251	53	250	47	247
New Jersey	29	233	69	255	50	250	50	247
New Mexico	67	221	33	242	52	229	48	227
New York	49	233	50	252	49	244	51	242
North Carolina	48	231	50	252	50	243	50	241
North Dakota	32	235	68	250	51	248	49	243
Ohio	37	230	63	253	51	246	49	243
Oklahoma	55	230	45	245	50	238	50	236
Oregon	44	226	53	245	51	238	49	234
Pennsylvania	35	227	64	253	50	245	50	243
Rhode Island	40	222	60	245	51	236	49	235
South Carolina	53	226	47	249	50	236	50	238
South Dakota	36	230	64	247	51	242	49	240
Tennessee	49	223	51	242	51	234	49	231
Texas	55	235	43	252	51	243	49	242
Utah	37	229	62	246	51	241	49	238
Vermont	31	234	69	252	51	248	49	245
Virginia	30	230	70	250	51	245	49	242
Washington	39	230	56	251	52	244	48	241
West Virginia	50	229	50	244	51	238	49	235
Wisconsin	34	228	66	252	51	245	49	243
Wyoming	36	236	64	248	51	244	49	243
Other jurisdictions								
District of Columbia	69	207	31	228	49	213	51	214
DoDEA[1]	#	‡	#	‡	52	241	48	239

Rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
[1] Department of Defense Education Activity (overseas and domestic schools).
NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Results are not shown for students whose race/ethnicity was "unclassified" and for students whose eligibility for free/reduced-price school lunch was not available.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Assessment Content at Grade 4

To interpret the results in meaningful ways, it is important to understand the content of the assessment. Content was varied to reflect differences in the skills students were expected to have at each grade. The proportion of the assessment devoted to each of the mathematics content areas in each grade can be found in the overview section of this report.

Of the 166 questions that made up the fourth-grade mathematics assessment, the largest percentage (40 percent) focused on number properties and operations. It was expected that fourth-graders should have a solid grasp of whole numbers and a beginning understanding of fractions.

In measurement, the emphasis was on length, including perimeter, distance, and height. Students were expected to demonstrate knowledge of common customary and metric units. In geometry, students were expected to be familiar with simple figures in 2- and 3-dimensions and their attributes. In data analysis and probability, students were expected to demonstrate understanding of how data are collected and organized and basic concepts of probability. In algebra at this grade, the emphasis was on recognizing, describing, and extending patterns and rules.

Mathematics Achievement Levels at Grade 4

The following descriptions are abbreviated versions of the full achievement-level descriptions for grade 4 mathematics. The cut score depicting the lowest score representative of that level is noted in parentheses.

Basic (214): Fourth-graders performing at the *Basic* level should be able to estimate and use basic facts to perform simple computations with whole numbers; show some understanding of fractions and decimals; and solve some simple real-world problems in all NAEP content areas. Students at this level should be able to use—though not always accurately—four-function calculators, rulers, and geometric shapes. Their written responses are often minimal and presented without supporting information.

Proficient (249): Fourth-graders performing at the *Proficient* level should be able to use whole numbers to estimate, compute, and determine whether results are reasonable. They should have a conceptual understanding of fractions and decimals; be able to solve real-world problems in all NAEP content areas; and use four-function calculators, rulers, and geometric shapes appropriately. Students performing at the *Proficient* level should employ problem-solving strategies such as identifying and using appropriate information. Their written solutions should be organized and presented both with supporting information and explanations of how they were achieved.

Advanced (282): Fourth-graders performing at the *Advanced* level should be able to solve complex nonroutine real-world problems in all NAEP content areas. They should display mastery in the use of four-function calculators, rulers, and geometric shapes. These students are expected to draw logical conclusions and justify answers and solution processes by explaining why, as well as how, they were achieved. They should go beyond the obvious in their interpretations and be able to communicate their thoughts clearly and concisely.

The full descriptions can be found at http://www.nagb.org/frameworks/math_07.pdf.

What Fourth-Graders Know and Can Do in Mathematics

The item map below is useful for understanding performance at different levels on the scale. The scale scores on the left represent the average scores for students who were likely to get the items correct. The lower-boundary scores at each achievement level are noted in boxes. The descriptions of selected assessment questions are listed on the right along with the corresponding mathematics content areas.

For example, the map on this page shows that fourth-graders performing in the middle of the *Basic* range (students with an average score of 225) were likely to be able to identify a fraction modeled by a picture. Students performing in the middle of the *Proficient* range (with an average score of 267) were likely to be able to explain how to find the perimeter of a given shape.

GRADE 4 NAEP MATHEMATICS ITEM MAP

	Scale score	Content area	Question description
	500		
Advanced	330	**Data analysis and probability**	Label sections in a spinner to satisfy a given condition
Advanced	318	**Number properties and operations**	*Add three fractions with like denominators*
Advanced	296	**Algebra**	*Relate input to output from a table of values*
Advanced	294	**Number properties and operations**	*Solve a story problem involving addition and subtraction* (shown on page 22)
Advanced	290	**Measurement**	*Find area of a square with inscribed triangle*
Advanced	289	**Geometry**	*Recognize the result of folding a given shape*
Advanced	287	**Data analysis and probability**	Identify color with highest chance of being chosen (shown on page 23)
	282		
Proficient	279	**Number properties and operations**	Solve a story problem requiring multiple operations
Proficient	279	**Data analysis and probability**	*Identify picture representing greatest probability*
Proficient	267	**Measurement**	Explain how to find the perimeter of a given shape
Proficient	264	**Number properties and operations**	*Solve a story problem involving money*
Proficient	263	**Algebra**	*Identify number that would be in a pattern*
Proficient	262	**Geometry**	*Determine the number of blocks used to build a figure*
Proficient	255	**Number properties and operations**	*Use place value to determine the amount of increase*
Proficient	250	**Geometry**	*Identify the 3-D shape resulting from folding paper*
Proficient	249	**Data analysis and probability**	*Determine probability of a specific outcome*
	249		
Basic	245	**Number properties and operations**	Recognize property of odd numbers
Basic	243	**Number properties and operations**	Multiply two decimal numbers
Basic	232	**Measurement**	*Determine attribute being measured from a picture*
Basic	230	**Number properties and operations**	*Subtract a three-digit number from a four-digit number*
Basic	227	**Algebra**	*Identify number sentence that models a balanced scale*
Basic	225	**Number properties and operations**	*Identify a fraction modeled by a picture*
Basic	220	**Algebra**	*Identify an expression that represents a scenario*
Basic	218	**Number properties and operations**	*Find a sum based on place value*
Basic	217	**Geometry**	*Identify congruent triangles*
	214		
	211	**Data analysis and probability**	Complete a bar graph
	205	**Geometry**	*Use reason to identify figure based on description*
	202	**Measurement**	*Identify appropriate unit for measuring length*
	202	**Number properties and operations**	*Identify place value representation of a number*
	191	**Algebra**	*Find unknown in whole number sentence*
	0		

NOTE: Regular type denotes a constructed-response question. *Italic* type denotes a multiple-choice question. The position of a question on the scale represents the average scale score attained by students who had a 65 percent probability of successfully answering a constructed-response question, or a 74 percent probability of correctly answering a four-option multiple-choice question. For constructed-response questions, the question description represents students' performance rated as completely correct. Scale score ranges for mathematics achievement levels are referenced on the map.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Sample Question About Number Properties and Operations

This sample question measures fourth-graders' performance in the number properties and operations content area. In particular, it addresses the "Number operations" subtopic, which focuses on computation, the effects of operations on numbers, and the relationships between operations. The framework objective measured is "Solve application problems involving numbers and operations." Students were not permitted to use a calculator to solve this problem.

Thirty-six percent of fourth-graders selected the correct answer (choice B). One way to arrive at this answer is to first use subtraction to determine that the bridge was built in 1926, and then use addition to determine that it was 50 years old in 1976. The most common incorrect answer (choice A), which was selected by 39 percent of fourth-graders, can be obtained by subtracting 50 years from 2001. The other incorrect answer choices (C and D) represent computation errors.

Percentage of fourth-grade students in each response category in 2007

Choice A	Choice B	Choice C	Choice D	Omitted
39	36	10	14	1

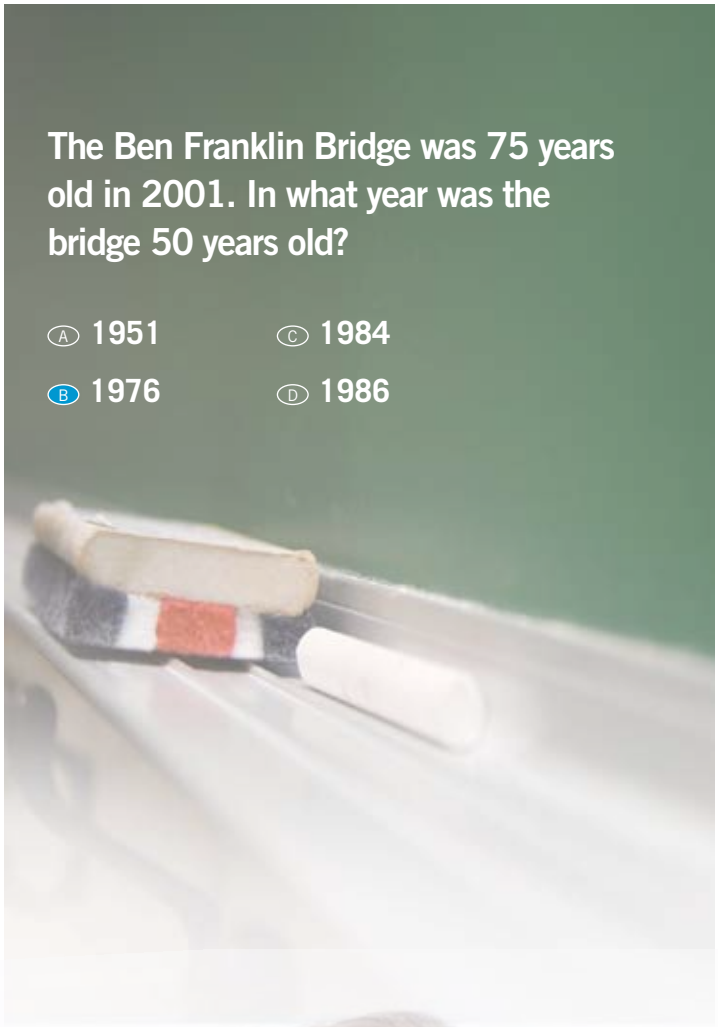
NOTE: Detail may not sum to totals because of rounding.

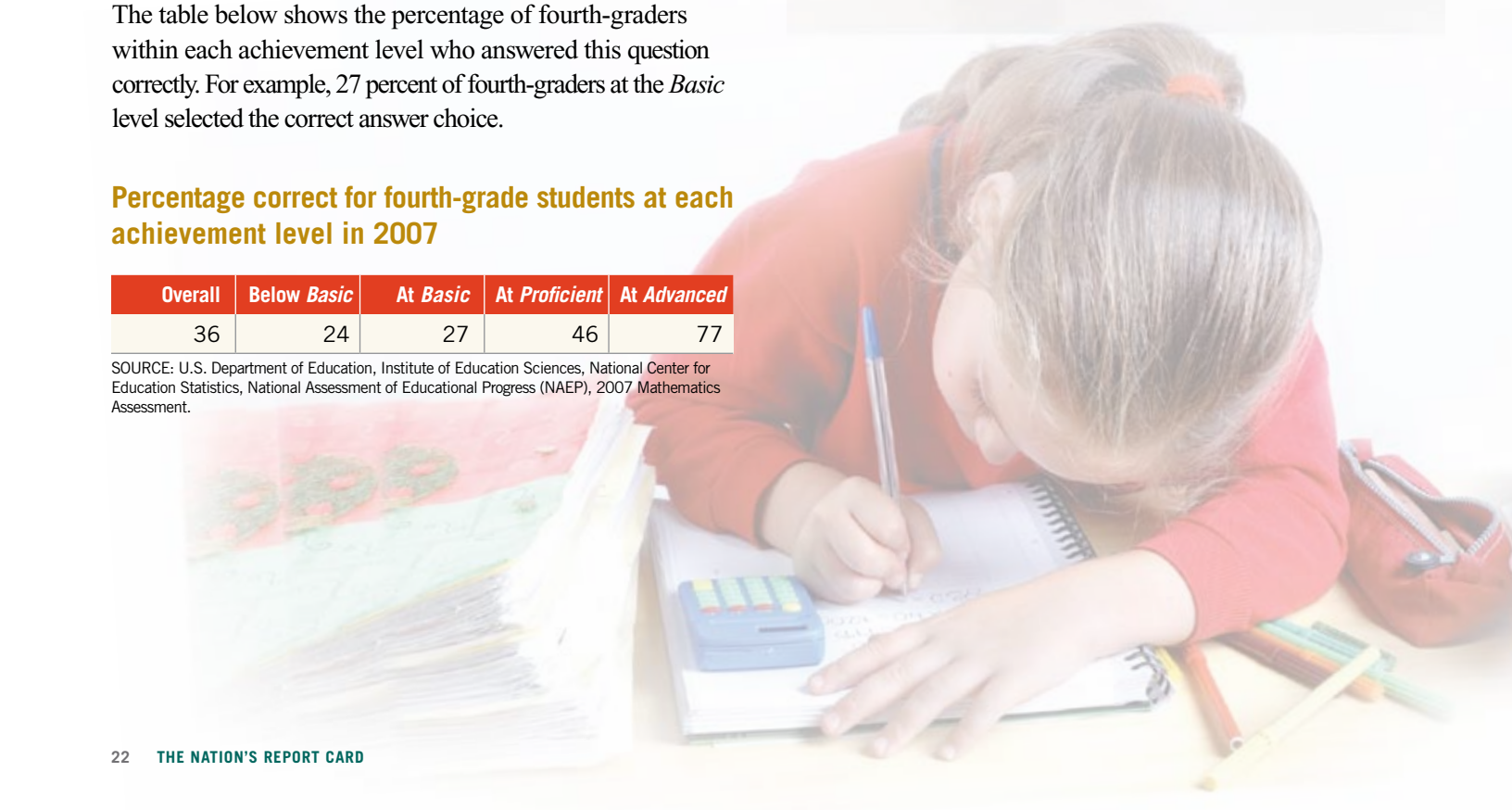
The table below shows the percentage of fourth-graders within each achievement level who answered this question correctly. For example, 27 percent of fourth-graders at the *Basic* level selected the correct answer choice.

Percentage correct for fourth-grade students at each achievement level in 2007

Overall	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*
36	24	27	46	77

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.





Sample Question About Data Analysis and Probability

This sample question measures fourth-graders' performance in the data analysis and probability content area. It addresses the "Probability" subtopic, which focuses on simple probability and counting or representing the outcomes of a given event. The framework objective measured by this question is "Use informal probabilistic thinking to describe chance events." Students were not permitted to use a calculator to solve this problem.

Student responses for this question were rated using the following three-level scoring guide:

Correct—Response indicates that a red cube is most likely to be picked and indicates that the probability is 3 out of 6 (or equivalent).

Partial—Response indicates that a red cube is most likely to be picked or indicates that the probability is 3 out of 6 (or equivalent).

Incorrect—All incorrect responses.

The student response on the right was rated as "Correct" because both parts of the question were answered correctly. Twenty-two percent of fourth-graders gave a response that was rated "Correct" for this question. Sixty-seven percent of fourth-graders provided a response rated as "Partial."

Percentage of fourth-grade students in each response category in 2007

Correct	Partial	Incorrect	Omitted
22	67	10	1

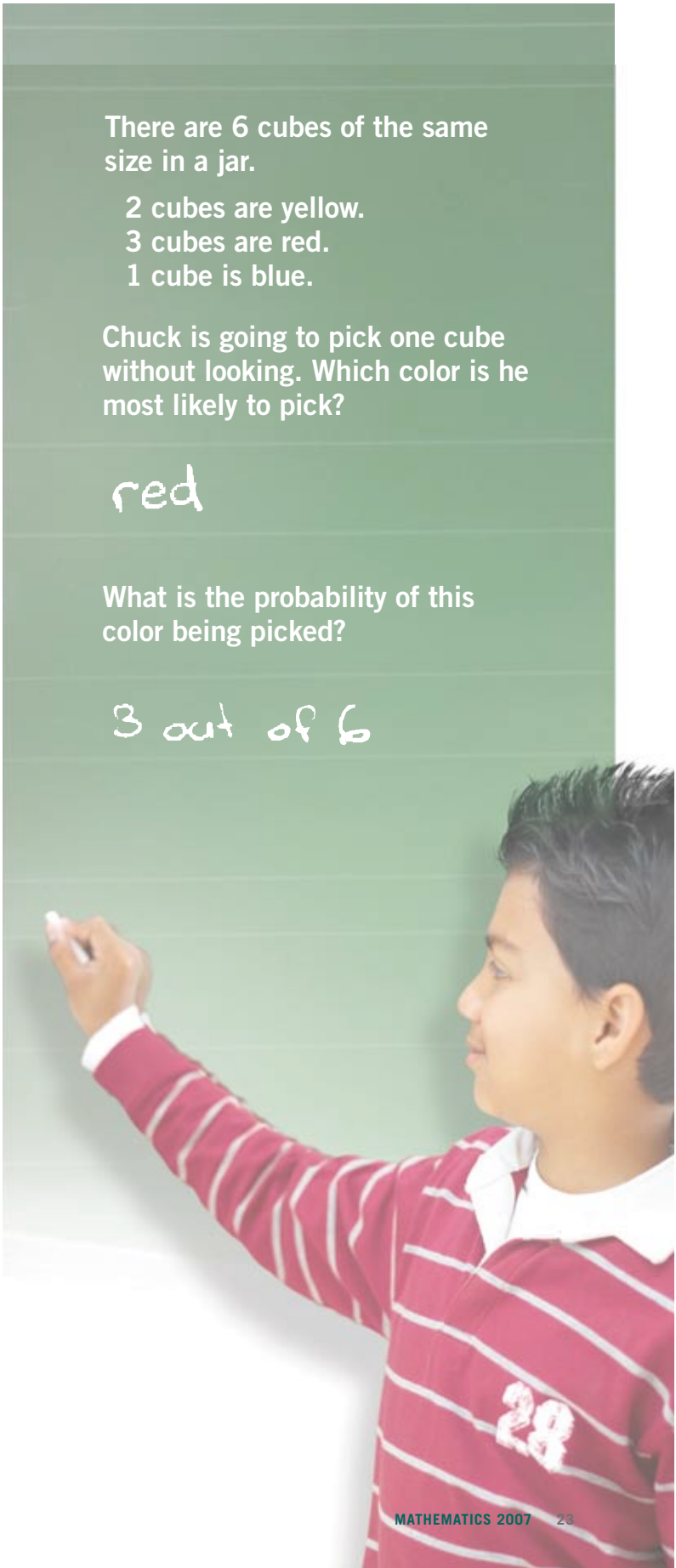
NOTE: Detail may not sum to totals because a small percentage of responses that did not address the assessment task are not shown.

The table below shows the percentage of fourth-graders within each achievement level whose answer to this question was rated as "Correct." For example, 10 percent of fourth-graders at the *Basic* level provided a response rated as "Correct."

Percentage rated as "Correct" for fourth-grade students at each achievement level in 2007

Overall	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*
22	1	10	38	75

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.



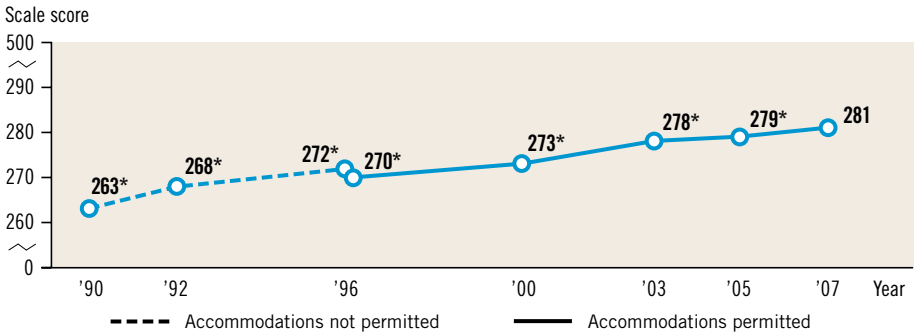
8th Grade

Increased mathematics knowledge at grade 8

Similar to the results for grade 4, the mathematical ability of eighth-graders also continued an upward trend in 2007. The average score in 2007 was higher than the score in any previous assessment. Students scored 3 points higher in 2007 than in 2005 and 19 points higher than in 1990[2] (figure 11).

Although not shown here, gains were also made in each of the five mathematics content areas. Score point increases from 1990 to 2007 ranged from a 13-point gain in number properties and operations to a 24-point gain in algebra.

Figure 11. **Trend in eighth-grade NAEP mathematics average scores**

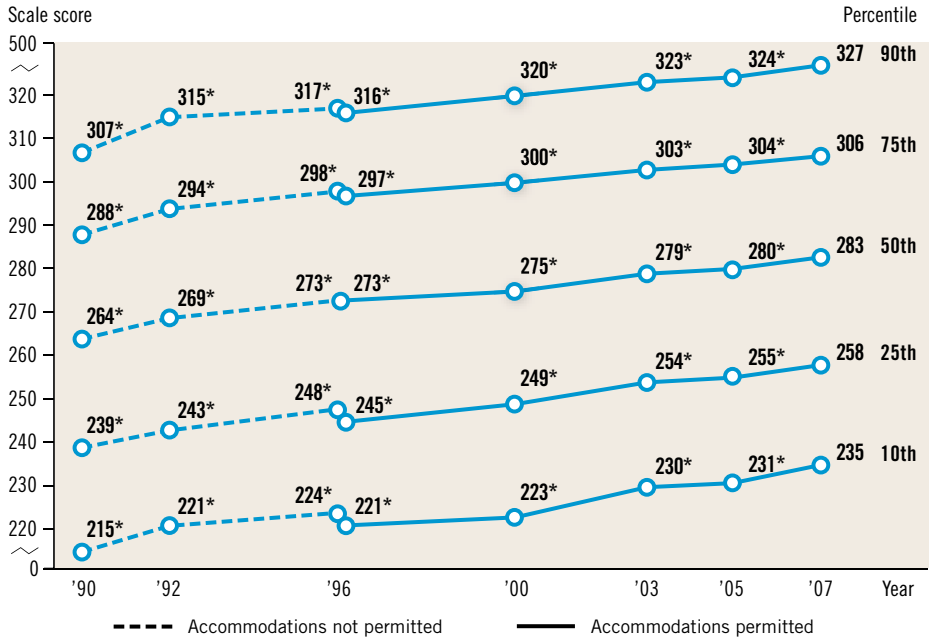


* Significantly different ($p < .05$) from 2007.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

[2] The score-point gains are based on the difference of the unrounded scores as opposed to the rounded scores shown in the figure.

Improvement at all performance levels

Figure 12. Trend in eighth-grade NAEP mathematics percentile scores

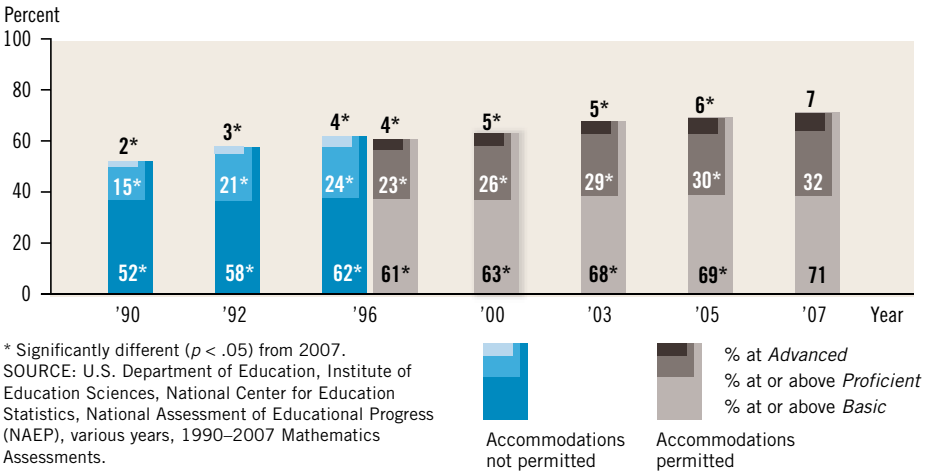


* Significantly different ($p < .05$) from 2007.

The improvement in mathematics at grade 8 was seen across all performance levels. Scores for students at each of the percentiles were higher in 2007 than the comparable scores from all previous years. Score increases since 1990 were almost even across the percentiles and ranged from 18 to 20 points (figure 12).

Achievement-level results were consistent with the overall scale score and percentile results, showing improvement for students at all achievement levels. The percentages of students at or above *Basic*, at or above *Proficient*, and at *Advanced* were higher in 2007 than in all six previous assessment years (figure 13). The percentage of students at or above *Basic* increased 2 points since 2005 and 19 points in comparison to 1990. The percentage of students at or above *Proficient* doubled from 15 percent in 1990 to 32 percent in 2007, and the percentage at *Advanced* increased from 2 to 7 percent over the same period.

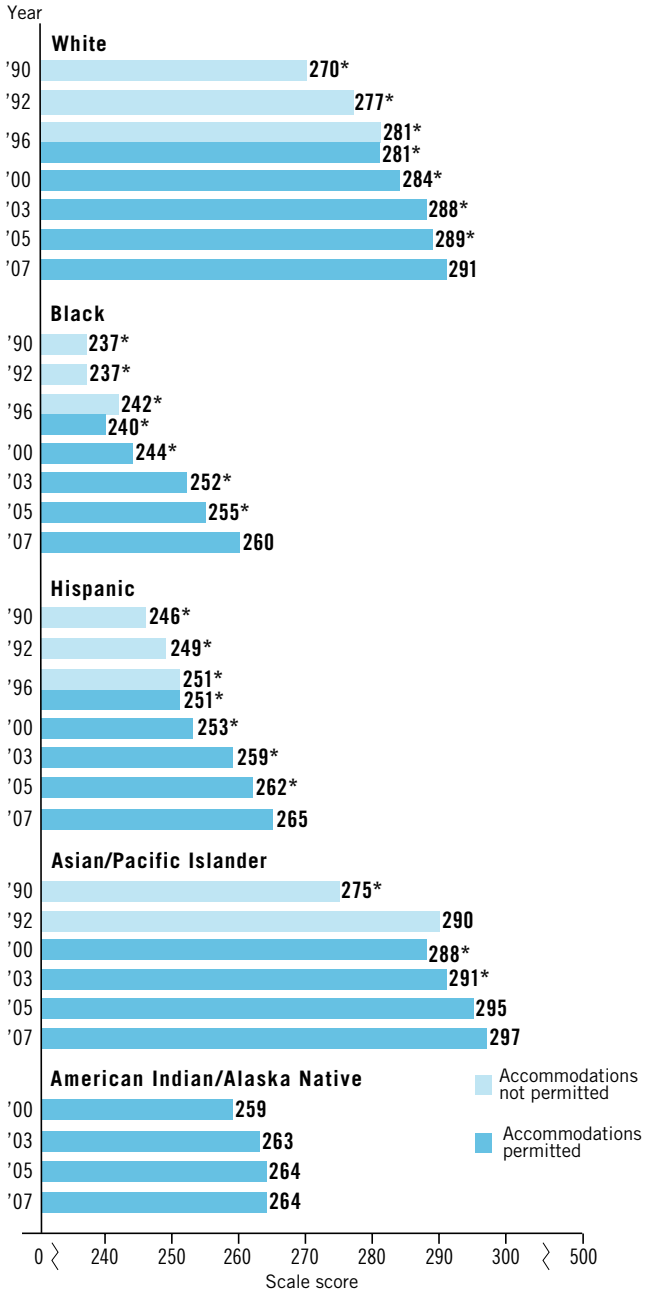
Figure 13. Trend in eighth-grade NAEP mathematics achievement-level performance



* Significantly different ($p < .05$) from 2007.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Gains for White, Black, and Hispanic students

Figure 14. **Trend in eighth-grade NAEP mathematics average scores, by race/ethnicity**



* Significantly different ($p < .05$) from 2007.
NOTE: Special analysis raised concerns about the accuracy and precision of national grade 8 Asian/Pacific Islander results in 1996. As a result, they are omitted from this figure. Sample sizes were insufficient to permit reliable estimates for American Indian/Alaska Native eighth-graders in 1990, 1992, and 1996. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

The overall improved performance of eighth-graders was not reflected in all of the five student racial/ethnic groups. White, Black, and Hispanic students showed higher average mathematics scores in 2007 than in all previous assessment years. The score for Asian/Pacific Islander students showed no significant change in comparison to 2005, but was higher than in 1990. No significant change in the score for American Indian/Alaska Native students was seen when compared to previous assessment years (figure 14).

ACHIEVEMENT-LEVEL RESULTS...

Information is available on achievement-level results for racial/ethnic groups and other reporting categories at http://nationsreportcard.gov/math_2007/data.asp.

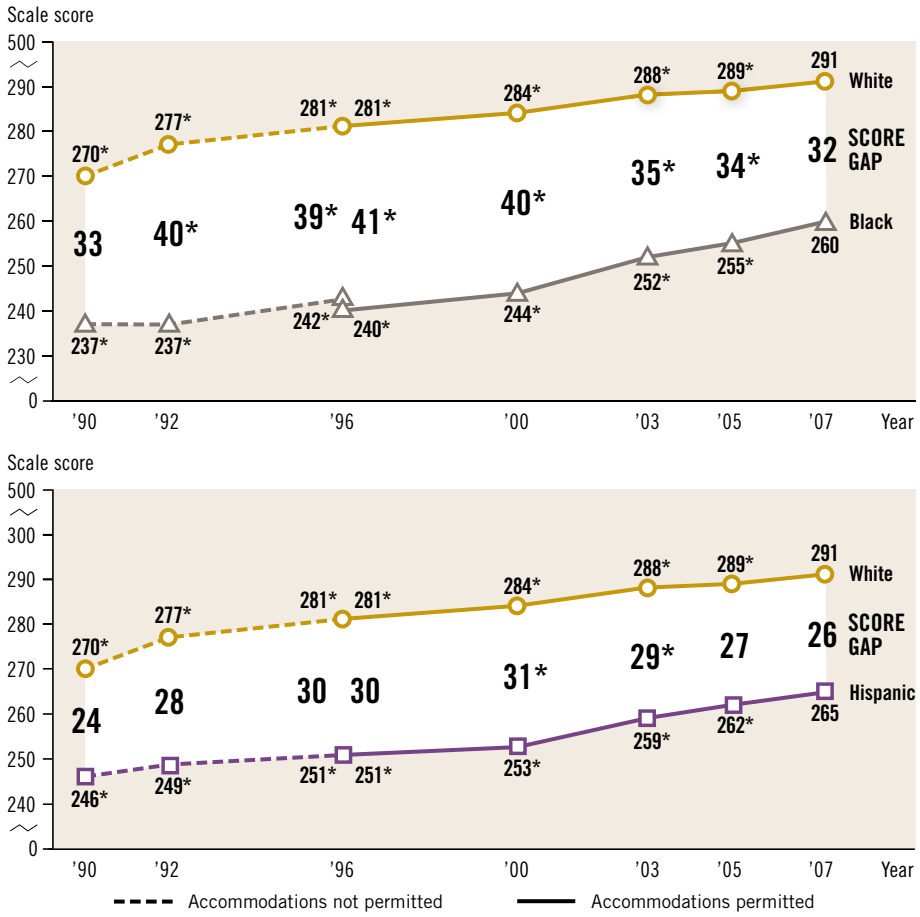
White – Black gap narrows since 2005

Significant score gaps persisted between White students and their Black and Hispanic peers.

At 32 points, the White – Black student score gap in 2007 was smaller than it was in 2005, but not significantly different from the gap in 1990.

The White – Hispanic score gap of 26 points was not significantly different from the gaps in either 2005 or 1990 (figure 15).

Figure 15. Trend in eighth-grade NAEP mathematics average scores and score gaps, by selected racial/ethnic groups



* Significantly different ($p < .05$) from 2007.
NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores.

Table 8. Percentage of students assessed in eighth-grade NAEP mathematics, by race/ethnicity: Various years, 1990–2007

Race/ethnicity	1990	1992	1996	2000	2003	2005	2007
White	73*	73*	69*	65*	63*	61*	59
Black	16	16	17	16	16	16	16
Hispanic	7*	8*	10*	13*	15*	16*	18
Asian/Pacific Islander	2*	2*	—	4	4	5	5
American Indian/ Alaska Native	1	1*	1	2	1	1	1

— Not available. Special analysis raised concerns about the accuracy and precision of national grade 8 Asian/Pacific Islander results in 1996. As a result, they are omitted from this table.
* Significantly different ($p < .05$) from 2007.
NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because results are not shown for the "unclassified" race/ethnicity category.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

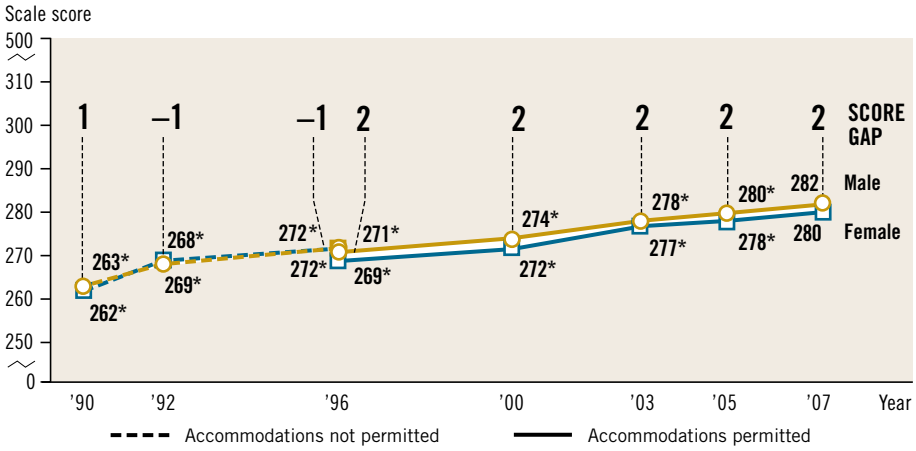
The percentage of White eighth-graders in the population was lower in 2007 than in previous assessments, while the percentage of Hispanic students was higher (table 8). The percentage of Asian/Pacific Islander students in 2007 was not significantly different from 2005, but was higher than in 1990.

Both males and females make gains

As seen in grade 4, both male and female eighth-graders showed improved mathematical performance. Higher scores were seen in 2007 than in any of the previous assessment years (figure 16).

In 2007, male students scored 2 points higher on average than their female counterparts. The gap between the two groups in 2007 was not statistically different from the gaps seen in 2005 and 1990.

Figure 16. **Trend in eighth-grade NAEP mathematics average scores and score gaps, by gender**



* Significantly different ($p < .05$) from 2007.
NOTE: Score gaps are calculated based on differences between unrounded average scores. Score gaps reflect the average scores for male students minus the scores for female students.

As in grade 4, differences between male and female students varied somewhat when examined by content area in 2007. With the exception of geometry and data analysis and probability, male students scored higher on average than female students in the mathematics content areas (table 9). Female students scored 1 point higher in data analysis and probability. There was no significant difference in the performance of male and female students in geometry.

Table 9. **Average scores in eighth-grade NAEP mathematics, by content area and gender: 2007**

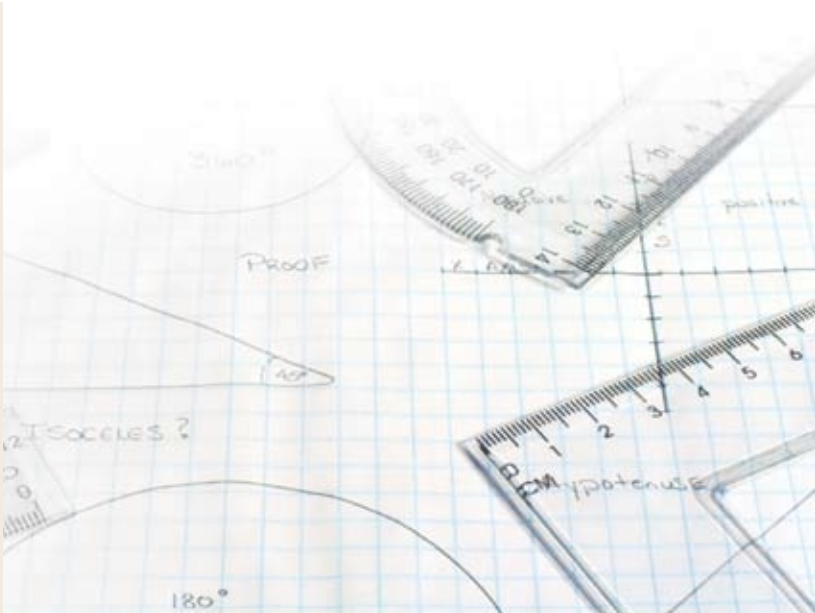
Gender	Number properties and operations	Measurement	Geometry	Data analysis and probability	Algebra
Male	282*	281*	278	284*	286*
Female	277	275	278	285	285

* Significantly different ($p < .05$) from female students in 2007.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Gaps in performance of public and private school students

Ninety-one percent of eighth-graders attended public schools in 2007, and 9 percent attended private schools. The average mathematics score for eighth-graders in public schools (280) was lower than for students in private schools overall (293) and lower than for students in Catholic schools specifically (292).

Trend results for public and Catholic school students, and for private school students in those years in which sample sizes were sufficient, are available at: http://nationsreportcard.gov/math_2007/m0038.asp.

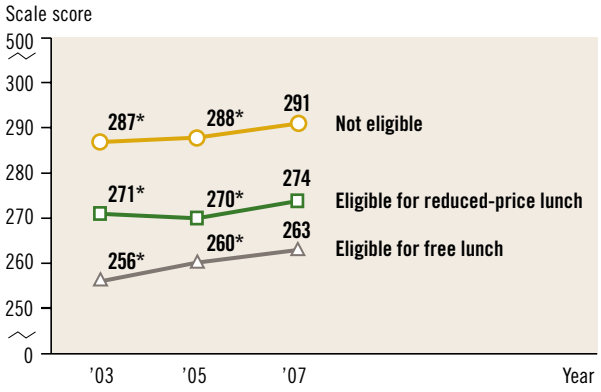


Improved performance across income levels

Similar to the results for grade 4, scores increased for students who were eligible for either free or reduced-price school lunch as well as for students who were not eligible. Average mathematics scores were higher in 2007 than in 2005 for all three groups of students (figure 17).

Eighth-graders who were not eligible for free or reduced-price lunch scored higher on average than those who were eligible in 2007, and students eligible for reduced-price lunch scored higher than those eligible for free lunch.

Figure 17. **Trend in eighth-grade NAEP mathematics average scores, by eligibility for free or reduced-price school lunch**



* Significantly different ($p < .05$) from 2007.

Table 10. **Percentage of students assessed in eighth-grade NAEP mathematics, by eligibility for free or reduced-price school lunch: 2003, 2005, and 2007**

Eligibility status	2003	2005	2007
Eligible for free lunch	26*	29*	32
Eligible for reduced-price lunch	7*	7*	6
Not eligible	55	56	55
Information not available	11*	8	7

* Significantly different ($p < .05$) from 2007.
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, 2005, and 2007 Mathematics Assessments.

Changes over time in the percentages of students based on their eligibility for free or reduced-price school lunch are presented in table 10. About one-third of eighth-graders assessed were eligible for free lunch in 2007.

State Performance at Grade 8

All of the 52 states and jurisdictions that participated in 2007 also participated in 2005, and 38 participated in the 1990 assessment, allowing for comparisons over time. As with grade 4, it is important to remember that performance results for states may be affected by differences in demographic makeup and exclusion and accommodation rates for students with disabilities and English language learners, which may vary considerably across states as well as across years.

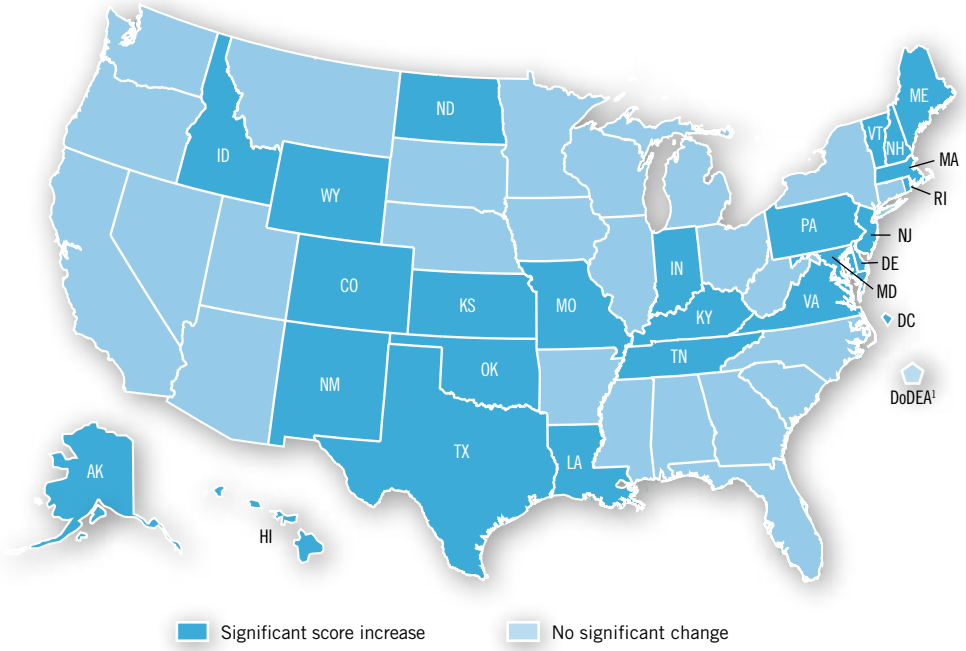
Increased scores in one-half of states

The map on the right highlights changes in states' average mathematics scores since 2005, with increases in 26 states (figure 18). Nine of these states showed increases for only students who were not eligible for free/reduced-price school lunch, while nine states showed increases for both students who were eligible and students who were not eligible.

There were no states in which scores declined since 2005 for students overall.

All of the 38 states that participated in both 1990 and 2007 showed increases in average mathematics scores. These 38 states also showed increases in the percentages of students both at or above *Basic* and at or above *Proficient*. These and other state results for grade 8 are provided in figure 20, tables 11 and 12, and appendix tables A-14 through A-20.

Figure 18. **Changes in eighth-grade NAEP mathematics average scores between 2005 and 2007**



[1] Department of Defense Education Activity (overseas and domestic schools).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments.

Four states make gains in all content areas

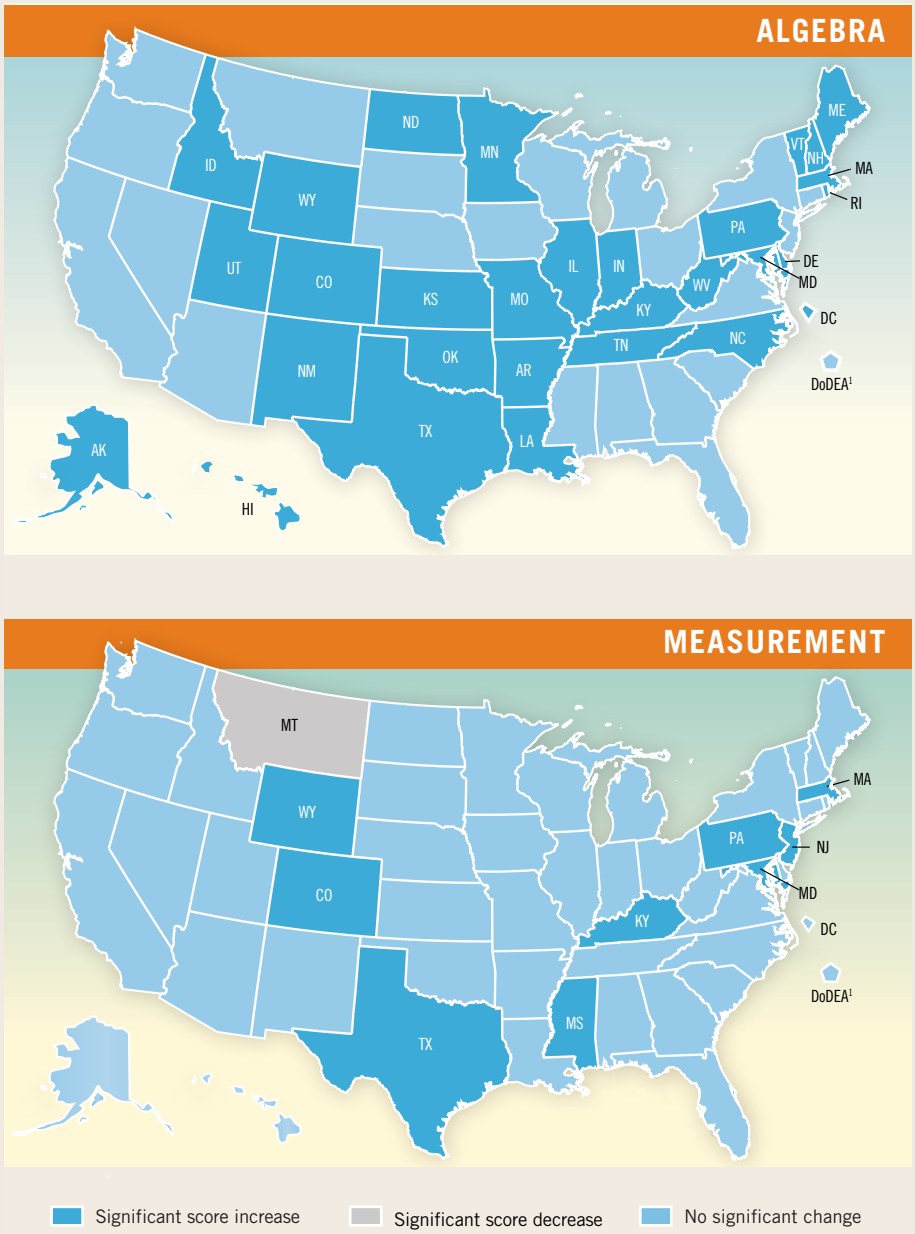
Among the 26 states posting overall gains between 2005 and 2007, Kentucky, Massachusetts, Texas, and Wyoming were the only states that also scored higher in all five of the mathematics content areas.

Among the 26 states with no change in performance overall, 9 states (Arkansas, California, Florida, Minnesota, Mississippi, Nevada, North Carolina, Utah, and West Virginia) showed increases in one content area, Illinois increased in two content areas, and Montana increased in one area and decreased in another.

The two maps presented on the right show changes in states' average scores from 2005 to 2007 for two of the five mathematics content areas: algebra and measurement (figure 19).

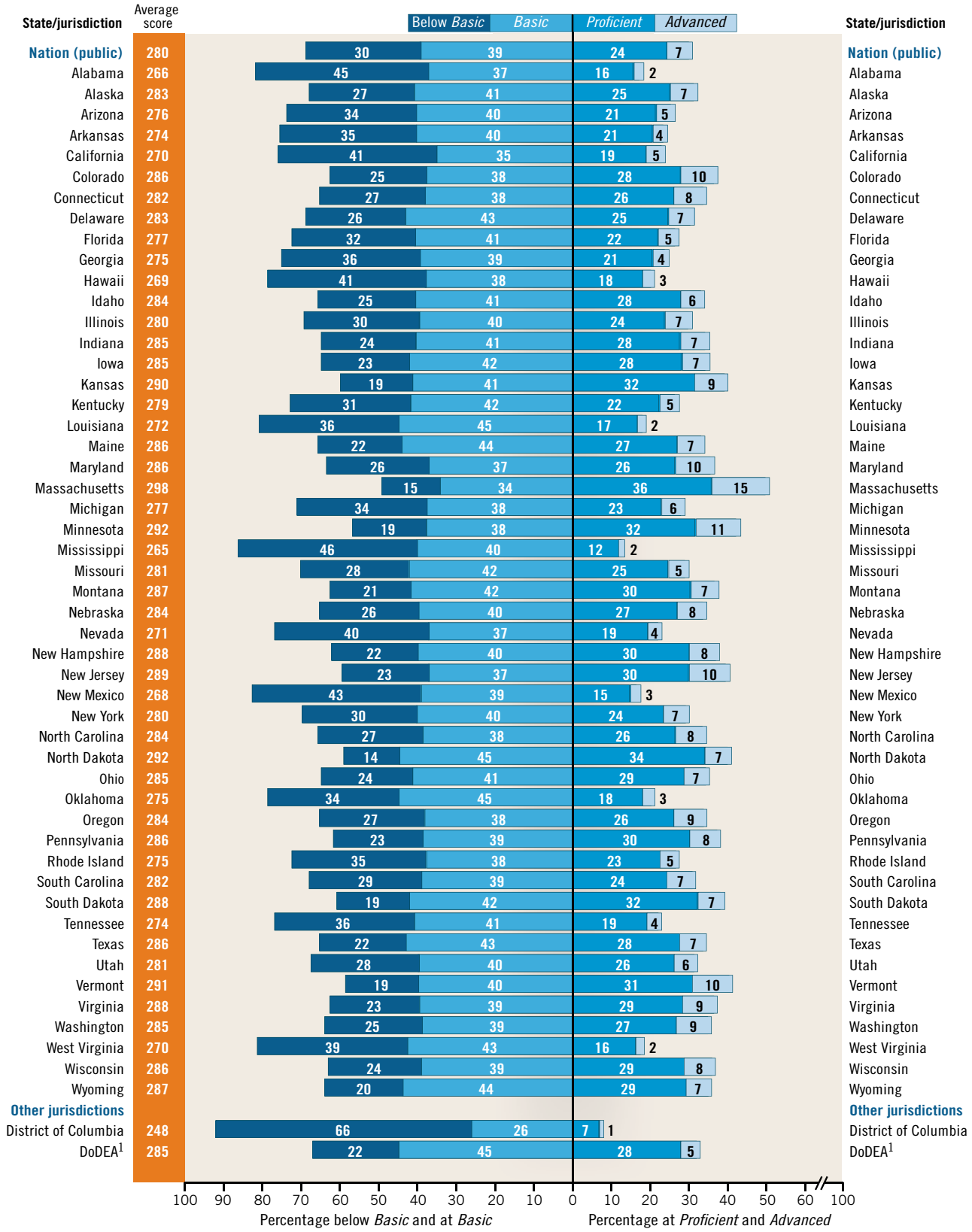
The algebra and measurement content areas showed the most and fewest changes in state performance, respectively. Thirty states made gains in algebra, with no state posting a decline. The fewest states made gains in measurement, with increases in nine states and a decline in one state.

Figure 19. **Changes in eighth-grade NAEP mathematics average scores between 2005 and 2007, by selected content areas**



[1] Department of Defense Education Activity (overseas and domestic schools).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments.

Figure 20. **Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by state: 2007**



[1] Department of Defense Education Activity (overseas and domestic schools).
NOTE: The shaded bars are graphed using unrounded numbers. 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), 2007 Mathematics Assessment.

Table 11. **Average scores in NAEP mathematics for eighth-grade public school students, by state: Various years, 1990–2007**

State/jurisdiction	Accommodations not permitted				Accommodations permitted			
	1990	1992	1996	2000	2000	2003	2005	2007
Nation (public)[1]	**262***	**267***	**271***	**274***	**272***	**276***	**278***	**280**
Alabama	253*	252*	257*	262	264	262	262	266
Alaska	—	—	278*	—	—	279*	279*	283
Arizona	260*	265*	268*	271*	269*	271*	274	276
Arkansas	256*	256*	262*	261*	257*	266*	272	274
California	256*	261*	263*	262*	260*	267*	269	270
Colorado	267*	272*	276*	—	—	283	281*	286
Connecticut	270*	274*	280	282	281	284	281	282
Delaware	261*	263*	267*	—	—	277*	281*	283
Florida	255*	260*	264*	—	—	271*	274	277
Georgia	259*	259*	262*	266*	265*	270*	272	275
Hawaii	251*	257*	262*	263*	262*	266*	266*	269
Idaho	271*	275*	—	278*	277*	280*	281*	284
Illinois	261*	—	—	277	275*	277*	278	280
Indiana	267*	270*	276*	283	281*	281*	282*	285
Iowa	278*	283	284	—	—	284	284	285
Kansas	—	—	—	284*	283*	284*	284*	290
Kentucky	257*	262*	267*	272*	270*	274*	274*	279
Louisiana	246*	250*	252*	259*	259*	266*	268*	272
Maine	—	279*	284	284*	281*	282*	281*	286
Maryland	261*	265*	270*	276*	272*	278*	278*	286
Massachusetts	—	273*	278*	283*	279*	287*	292*	298
Michigan	264*	267*	277	278	277	276	277	277
Minnesota	275*	282*	284*	288*	287*	291	290	292
Mississippi	—	246*	250*	254*	254*	261*	262	265
Missouri	—	271*	273*	274*	271*	279	276*	281
Montana	280*	—	283*	287	285	286	286	287
Nebraska	276*	278*	283	281*	280*	282	284	284
Nevada	—	—	—	268*	265*	268*	270	271
New Hampshire	273*	278*	—	—	—	286	285*	288
New Jersey	270*	272*	—	—	—	281*	284*	289
New Mexico	256*	260*	262*	260*	259*	263*	263*	268
New York	261*	266*	270*	276	271*	280	280	280
North Carolina	250*	258*	268*	280*	276*	281	282	284
North Dakota	281*	283*	284*	283*	282*	287*	287*	292
Ohio	264*	268*	—	283	281*	282	283	285
Oklahoma	263*	268*	—	272	270*	272	271*	275
Oregon	271*	—	276*	281	280	281	282	284
Pennsylvania	266*	271*	—	—	—	279*	281*	286
Rhode Island	260*	266*	269*	273	269*	272*	272*	275
South Carolina	—	261*	261*	266*	265*	277*	281	282
South Dakota	—	—	—	—	—	285*	287	288
Tennessee	—	259*	263*	263*	262*	268*	271*	274
Texas	258*	265*	270*	275*	273*	277*	281*	286
Utah	—	274*	277*	275*	274*	281	279	281
Vermont	—	—	279*	283*	281*	286*	287*	291
Virginia	264*	268*	270*	277*	275*	282*	284*	288
Washington	—	—	276*	—	—	281*	285	285
West Virginia	256*	259*	265*	271	266*	271	269	270
Wisconsin	274*	278*	283	—	—	284	285	286
Wyoming	272*	275*	275*	277*	276*	284*	282*	287
Other jurisdictions								
District of Columbia	231*	235*	233*	234*	235*	243*	245*	248
DoDEA[2]	—	—	274*	278*	277*	285	284	285

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Table 12. **Percentage of eighth-grade public school students and average scores in NAEP mathematics, by selected student groups and state: 2007**

State/jurisdiction	Race/ethnicity									
	White		Black		Hispanic		Asian/Pacific Islander		American Indian/ Alaska Native	
	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score
Nation (public)	**58**	**290**	**17**	**259**	**19**	**264**	**5**	**296**	**1**	**265**
Alabama	60	278	35	246	2	249	1	‡	1	‡
Alaska	56	294	4	271	4	274	8	282	25	260
Arizona	47	289	5	266	39	262	3	303	7	258
Arkansas	69	282	22	254	7	256	1	‡	1	‡
California	31	287	7	253	48	256	12	293	1	263
Colorado	65	296	7	272	25	264	3	297	1	‡
Connecticut	69	293	13	255	15	254	3	307	#	‡
Delaware	56	294	31	265	9	267	4	309	#	‡
Florida	48	289	23	259	24	270	2	293	#	‡
Georgia	46	288	43	261	7	266	2	‡	#	‡
Hawaii	14	278	2	‡	2	264	70	268	#	‡
Idaho	82	287	1	‡	14	264	1	‡	2	‡
Illinois	60	291	16	253	18	265	5	303	#	‡
Indiana	77	290	12	259	7	267	1	‡	#	‡
Iowa	88	288	4	257	6	261	2	‡	#	‡
Kansas	76	295	8	267	10	269	2	302	2	‡
Kentucky	86	282	10	257	2	‡	1	‡	#	‡
Louisiana	52	283	43	258	2	‡	2	‡	1	‡
Maine	96	287	2	‡	1	‡	1	‡	#	‡
Maryland	51	300	37	265	7	272	5	313	#	‡
Massachusetts	75	305	8	264	10	270	5	315	#	‡
Michigan	75	285	18	244	3	259	2	‡	1	‡
Minnesota	81	297	7	260	4	269	5	283	2	266
Mississippi	47	279	51	251	1	‡	1	‡	#	‡
Missouri	75	288	19	253	3	270	2	‡	#	‡
Montana	85	291	1	‡	2	‡	1	‡	11	260
Nebraska	80	291	7	240	11	261	1	‡	1	‡
Nevada	47	282	10	255	34	257	8	285	1	‡
New Hampshire	94	289	2	‡	3	264	1	‡	#	‡
New Jersey	57	298	17	264	19	271	7	314	#	‡
New Mexico	32	285	3	264	52	260	1	‡	12	253
New York	55	290	19	258	18	264	6	302	1	‡
North Carolina	56	295	30	266	8	273	3	299	1	261
North Dakota	89	295	1	‡	1	‡	1	‡	8	264
Ohio	76	291	18	258	2	276	2	‡	#	‡
Oklahoma	59	280	9	258	8	259	2	‡	21	269
Oregon	73	289	3	272	15	261	5	299	2	264
Pennsylvania	76	293	15	257	6	264	3	314	#	‡
Rhode Island	70	284	9	250	17	251	4	282	1	‡
South Carolina	56	293	38	265	3	272	1	‡	#	‡
South Dakota	86	292	1	‡	2	269	1	‡	10	261
Tennessee	67	282	28	254	4	264	2	‡	#	‡
Texas	38	300	15	271	44	277	3	309	#	‡
Utah	82	286	1	‡	12	256	3	277	2	‡
Vermont	95	292	1	‡	1	‡	2	‡	1	‡
Virginia	61	296	26	268	6	275	5	299	#	‡
Washington	69	291	5	264	14	263	10	289	2	265
West Virginia	94	271	4	250	1	‡	1	‡	#	‡
Wisconsin	80	292	10	247	6	268	3	290	1	‡
Wyoming	86	290	1	‡	8	274	1	‡	3	‡
Other jurisdictions										
District of Columbia	3	‡	88	245	9	251	1	‡	#	‡
DoDEA[1]	48	291	18	272	15	282	8	284	1	‡

See notes at end of table.

Table 12. **Percentage of eighth-grade public school students and average scores in NAEP mathematics, by selected student groups and state: 2007—Continued**

State/jurisdiction	Eligibility for free/reduced-price school lunch				Gender			
	Eligible		Not eligible		Male		Female	
	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score	Percentage of students	Average scale score
Nation (public)	**41**	**265**	**58**	**291**	**51**	**281**	**49**	**279**
Alabama	49	250	51	281	51	267	49	265
Alaska	37	266	63	292	52	282	48	283
Arizona	44	262	53	286	49	277	51	274
Arkansas	51	263	49	285	48	274	52	274
California	47	257	49	283	51	270	49	270
Colorado	33	267	67	296	52	287	48	286
Connecticut	27	256	73	292	51	282	49	283
Delaware	33	270	67	290	51	285	49	281
Florida	44	265	56	287	49	278	51	277
Georgia	47	262	53	287	50	275	50	274
Hawaii	42	258	58	276	52	267	48	270
Idaho	39	273	60	290	49	285	51	282
Illinois	39	262	61	292	50	282	50	279
Indiana	36	271	64	293	52	286	48	284
Iowa	30	270	70	292	51	287	49	284
Kansas	36	275	64	299	50	291	50	289
Kentucky	46	267	54	288	51	280	49	277
Louisiana	57	264	42	284	48	273	52	272
Maine	32	275	68	292	49	288	51	285
Maryland	28	268	72	293	50	287	50	284
Massachusetts	26	275	74	306	49	300	51	296
Michigan	33	259	67	285	52	278	48	275
Minnesota	26	273	72	298	51	292	49	292
Mississippi	66	257	33	280	48	266	52	264
Missouri	39	266	60	290	50	282	50	279
Montana	34	272	65	295	50	287	50	287
Nebraska	33	265	67	293	51	285	49	282
Nevada	37	259	59	279	51	271	49	270
New Hampshire	17	271	80	291	50	288	50	287
New Jersey	27	266	71	297	51	290	49	288
New Mexico	59	258	40	282	52	268	48	267
New York	48	268	51	292	52	281	48	280
North Carolina	44	268	55	296	50	285	50	283
North Dakota	26	280	74	296	50	293	50	290
Ohio	31	268	67	293	51	286	49	283
Oklahoma	51	264	49	285	49	277	51	273
Oregon	39	270	58	294	52	285	48	283
Pennsylvania	29	267	71	294	51	289	49	283
Rhode Island	33	257	67	285	52	276	48	275
South Carolina	49	269	51	294	48	281	52	282
South Dakota	30	275	70	294	52	290	48	287
Tennessee	45	262	55	284	49	277	51	271
Texas	50	275	50	297	50	287	50	285
Utah	30	267	68	287	52	282	48	280
Vermont	27	277	73	296	50	292	50	290
Virginia	28	268	72	295	53	289	47	286
Washington	33	268	65	294	50	285	50	285
West Virginia	48	260	52	279	51	271	49	269
Wisconsin	29	266	69	293	52	287	48	284
Wyoming	28	275	72	291	52	288	48	286
Other jurisdictions								
District of Columbia	65	243	35	259	46	248	54	248
DoDEA[1]	#	‡	#	‡	49	285	51	285

Rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
[1] Department of Defense Education Activity (overseas and domestic schools).
NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Results are not shown for students whose race/ethnicity was "unclassified" and for students whose eligibility for free/reduced-price school lunch was not available.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Assessment Content at Grade 8

Of the 168 questions that made up the eighth-grade mathematics assessment, the largest percentage (approximately 30 percent) focused on algebra. The emphasis was on students' understanding of algebraic representations, patterns, and functions; linearity; and algebraic expressions, equations, and inequalities. The knowledge and skills expected at grade 8 in number properties and operations include computing with rational numbers, common irrational numbers, and numbers in scientific notation, and using numbers to solve problems involving proportionality and rates. In the measurement content area, students were expected to be familiar with area, volume, angles, and rates. In geometry, eighth-graders were expected to be familiar with parallel and perpendicular lines, angle relations in polygons, cross sections of solids, and the Pythagorean Theorem. In data analysis and probability, students were expected to use a variety of techniques for organizing and summarizing data, analyzing statistical claims, and demonstrating an understanding of the terminology and concepts of probability.

Mathematics Achievement Levels at Grade 8

The following descriptions are abbreviated versions of the full achievement-level descriptions for grade 8 mathematics. The cut score depicting the lowest score representative of that level is noted in parentheses.

Basic (262): Eighth-graders performing at the *Basic* level should complete problems correctly with the help of structural prompts such as diagrams, charts, and graphs. They should be able to solve problems in all NAEP content areas through the appropriate selection and use of strategies and technological tools, including calculators, computers, and geometric shapes. Students at this level also should be able to use fundamental algebraic and informal geometric concepts in problem solving. As they approach the *Proficient* level, students at the *Basic* level should be able to determine which of the available data are necessary and sufficient for correct solutions and use them in problem solving. However, these eighth-graders show limited skill in communicating mathematically.

Proficient (299): Eighth-graders performing at the *Proficient* level should be able to conjecture, defend their ideas, and give supporting examples. They should understand the connections among fractions, percents, decimals, and other mathematical topics such as algebra and functions. Students at this level are expected to have a thorough understanding of *Basic* level arithmetic operations—an understanding sufficient for problem solving in practical situations. Quantity and spatial relationships in problem solving and reasoning should be familiar to them, and they should be able to convey underlying reasoning skills beyond the level of arithmetic. They should be able to compare and contrast mathematical ideas and generate their own examples. These students should make inferences from data and graphs, apply properties of informal geometry, and accurately use the tools of technology. Students at this level should understand the process of gathering and organizing data and be able to calculate, evaluate, and communicate results within the domain of statistics and probability.

Advanced (333): Eighth-graders performing at the *Advanced* level should be able to probe examples and counterexamples in order to shape generalizations from which they can develop models. Eighth-graders performing at the *Advanced* level should use number sense and geometric awareness to consider the reasonableness of an answer. They are expected to use abstract thinking to create unique problem-solving techniques and explain the reasoning processes underlying their conclusions.

The full descriptions can be found at http://www.nagb.org/frameworks/math_07.pdf.

What Eighth-Graders Know and Can Do in Mathematics

The item map below illustrates the range of mathematical knowledge and skills demonstrated by eighth-graders. For example, students performing near the middle of the *Basic* range (with an average score of 278) were likely to be able to estimate time given a rate and a distance. Students performing near the top of the *Proficient* range (with an average score of 325) were likely to be able to complete a table and write an algebraic expression.

GRADE 8 NAEP MATHEMATICS ITEM MAP

	Scale score	Content area	Question description
	500		
	~		
Advanced	364	**Geometry**	Model a geometrical situation given specific conditions
	355	**Measurement**	*Estimate side length of a square given area*
	342	**Algebra**	*Identify the graph of a linear equation*
	340	**Number properties and operations**	*Interpret a number expressed in scientific notation*
	337	**Geometry**	Find container height given dimensions of contents
	334	**Data analysis and probability**	Identify best method for selecting a sample
	333		
Proficient	329	**Algebra**	*Convert a temperature from Fahrenheit to Celsius*
	328	**Data analysis and probability**	*Identify which statistic is represented by a response*
	325	**Algebra**	Complete a table and write an algebraic expression
	320	**Number properties and operations**	*Determine distance given rate and time*
	317	**Number properties and operations**	Analyze a mathematical relationship (shown on page 39)
	314	**Algebra**	*Use a formula to solve a problem*
	311	**Number properties and operations**	*Divide large numbers in a given context*
	308	**Measurement**	Determine value of marks on a scale
	306	**Geometry**	*Determine measure of an angle in a figure*
	304	**Number properties and operations**	*Identify fractions listed in ascending order*
	301	**Algebra**	*Determine an equation relating sales and profit* (shown on page 38)
	299		
Basic	296	**Data analysis and probability**	*Identify relationship in a scatterplot*
	296	**Number properties and operations**	*Convert raw points to a percentage*
	287	**Data analysis and probability**	Explain which survey is better
	278	**Number properties and operations**	*Estimate time given a rate and a distance*
	276	**Algebra**	*Determine an expression to model a scenario*
	268	**Measurement**	*Determine width after proportional enlargement*
	265	**Algebra**	*Identify point on a graph with specified coordinates*
	262		
	261	**Algebra**	*Evaluate an expression for a specific value*
	259	**Data analysis and probability**	*Recognize misrepresented data*
	258	**Measurement**	*Determine dimensions that give the greatest volume*
	258	**Geometry**	*Identify the result of combining two shapes*
	257	**Algebra**	*Solve an algebraic equation*
	254	**Number properties and operations**	*Use place value to write a number*
	~		
	0		

NOTE: Regular type denotes a constructed-response question. *Italic* type denotes a multiple-choice question. The position of a question on the scale represents the average scale score attained by students who had a 65 percent probability of successfully answering a constructed-response question, a 74 percent probability of correctly answering a four-option multiple-choice question, or a 72 percent probability of correctly answering a five-option multiple-choice question. For constructed-response questions, the question description represents students' performance rated as completely correct. Scale score ranges for mathematics achievement levels are referenced on the map.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Sample Question About Algebra

This sample question measures eighth-graders' performance in the algebra content area. It addresses the "Algebraic representations" subtopic, which focuses on analyzing, interpreting, and translating among different representations of linear relationships; representing points in a rectangular coordinate system; and recognizing common nonlinear relationships in meaningful contexts. The framework objective measured by this question is "Translate between different representations of linear expressions using symbols, graphs, tables, diagrams, or written descriptions." Students were permitted to use a calculator to solve this problem.

Fifty-four percent of eighth-graders selected the correct answer (choice B). The most common incorrect answer (choice A), which was selected by 17 percent of the students, resulted from interchanging the variables for the number of cards sold and the amount of profit. Incorrect choices C and D are alternate ways to represent the relationship between the number of cards sold and the profit on Monday, but they do not represent the relationship on the other days. Incorrect choice E can be obtained by interchanging the variables and considering only Thursday.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Number Sold, n	4	0	5	2	3	6
Profit, p	\$2.00	\$0.00	\$2.50	\$1.00	\$1.50	\$3.00

Angela makes and sells special-occasion greeting cards. The table above shows the relationship between the number of cards sold and her profit. Based on the data in the table, which of the following equations shows how the number of cards sold and profit (in dollars) are related?

(A) $p = 2n$ (B) $p = 0.5n$ (C) $p = n - 2$ (D) $p = 6 - n$ (E) $p = n + 1$

Percentage of eighth-grade students in each response category in 2007

Choice A	Choice B	Choice C	Choice D	Choice E	Omitted
17	54	13	9	6	1

NOTE: Detail may not sum to totals because of rounding.

The table below shows the percentage of eighth-graders within each achievement level who answered this question correctly. For example, 46 percent of eighth-graders at the *Basic* level selected the correct answer choice.

Percentage correct for eighth-grade students at each achievement level in 2007

Overall	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*
54	22	46	86	98

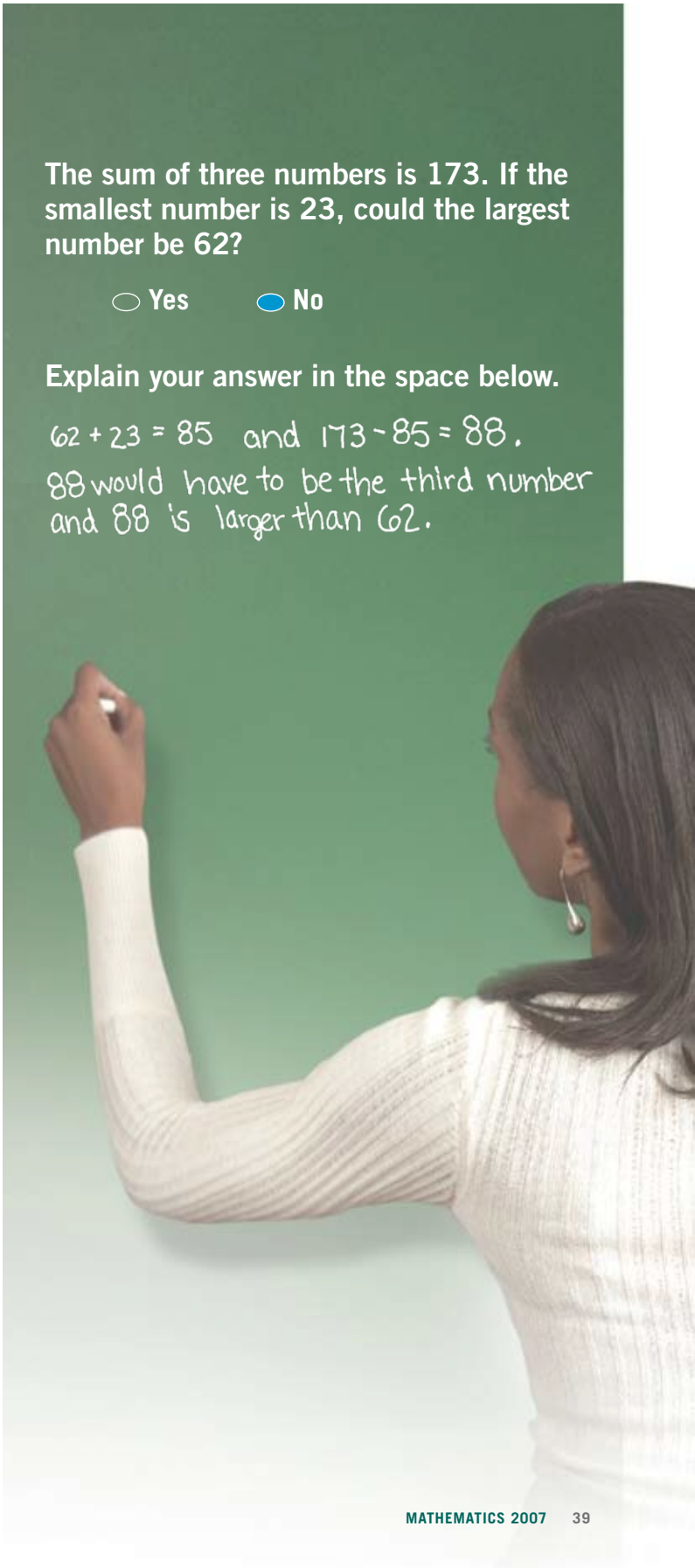
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Sample Question About Number Properties and Operations

This sample question measures eighth-graders' understanding in the number properties and operations content area. It addresses the "Properties of number and operations" subtopic, which focuses on recognizing, describing, and explaining properties of integers and operations. The framework objective measured by this question is "Explain or justify a mathematical concept or relationship." Students were permitted to use a calculator to solve this problem.

Student responses for this question were rated using a two-level scoring guide, rating responses as "Correct" or "Incorrect."

Forty-two percent of grade 8 students correctly responded to this question. The student response on the right was rated as "Correct." It showed that if two of the three numbers are 23 and 62, then the third number must be 88. Therefore, 62 cannot be the largest of the three numbers.



Percentage of eighth-grade students in each response category in 2007

Correct	Incorrect	Omitted
42	55	2

NOTE: Detail may not sum to totals because a small percentage of responses that did not address the assessment task are not shown.

The table below shows the percentage of eighth-graders within each achievement level whose answer to this question was rated as "Correct." For example, 43 percent of eighth-graders at the *Basic* level provided a response rated as "Correct."

Percentage rated as "Correct" for eighth-grade students at each achievement level in 2007

Overall	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*
42	13	43	66	78

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Technical Notes

Sampling and Weighting

The schools and students participating in NAEP assessments are selected to be representative both nationally and for public schools at the state level. Samples of schools and students are drawn from each state and from the District of Columbia and Department of Defense schools. The results from the assessed students are combined to provide accurate estimates of the overall performance of students in the nation and in individual states and other jurisdictions.

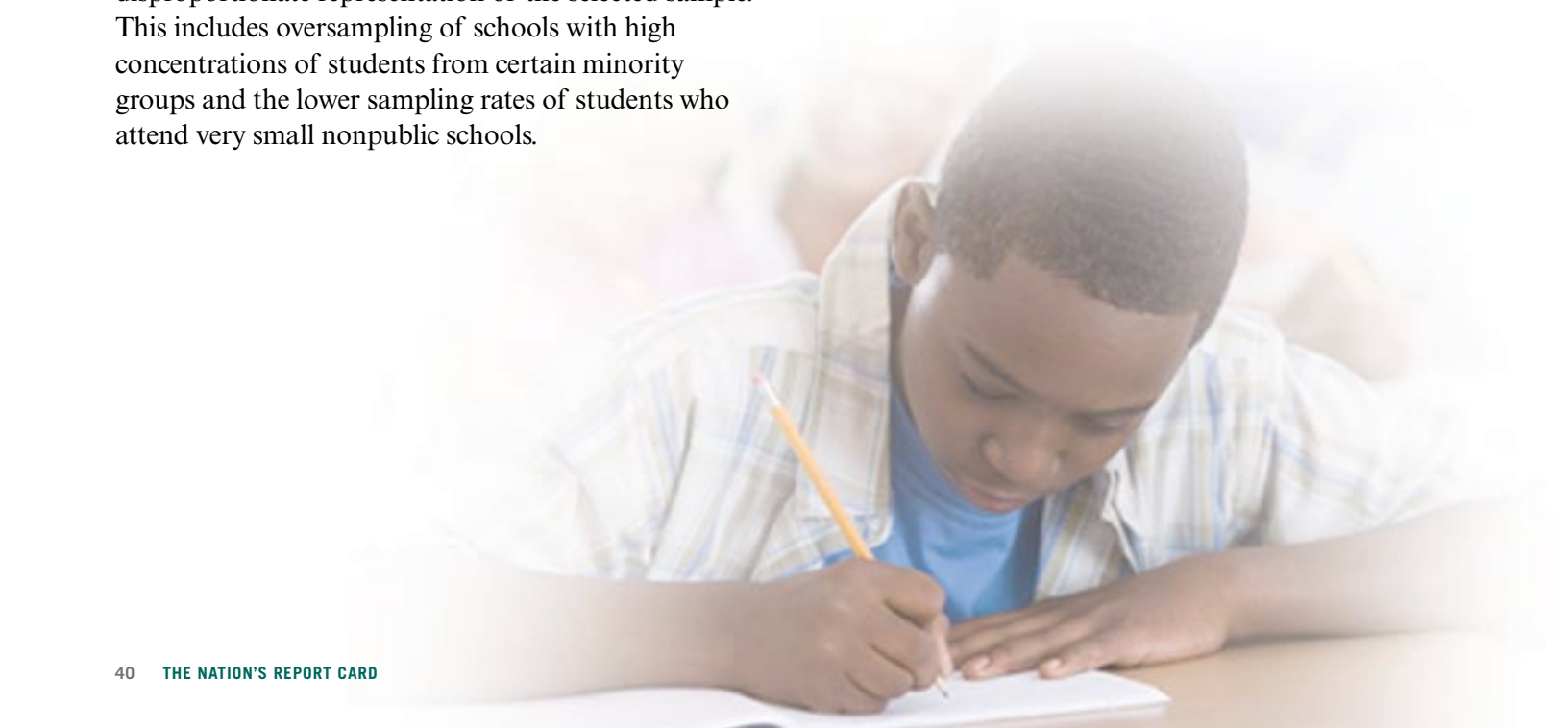
While national results reflect the performance of students in both public schools and nonpublic schools (i.e., private schools, Bureau of Indian Education schools, and Department of Defense schools), state-level results reflect the performance of public school students only. More information on sampling can be found at http://nces.ed.gov/nationsreportcard/about/nathow.asp.

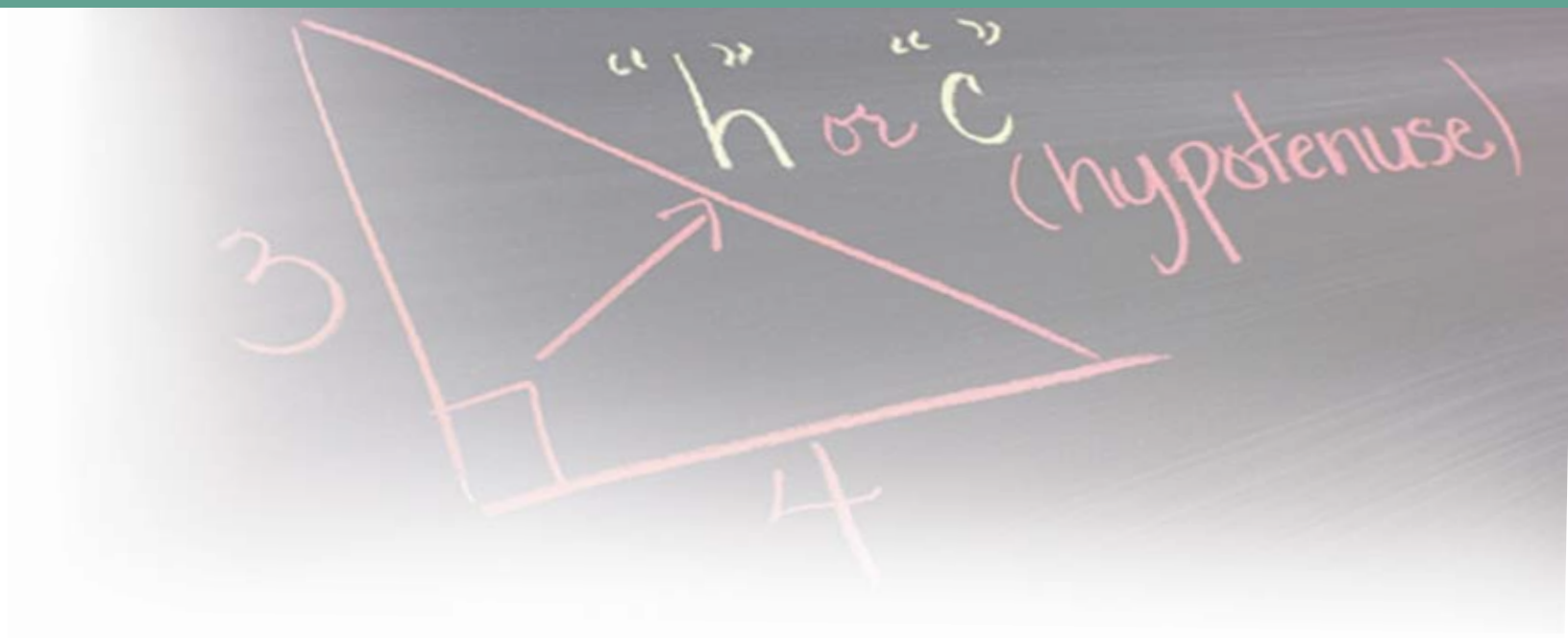
Each school that participated in the assessment, and each student assessed, represents a portion of the population of interest. Results are weighted to make appropriate inferences between the student samples and the respective populations from which they are drawn. Sampling weights account for the disproportionate representation of the selected sample. This includes oversampling of schools with high concentrations of students from certain minority groups and the lower sampling rates of students who attend very small nonpublic schools.

Interpreting Statistical Significance

Comparisons over time or between groups are based on statistical tests that consider both the size of the differences and the standard errors of the two statistics being compared. Standard errors are margins of error, and estimates based on smaller groups are likely to have larger margins of error. The size of the standard errors may also be influenced by other factors such as how representative the students assessed are of the entire population.

When an estimate has a large standard error, a numerical difference that seems large may not be statistically significant. Differences of the same magnitude may or may not be statistically significant depending upon the size of the standard errors of the estimates. For example, a 1-point difference between male and female students may be statistically significant, while a 1-point difference between Black and Asian/Pacific Islander students may not be. Standard errors for the estimates presented in this report are available at http://nces.ed.gov/nationsreportcard/nde.





School and Student Participation Rates

To ensure unbiased samples, NCES and the Governing Board established participation rate standards that states and jurisdictions were required to meet in order for their results to be reported. Participation rates for the original sample needed to be at least 85 percent for schools to meet reporting requirements. In the 2007 mathematics assessment, all 52 states and jurisdictions met participation rate standards at both grades 4 and 8.

The national school participation rates for public and private schools combined were 98 percent for grade 4 and 97 percent for grade 8. Student participation rates were 95 percent for grade 4 and 92 percent for grade 8.

Participation rates needed to be 70 percent or higher to report results separately for private schools. While the school participation rate for private schools did meet the standard in 2007, it did not always meet the standard in previous assessment years. Therefore, comparisons could not be made for private schools as a group across all years. Participation rates for Catholic schools, however, were sufficient for reporting in 2007 and in previous assessment years. These data and other private school data are available at http://nationsreportcard.gov/math_2007/m0038.asp.

National School Lunch Program

NAEP first began collecting data in 1996 on student eligibility for the National School Lunch Program (NSLP) as an indicator of poverty. Under the guidelines of NSLP, children from families with incomes below 130 percent of the poverty level are eligible for free meals. Those from families with incomes between 130 and 185 percent of the poverty level are eligible for reduced-price meals. (For the period July 1, 2006 through June 30, 2007, for a family of four, 130 percent of the poverty level was $26,000, and 185 percent was $37,000.)

As a result of improvements in the quality of the data on students' eligibility for NSLP, the percentage of students for whom information was not available has decreased in comparison to the percentages reported prior to the 2003 assessment. Therefore, trend comparisons are only made back to 2003 in this report. For more information on NSLP, visit http://www.fns.usda.gov/cnd/lunch/.

Appendix Tables

Table A-1. **Fourth- and eighth-grade public and nonpublic school students with disabilities (SD) and/or English language learners (ELL) identified, excluded, and assessed in NAEP mathematics, as a percentage of all students: Various years, 1992–2007**

	Accommodations not permitted		Accommodations permitted				
Student characteristics	1992	1996	1996	2000	2003	2005	2007
Grade 4							
SD and/or ELL							
Identified	9	14	15	18	21	21	21
Excluded	6	6	4	4	4	3	3
Assessed	3	8	11	14	17	18	19
Without accommodations	3	8	7	9	9	9	9
With accommodations	†	†	5	5	8	9	10
SD							
Identified	7	11	10	12	13	13	13
Excluded	4	5	3	3	3	2	2
Assessed	3	6	7	9	10	10	10
Without accommodations	3	6	4	5	4	3	3
With accommodations	†	†	4	4	6	7	7
ELL							
Identified	3	3	6	7	10	10	10
Excluded	2	1	1	1	1	1	1
Assessed	1	2	5	6	8	8	9
Without accommodations	1	2	3	4	6	6	6
With accommodations	†	†	2	1	2	2	3
Grade 8							
SD and/or ELL							
Identified	9	11	12	13	17	17	17
Excluded	6	4	3	4	3	3	4
Assessed	4	6	8	10	14	14	13
Without accommodations	4	6	6	7	7	6	6
With accommodations	†	†	3	3	6	8	7
SD							
Identified	7	9	9	10	13	12	12
Excluded	4	4	3	3	3	3	3
Assessed	3	5	6	7	10	10	8
Without accommodations	3	5	4	5	4	3	2
With accommodations	†	†	2	2	6	7	6
ELL							
Identified	2	3	3	4	6	6	6
Excluded	2	1	1	1	1	1	1
Assessed	1	2	2	3	5	5	5
Without accommodations	1	2	2	2	4	4	4
With accommodations	†	†	#	1	1	1	2

† Not applicable. Accommodations were not permitted in this sample.
# Rounds to zero.
NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. 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), various years, 1992–2007 Mathematics Assessments.

Table A-2. **Fourth- and eighth-grade public and nonpublic school students with disabilities (SD) and/or English language learners (ELL) identified, excluded, and assessed in NAEP mathematics, as a percentage of all students, by selected race/ethnicity categories: 2007**

	Race/ethnicity		
Student characteristics	White	Black	Hispanic
Grade 4			
SD and/or ELL			
Identified	14	16	46
Excluded	2	4	4
Assessed	12	12	42
Without accommodations	4	3	26
With accommodations	8	9	15
SD			
Identified	13	14	12
Excluded	2	4	3
Assessed	11	11	9
Without accommodations	4	2	3
With accommodations	8	8	6
ELL			
Identified	1	2	39
Excluded	#	#	3
Assessed	1	2	37
Without accommodations	#	1	25
With accommodations	#	1	12
Grade 8			
SD and/or ELL			
Identified	12	16	33
Excluded	3	6	5
Assessed	9	11	28
Without accommodations	3	3	18
With accommodations	6	8	11
SD			
Identified	11	15	11
Excluded	3	6	3
Assessed	8	10	8
Without accommodations	2	2	3
With accommodations	6	8	5
ELL			
Identified	1	1	26
Excluded	#	#	3
Assessed	1	1	23
Without accommodations	#	#	16
With accommodations	#	#	7

Rounds to zero.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. 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), 2007 Mathematics Assessment.

Table A-3. **Fourth- and eighth-grade public school students with disabilities (SD) and English language learners (ELL) identified, excluded, and accommodated in NAEP mathematics, as a percentage of all students, by state: 2007**

State/jurisdiction	Grade 4							Grade 8						
	Overall excluded	SD			ELL			Overall excluded	SD			ELL		
		Identified	Excluded	Accommodated	Identified	Excluded	Accommodated		Identified	Excluded	Accommodated	Identified	Excluded	Accommodated
Nation (public)	**3**	**14**	**3**	**8**	**11**	**1**	**3**	**4**	**13**	**4**	**6**	**7**	**1**	**2**
Alabama	2	11	1	4	2	#	#	3	12	3	2	2	#	#
Alaska	2	16	1	10	16	1	6	4	12	4	6	17	1	5
Arizona	3	11	2	5	16	2	3	3	11	3	5	10	1	2
Arkansas	3	12	2	7	7	1	5	2	12	2	8	3	#	2
California	2	10	2	4	34	1	3	2	9	2	3	22	1	2
Colorado	2	12	2	9	15	#	7	2	10	2	7	7	#	3
Connecticut	1	13	1	9	7	#	5	2	13	1	9	4	#	2
Delaware	5	17	5	9	5	1	2	7	14	6	6	3	1	1
Florida	3	15	2	12	8	2	5	3	13	2	10	6	1	4
Georgia	2	12	2	7	3	#	2	5	9	5	3	2	#	1
Hawaii	1	11	1	8	10	1	4	2	13	1	7	7	1	3
Idaho	2	11	1	6	8	#	2	2	10	1	5	6	#	2
Illinois	5	15	3	8	9	1	3	6	14	5	8	4	1	1
Indiana	3	17	3	9	5	#	3	6	15	5	8	4	#	1
Iowa	1	13	1	10	5	#	3	2	15	2	11	3	#	2
Kansas	3	13	3	7	8	#	4	4	12	4	7	4	#	1
Kentucky	3	15	2	7	2	#	1	7	13	6	5	2	#	1
Louisiana	2	18	2	13	1	#	1	3	12	3	8	1	#	1
Maine	3	18	3	11	2	#	1	5	17	5	9	2	#	#
Maryland	4	12	4	6	4	1	3	7	11	7	3	2	#	1
Massachusetts	5	18	5	11	6	1	2	9	17	9	6	3	1	1
Michigan	3	13	3	7	2	#	1	5	14	4	8	2	#	#
Minnesota	2	13	2	7	8	1	3	2	12	2	7	5	#	1
Mississippi	1	10	1	6	1	#	#	2	11	2	6	#	#	#
Missouri	4	15	3	7	2	#	1	5	13	5	6	2	#	1
Montana	2	13	2	8	4	#	2	3	13	3	8	5	#	2
Nebraska	3	17	2	9	8	1	2	3	13	2	7	3	1	1
Nevada	3	13	2	6	22	2	9	4	12	3	5	11	1	4
New Hampshire	2	19	2	13	3	#	1	3	19	3	12	2	#	1
New Jersey	2	14	2	11	4	#	3	3	14	3	11	4	1	2
New Mexico	4	13	3	7	23	2	9	3	12	2	7	17	2	4
New York	2	15	1	12	9	1	7	3	14	3	11	5	1	4
North Carolina	2	15	2	10	7	1	4	2	13	2	10	4	#	2
North Dakota	4	15	4	8	3	1	1	6	14	6	6	3	#	1
Ohio	5	15	4	8	3	1	1	7	15	7	7	1	#	#
Oklahoma	5	14	5	6	5	#	1	8	14	8	4	4	1	1
Oregon	3	15	2	8	13	1	7	3	12	3	5	9	1	3
Pennsylvania	2	17	2	10	2	#	1	4	15	4	9	2	1	1
Rhode Island	2	19	2	12	7	1	4	3	17	2	12	4	1	1
South Carolina	2	13	2	6	4	#	1	5	13	5	5	2	#	1
South Dakota	1	15	1	7	4	#	1	2	11	2	6	1	#	#
Tennessee	6	14	6	4	2	#	1	6	12	6	3	2	#	1
Texas	5	13	5	5	16	2	5	6	11	5	3	8	2	2
Utah	2	12	2	6	12	1	4	3	10	2	6	9	1	2
Vermont	2	17	2	11	3	#	1	4	19	4	10	2	#	1
Virginia	5	15	4	7	8	1	4	7	14	6	6	4	1	1
Washington	3	15	2	8	9	1	4	4	11	3	6	6	1	2
West Virginia	1	17	1	8	1	#	#	2	17	2	10	1	#	#
Wisconsin	3	15	2	9	7	1	4	5	14	4	9	5	1	2
Wyoming	2	15	2	9	4	#	1	2	13	2	9	3	#	1
Other jurisdictions														
District of Columbia	6	14	5	8	8	2	5	10	17	9	6	4	1	2
DoDEA[1]	2	11	1	7	7	1	2	2	7	1	6	5	1	1

Rounds to zero.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: Students identified as both SD and ELL were counted only once in overall, but were counted separately under the SD and ELL categories.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessment.

Table A-4. **Fourth- and eighth-grade public school students with disabilities excluded in NAEP mathematics, as a percentage of all students, by state: Various years, 1990–2007**

	Grade 4						Grade 8						
State/jurisdiction	1992[1]	1996[1]	2000	2003	2005	2007	1990[1]	1992[1]	1996[1]	2000	2003	2005	2007
Nation (public)	**5**	**5**	**3**	**3**	**3**	**3**	**—**	**5**	**4**	**3**	**3**	**3**	**4**
Alabama	4	6	3	2	1	1	5	5	7	6	2	1	3
Alaska	—	4	—	1	1	1	—	—	5	—	1	2	4
Arizona	3	7	3	3	3	2	3	4	5	2	3	3	3
Arkansas	5	6	4	1	2	2	7	6	7	2	1	3	2
California	3	5	3	2	2	2	3	4	5	3	1	2	2
Colorado	4	7	—	2	2	2	4	4	4	—	1	2	2
Connecticut	4	7	3	3	2	1	5	5	7	5	3	2	1
Delaware	5	6	—	6	7	5	4	4	8	—	8	10	6
Florida	7	7	—	2	2	2	5	5	7	—	2	2	2
Georgia	5	6	3	2	2	2	3	4	6	4	2	2	5
Hawaii	5	4	6	2	2	1	3	3	4	4	3	2	1
Idaho	3	—	1	1	1	1	2	3	—	2	1	2	1
Illinois	—	—	2	3	2	3	4	—	—	3	4	3	5
Indiana	3	5	2	2	1	3	5	4	5	3	2	4	5
Iowa	3	5	1	2	2	1	4	4	5	—	2	2	2
Kansas	—	—	3	1	2	3	—	—	—	3	2	3	4
Kentucky	3	6	3	3	2	2	5	5	4	4	4	3	6
Louisiana	4	7	3	3	4	2	4	4	6	2	4	4	3
Maine	6	7	4	3	3	3	—	4	5	3	4	4	5
Maryland	3	7	2	3	3	4	4	4	6	2	3	4	7
Massachusetts	6	7	1	2	3	5	—	6	7	2	2	6	9
Michigan	5	6	3	3	4	3	4	6	5	4	4	4	4
Minnesota	3	5	2	2	2	2	3	3	3	1	2	2	2
Mississippi	5	6	3	5	2	1	—	7	7	5	5	3	2
Missouri	4	5	2	3	2	3	—	4	6	3	4	4	5
Montana	—	5	2	2	2	2	2	—	3	2	2	2	3
Nebraska	4	4	2	2	2	2	3	4	4	3	3	1	2
Nevada	—	5	3	3	3	2	—	—	5	3	2	2	3
New Hampshire	4	—	—	3	2	2	4	5	4	—	3	2	3
New Jersey	3	5	—	2	2	2	5	6	5	—	1	3	3
New Mexico	6	8	5	2	2	3	6	4	5	7	2	2	2
New York	3	5	2	3	3	1	4	6	5	3	4	3	3
North Carolina	3	6	4	4	2	2	3	3	4	4	3	2	2
North Dakota	2	3	1	2	2	4	2	2	3	2	1	4	6
Ohio	6	—	4	4	3	4	5	6	—	4	5	5	7
Oklahoma	7	—	4	3	4	5	5	6	—	4	2	4	8
Oregon	—	6	2	4	3	2	2	—	3	2	3	2	3
Pennsylvania	3	4	—	2	2	2	5	4	—	—	1	3	4
Rhode Island	4	5	2	2	2	2	5	4	5	3	3	3	2
South Carolina	5	5	5	6	4	2	—	6	6	4	7	6	5
South Dakota	—	—	—	1	1	1	—	—	—	—	2	2	2
Tennessee	4	6	2	2	3	6	—	5	4	2	3	5	6
Texas	5	7	6	7	5	5	4	5	6	7	6	5	5
Utah	4	5	3	2	2	2	—	4	5	2	2	2	2
Vermont	—	6	3	4	3	2	—	—	4	3	3	4	4
Virginia	5	6	3	4	4	4	4	5	7	5	6	4	6
Washington	—	5	—	2	2	2	—	—	5	—	2	2	3
West Virginia	4	8	3	3	2	1	5	6	8	3	3	3	2
Wisconsin	5	7	4	3	2	2	4	4	7	4	3	3	4
Wyoming	3	4	2	1	1	2	3	4	2	1	1	2	2
Other jurisdictions													
District of Columbia	7	7	3	4	5	5	4	8	8	5	5	5	9
DoDEA[2]	—	4	2	1	1	1	—	—	2	1	1	1	1

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

[1] Accommodations were not permitted in this assessment year.

[2] Department of Defense Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Table A-5. **Fourth- and eighth-grade public school English language learners excluded in NAEP mathematics, as a percentage of all students, by state: Various years, 1990–2007**

State/jurisdiction	Grade 4						Grade 8						
	1992[1]	1996[1]	2000	2003	2005	2007	1990[1]	1992[1]	1996[1]	2000	2003	2005	2007
Nation (public)	**2**	**2**	**1**	**1**	**1**	**1**	**—**	**2**	**1**	**1**	**1**	**1**	**1**
Alabama	#	#	#	#	#	#	#	#	#	#	#	#	#
Alaska	—	1	—	#	1	1	—	—	1	—	#	#	1
Arizona	2	7	3	2	2	2	1	2	4	1	2	2	1
Arkansas	#	#	#	1	2	1	#	#	#	#	1	1	#
California	10	12	3	2	3	1	4	5	6	2	2	1	1
Colorado	1	2	—	1	1	#	1	1	1	—	1	1	#
Connecticut	2	2	1	1	1	#	1	1	2	2	1	#	#
Delaware	1	1	—	1	1	1	#	#	#	—	1	1	1
Florida	2	3	—	2	1	2	2	2	3	—	1	1	1
Georgia	1	2	1	1	1	#	#	#	1	1	1	#	#
Hawaii	2	1	3	2	1	1	1	2	1	1	1	1	1
Idaho	1	—	2	1	1	#	#	#	—	1	#	1	#
Illinois	—	—	2	2	1	1	1	—	—	2	1	1	1
Indiana	#	#	1	#	1	#	#	#	#	#	#	#	#
Iowa	#	1	1	1	#	#	#	#	#	—	#	#	#
Kansas	—	—	#	#	1	#	—	—	—	#	1	1	#
Kentucky	#	#	#	1	#	#	#	#	#	1	1	#	#
Louisiana	#	1	#	#	#	#	#	#	#	#	1	#	#
Maine	#	#	#	1	#	#	—	#	#	#	#	#	#
Maryland	1	1	1	2	1	1	1	1	1	1	1	#	#
Massachusetts	1	2	2	1	1	1	—	2	1	2	1	1	1
Michigan	1	1	1	1	1	#	#	#	1	#	1	#	#
Minnesota	#	1	1	1	1	1	#	#	#	1	1	1	#
Mississippi	#	#	#	1	#	#	—	#	#	#	#	#	#
Missouri	#	#	1	1	#	#	—	#	1	#	#	#	#
Montana	—	#	#	#	#	#	#	—	#	#	#	#	#
Nebraska	#	1	1	1	1	1	#	#	1	1	1	#	1
Nevada	—	4	4	2	1	2	—	—	3	1	1	1	1
New Hampshire	#	—	—	1	#	#	#	#	#	—	#	#	#
New Jersey	2	1	—	1	1	#	2	1	2	—	1	1	1
New Mexico	1	5	2	2	1	2	1	1	4	2	1	2	2
New York	2	3	3	3	1	1	2	3	3	2	2	1	1
North Carolina	#	1	1	1	1	1	#	#	1	1	1	1	#
North Dakota	#	#	#	#	#	1	#	#	#	#	#	#	#
Ohio	#	—	#	1	#	1	#	#	—	1	#	#	#
Oklahoma	#	—	1	1	1	#	#	#	—	#	1	1	1
Oregon	—	3	1	1	1	1	#	—	1	1	1	1	1
Pennsylvania	1	1	—	1	#	#	#	#	—	—	#	#	1
Rhode Island	3	2	1	2	1	1	2	2	2	1	2	1	1
South Carolina	#	#	1	#	#	#	—	#	#	#	#	#	#
South Dakota	—	—	—	#	#	#	—	—	—	—	#	#	#
Tennessee	#	1	1	#	1	#	—	#	#	1	1	#	#
Texas	4	5	2	2	2	2	2	2	3	2	2	2	2
Utah	1	1	1	1	1	1	—	1	1	#	1	1	1
Vermont	—	#	#	#	#	#	—	—	#	1	#	#	#
Virginia	1	1	2	2	1	1	1	1	1	1	2	1	1
Washington	—	1	—	1	1	1	—	—	1	—	1	1	1
West Virginia	#	#	#	#	#	#	#	#	#	#	#	#	#
Wisconsin	1	1	1	1	1	1	#	#	1	1	1	1	1
Wyoming	#	#	#	#	#	#	#	#	#	#	#	#	#
Other jurisdictions													
District of Columbia	2	4	2	1	1	2	1	2	3	2	1	1	1
DoDEA[2]	—	1	1	1	1	1	—	—	1	1	1	1	1

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
Rounds to zero.
[1] Accommodations were not permitted in this assessment year.
[2] Department of Defense Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Table A-6. **Percentage distribution of fourth- and eighth-grade students in NAEP mathematics, by selected race/ethnicity categories and state: 1990, 1992, and 2007**

	Grade 4						Grade 8					
	White		Black		Hispanic		White		Black		Hispanic	
State/jurisdiction	1992	2007	1992	2007	1992	2007	1990	2007	1990	2007	1990	2007
Nation (public)[1]	**72***	**55**	**18***	**17**	**7***	**21**	**73***	**58**	**16**	**17**	**7***	**19**
Alabama	65	58	34	37	#*	3	68*	60	32	35	#*	2
Alaska	—	55	—	5	—	4	—	56	—	4	—	4
Arizona	62*	43	4	5	23*	44	62*	47	3	5	26*	39
Arkansas	75*	67	24	22	#*	9	75	69	24	22	1*	7
California	50*	27	7	7	30*	54	49*	31	7	7	30*	48
Colorado	73*	60	6	6	17*	30	77*	65	5	7	15*	25
Connecticut	77*	64	11	13	10*	18	79*	69	11	13	8*	15
Delaware	70*	54	25*	33	2*	10	70*	56	26*	31	2*	9
Florida	63*	48	24	21	12*	25	65*	48	22	23	12*	24
Georgia	60*	46	38	38	1*	9	62*	46	36*	43	1*	7
Hawaii	23*	17	3	3	2*	4	20*	14	2	2	2	2
Idaho	92*	81	#*	1	6*	13	93*	82	#	1	4*	14
Illinois	—	56	—	19	—	19	70*	60	19	16	8*	18
Indiana	87*	78	11	10	2*	7	87*	77	9	12	2*	7
Iowa	95*	86	2*	5	1*	6	95*	88	2*	4	1*	6
Kansas	—	73	—	8	—	13	—	76	—	8	—	10
Kentucky	90*	84	9	11	#*	2	90*	86	9	10	#*	2
Louisiana	53	47	45	49	1*	2	57	52	40	43	1	2
Maine	98*	95	#*	2	#*	1	—	96	—	2	—	1
Maryland	62*	50	32	35	2*	8	62*	51	31	37	2*	7
Massachusetts	83*	75	8	7	4*	11	—	75	—	8	—	10
Michigan	79*	71	16	21	3	3	82*	75	14	18	2*	3
Minnesota	91*	78	3*	8	2*	7	93*	81	2*	7	#*	4
Mississippi	42	45	58	52	#	2	—	47	—	51	—	1
Missouri	83*	77	15	19	1*	3	—	75	—	19	—	3
Montana	—	83	—	1	—	3	91*	85	#	1	1*	2
Nebraska	90*	75	6	7	3*	14	92*	80	5*	7	2*	11
Nevada	—	43	—	8	—	40	—	47	—	10	—	34
New Hampshire	96*	91	1*	2	1*	4	98*	94	#*	2	1*	3
New Jersey	69*	57	16	14	11*	20	69*	57	17	17	9*	19
New Mexico	45*	29	4	3	45*	58	42*	32	2	3	42*	52
New York	63*	53	15	19	17	20	61	55	19	19	13	18
North Carolina	65*	55	31	28	1*	10	63*	56	32	30	1*	8
North Dakota	95*	87	#*	2	1*	2	93	89	#	1	1	1
Ohio	86*	75	12*	18	1*	3	84*	76	12*	18	1*	2
Oklahoma	77*	58	9	11	3*	9	77*	59	11	9	2*	8
Oregon	—	71	—	3	—	17	91*	73	2*	3	3*	15
Pennsylvania	81	77	14	14	3	6	82	76	14	15	2*	6
Rhode Island	82*	70	7	8	7*	19	86*	70	5*	9	5*	17
South Carolina	58	57	41	36	#*	4	—	56	—	38	—	3
South Dakota	—	83	—	2	—	2	—	86	—	1	—	2
Tennessee	73	69	25	26	#*	3	—	67	—	28	—	4
Texas	49*	36	14	15	34*	45	50*	38	14	15	33*	44
Utah	93*	80	1	1	4*	15	—	82	—	1	—	12
Vermont	—	94	—	2	—	1	—	95	—	1	—	1
Virginia	71*	58	25	26	2*	8	70*	61	25	26	2*	6
Washington	—	65	—	6	—	15	—	69	—	5	—	14
West Virginia	96*	93	2*	5	#	1	96	94	3	4	#	1
Wisconsin	87*	77	6*	10	2*	8	88*	80	9	10	1*	6
Wyoming	90*	84	1	2	6*	10	86	86	1	1	6*	8
Other jurisdictions												
District of Columbia	5*	6	91*	84	3*	9	3	3	93*	88	3*	9
DoDEA[2]	—	51	—	17	—	14	—	48	—	18	—	15

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.
Rounds to zero.
* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools).
NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. State-level data were not collected at grade 4 in 1990.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, and 2007 Mathematics Assessments.

Table A-7. **Percentage of fourth-grade public school students at or above *Basic* in NAEP mathematics, by state: Various years, 1992–2007**

State/jurisdiction	Accommodations not permitted			Accommodations permitted			
	1992	1996	2000	2000	2003	2005	2007
Nation (public)[1]	**57***	**62***	**67***	**64***	**76***	**79***	**81**
Alabama	43*	48*	57*	55*	65*	66	70
Alaska	—	65*	—	—	75*	77	79
Arizona	53*	57*	58*	57*	70	70	74
Arkansas	47*	54*	56*	55*	71*	78	81
California	46*	46*	52*	50*	67	71	70
Colorado	61*	67*	—	—	77*	81	82
Connecticut	67*	75*	77*	76*	82	84	84
Delaware	55*	54*	—	—	81*	84*	87
Florida	52*	55*	—	—	76*	82*	86
Georgia	53*	53*	58*	57*	72*	76	79
Hawaii	52*	53*	55*	55*	68*	73*	77
Idaho	63*	—	71*	68*	80*	86	85
Illinois	—	—	66*	63*	73*	74*	79
Indiana	60*	72*	78*	77*	82*	84*	89
Iowa	72*	74*	78*	75*	83*	85	87
Kansas	—	—	75*	76*	85*	88	89
Kentucky	51*	60*	60*	59*	72*	75*	79
Louisiana	39*	44*	57*	57*	67*	74	73
Maine	75*	75*	74*	73*	83	84	85
Maryland	55*	59*	61*	60*	73*	79	80
Massachusetts	68*	71*	79*	77*	84*	91*	93
Michigan	61*	68*	72*	71*	77	79	80
Minnesota	71*	76*	78*	76*	84*	88	87
Mississippi	36*	42*	45*	45*	62*	69	70
Missouri	62*	66*	72*	71*	79	79*	82
Montana	—	71*	73*	72*	81*	85	88
Nebraska	67*	70*	67*	65*	80	80	80
Nevada	—	57*	61*	60*	69*	72	74
New Hampshire	72*	—	—	—	87*	89	91
New Jersey	68*	68*	—	—	80*	86*	90
New Mexico	50*	51*	51*	50*	63*	65*	70
New York	57*	64*	67*	66*	79*	81*	85
North Carolina	50*	64*	76*	73*	85	83	85
North Dakota	72*	75*	75*	73*	83*	89	91
Ohio	57*	—	73*	73*	81*	84*	87
Oklahoma	60*	—	69*	67*	74*	79*	82
Oregon	—	65*	67*	65*	79	80	79
Pennsylvania	65*	68*	—	—	78*	82	85
Rhode Island	54*	61*	67*	65*	72*	76	80
South Carolina	48*	48*	60*	59*	79	81	80
South Dakota	—	—	—	—	82*	86	86
Tennessee	47*	58*	60*	59*	70*	74	76
Texas	56*	69*	77*	76*	82*	87	87
Utah	66*	69*	70*	69*	79*	83	83
Vermont	—	67*	73*	73*	85*	87*	89
Virginia	59*	62*	73*	71*	83*	83*	87
Washington	—	67*	—	—	81*	84	84
West Virginia	52*	63*	68*	65*	75*	75*	81
Wisconsin	71*	74*	—	—	79*	84	85
Wyoming	69*	64*	73*	71*	87	87	88
Other jurisdictions							
District of Columbia	23*	20*	24*	24*	36*	45*	49
DoDEA[2]	—	64*	70*	69*	84	85	86

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.

NOTE: State-level data were not collected in 1990.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2007 Mathematics Assessments.

Table A-8. **Percentage of fourth-grade public school students at or above *Proficient* in NAEP mathematics, by state: Various years, 1992–2007**

State/jurisdiction	Accommodations not permitted			Accommodations permitted			
	1992	1996	2000	2000	2003	2005	2007
Nation (public)[1]	**17***	**20***	**25***	**22***	**31***	**35***	**39**
Alabama	10*	11*	14*	13*	19*	21*	26
Alaska	—	21*	—	—	30*	34	38
Arizona	13*	15*	17*	16*	25*	28	31
Arkansas	10*	13*	13*	14*	26*	34	37
California	12*	11*	15*	13*	25*	28	30
Colorado	17*	22*	—	—	34*	39	41
Connecticut	24*	31*	32*	31*	41	42	45
Delaware	17*	16*	—	—	31*	36*	40
Florida	13*	15*	—	—	31*	37*	40
Georgia	15*	13*	18*	17*	27*	30	32
Hawaii	15*	16*	14*	14*	23*	27*	33
Idaho	16*	—	21*	20*	31*	40	40
Illinois	—	—	21*	20*	32*	32*	36
Indiana	16*	24*	31*	30*	35*	38*	46
Iowa	26*	22*	28*	26*	36*	37*	43
Kansas	—	—	30*	29*	41*	47	51
Kentucky	13*	16*	17*	17*	22*	26*	31
Louisiana	8*	8*	14*	14*	21	24	24
Maine	27*	27*	25*	23*	34*	39	42
Maryland	18*	22*	22*	21*	31*	38	40
Massachusetts	23*	24*	33*	31*	41*	49*	58
Michigan	18*	23*	29*	28*	34	38	37
Minnesota	26*	29*	34*	33*	42*	47	51
Mississippi	6*	8*	9*	9*	17*	19	21
Missouri	19*	20*	23*	23*	30*	31*	38
Montana	—	22*	25*	24*	31*	38*	44
Nebraska	22*	24*	24*	24*	34*	36	38
Nevada	—	14*	16*	16*	23*	26*	30
New Hampshire	25*	—	—	—	43*	47*	52
New Jersey	25*	25*	—	—	39*	45*	52
New Mexico	11*	13*	12*	12*	17*	19*	24
New York	17*	20*	22*	21*	33*	36*	43
North Carolina	13*	21*	28*	25*	41	40	41
North Dakota	22*	24*	25*	25*	34*	40*	46
Ohio	16*	—	26*	25*	36*	43	46
Oklahoma	14*	—	16*	16*	23*	29	33
Oregon	—	21*	23*	23*	33	37	35
Pennsylvania	22*	20*	—	—	36*	41*	47
Rhode Island	13*	17*	23*	22*	28*	31*	34
South Carolina	13*	12*	18*	18*	32*	36	36
South Dakota	—	—	—	—	34*	41	41
Tennessee	10*	17*	18*	18*	24*	28	29
Texas	15*	25*	27*	25*	33*	40	40
Utah	19*	23*	24*	23*	31*	37	39
Vermont	—	23*	29*	29*	42*	44*	49
Virginia	19*	19*	25*	24*	36*	39	42
Washington	—	21*	—	—	36*	42	44
West Virginia	12*	19*	18*	17*	24*	25*	33
Wisconsin	24*	27*	—	—	35*	40*	47
Wyoming	19*	19*	25*	25*	39*	43	44
Other jurisdictions							
District of Columbia	5*	5*	6*	5*	7*	10*	14
DoDEA[2]	—	19*	23*	21*	31*	35	37

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.

NOTE: State-level data were not collected in 1990.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2007 Mathematics Assessments.

Table A-9. **Average scale scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by race/ethnicity and state: 2007**

State/jurisdiction	White					Black					Hispanic				
		Percentage of students					Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**248**	**9**	**91**	**51**	**8**	**222**	**37**	**63**	**15**	**1**	**227**	**31**	**69**	**22**	**1**
Alabama	238	17	83	36	4	213	50	50	10	1	218	45	55	17	1
Alaska	247	10	90	50	8	227	33	67	22	2	232	24	76	26	2
Arizona	246	11	89	48	8	219	41	59	16	1	220	39	61	15	#
Arkansas	245	11	89	46	6	217	44	56	12	#	230	23	77	22	1
California	247	12	88	52	9	218	42	58	15	1	218	43	57	15	1
Colorado	249	9	91	54	9	224	35	65	20	2	224	34	66	19	2
Connecticut	252	6	94	57	10	220	40	60	15	1	223	36	64	18	2
Delaware	249	6	94	53	7	230	24	76	20	#	234	17	83	25	1
Florida	250	6	94	54	8	225	29	71	15	1	238	17	83	33	3
Georgia	246	10	90	46	6	222	36	64	13	1	229	25	75	20	1
Hawaii	244	14	86	46	7	230	25	75	24	3	224	33	67	19	2
Idaho	245	11	89	45	6	‡	‡	‡	‡	‡	224	36	64	18	1
Illinois	248	9	91	50	8	216	46	54	9	#	223	36	64	19	1
Indiana	249	8	92	52	7	224	30	70	14	1	233	20	80	26	1
Iowa	245	11	89	46	6	224	34	66	17	1	230	29	71	25	3
Kansas	252	7	93	58	10	226	29	71	21	#	234	22	78	29	2
Kentucky	238	18	82	34	4	219	41	59	12	#	221	38	62	15	1
Louisiana	240	14	86	37	4	219	40	60	11	#	234	23	77	31	3
Maine	243	14	86	43	6	221	38	62	17	#	‡	‡	‡	‡	‡
Maryland	251	9	91	55	12	223	37	63	17	1	233	24	76	28	3
Massachusetts	257	3	97	65	12	232	25	75	26	2	231	23	77	23	2
Michigan	244	12	88	44	6	216	48	52	12	#	230	28	72	26	2
Minnesota	252	8	92	58	11	222	38	62	16	1	229	28	72	22	2
Mississippi	239	13	87	34	2	217	45	55	9	#	‡	‡	‡	‡	‡
Missouri	245	12	88	45	6	218	43	57	12	1	234	22	78	26	3
Montana	247	9	91	49	6	‡	‡	‡	‡	‡	241	15	85	40	4
Nebraska	244	12	88	45	6	211	56	44	9	1	220	40	60	15	1
Nevada	243	13	87	43	5	219	42	58	16	1	221	39	61	18	1
New Hampshire	250	7	93	53	8	226	33	67	25	#	232	25	75	27	#
New Jersey	255	5	95	63	11	232	22	78	25	2	234	21	79	29	3
New Mexico	242	14	86	43	5	220	39	61	18	#	222	37	63	16	1
New York	251	6	94	56	8	225	31	69	18	1	230	26	74	25	2
North Carolina	251	6	94	56	9	224	32	68	15	1	235	16	84	28	2
North Dakota	248	6	94	49	5	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	250	7	93	53	8	225	33	67	18	1	231	24	76	25	1
Oklahoma	242	12	88	39	4	220	37	63	10	#	227	30	70	22	1
Oregon	241	15	85	40	5	219	41	59	16	1	217	46	54	12	1
Pennsylvania	249	10	90	53	8	222	36	64	18	1	229	30	70	28	3
Rhode Island	242	14	86	41	4	219	41	59	16	1	220	38	62	15	#
South Carolina	248	10	90	50	8	221	36	64	14	1	227	26	74	21	2
South Dakota	245	9	91	46	4	221	37	63	15	2	228	31	69	21	2
Tennessee	240	14	86	36	4	214	50	50	9	#	222	33	67	15	1
Texas	253	5	95	59	9	230	24	76	21	1	236	16	84	30	2
Utah	244	12	88	45	5	‡	‡	‡	‡	‡	220	42	58	16	1
Vermont	247	10	90	50	8	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	251	7	93	53	9	228	27	73	18	1	235	18	82	28	1
Washington	248	10	90	51	8	222	37	63	17	2	225	32	68	19	1
West Virginia	237	18	82	33	3	223	36	64	19	1	‡	‡	‡	‡	‡
Wisconsin	250	8	92	54	8	212	53	47	10	1	229	31	69	27	1
Wyoming	246	9	91	48	5	‡	‡	‡	‡	‡	229	27	73	23	1
Other jurisdictions															
District of Columbia	262	9	91	73	27	209	55	45	8	#	220	43	57	19	1
DoDEA[1]	246	8	92	47	5	227	28	72	17	#	233	20	80	25	1

See notes at end of table.

Table A-9. **Average scale scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by race/ethnicity and state: 2007—Continued**

State/jurisdiction	Asian/Pacific Islander					American Indian/Alaska Native				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**254**	**9**	**91**	**59**	**16**	**229**	**28**	**72**	**26**	**3**
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	237	21	79	37	4	218	43	57	16	2
Arizona	253	9	91	59	15	216	45	55	15	1
Arkansas	236	23	77	41	7	‡	‡	‡	‡	‡
California	251	11	89	56	15	‡	‡	‡	‡	‡
Colorado	247	12	88	53	9	‡	‡	‡	‡	‡
Connecticut	255	8	92	64	17	‡	‡	‡	‡	‡
Delaware	261	1	99	70	17	‡	‡	‡	‡	‡
Florida	255	7	93	59	17	‡	‡	‡	‡	‡
Georgia	255	10	90	63	14	‡	‡	‡	‡	‡
Hawaii	233	24	76	31	4	‡	‡	‡	‡	‡
Idaho	‡	‡	‡	‡	‡	215	45	55	13	2
Illinois	257	5	95	62	17	‡	‡	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Kansas	260	7	93	67	21	‡	‡	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	261	7	93	68	23	‡	‡	‡	‡	‡
Massachusetts	259	5	95	66	21	‡	‡	‡	‡	‡
Michigan	261	4	96	69	23	‡	‡	‡	‡	‡
Minnesota	239	21	79	43	6	234	22	78	28	5
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Montana	‡	‡	‡	‡	‡	222	36	64	16	1
Nebraska	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Nevada	242	15	85	43	4	‡	‡	‡	‡	‡
New Hampshire	258	8	92	64	20	‡	‡	‡	‡	‡
New Jersey	267	2	98	78	26	‡	‡	‡	‡	‡
New Mexico	‡	‡	‡	‡	‡	222	38	62	17	1
New York	260	6	94	69	21	‡	‡	‡	‡	‡
North Carolina	253	9	91	60	14	229	27	73	24	3
North Dakota	‡	‡	‡	‡	‡	224	34	66	17	#
Ohio	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Oklahoma	247	8	92	48	6	234	20	80	29	2
Oregon	249	12	88	53	14	220	39	61	18	2
Pennsylvania	259	5	95	66	18	‡	‡	‡	‡	‡
Rhode Island	244	12	88	41	8	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	‡	‡	‡	‡	‡	218	40	60	13	#
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Texas	263	1	99	70	23	‡	‡	‡	‡	‡
Utah	244	11	89	44	5	‡	‡	‡	‡	‡
Vermont	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	256	4	96	60	15	‡	‡	‡	‡	‡
Washington	250	12	88	54	14	227	32	68	26	4
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	245	16	84	50	8	‡	‡	‡	‡	‡
Wyoming	‡	‡	‡	‡	‡	227	26	74	21	#
Other jurisdictions										
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DoDEA[1]	239	15	85	36	2	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Results are not shown for students whose race/ethnicity was "unclassified." 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), 2007 Mathematics Assessment.

Table A-10. **Average scale scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by gender and state: 2007**

State/jurisdiction	Male					Female				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**240**	**18**	**82**	**41**	**7**	**238**	**19**	**81**	**36**	**4**
Alabama	229	30	70	27	3	228	30	70	25	2
Alaska	238	21	79	38	7	237	21	79	37	5
Arizona	233	26	74	34	5	230	27	73	27	3
Arkansas	238	20	80	38	5	237	19	81	35	4
California	231	30	70	31	5	229	31	69	28	4
Colorado	242	18	82	44	8	239	18	82	38	5
Connecticut	243	16	84	46	9	242	16	84	43	6
Delaware	242	13	87	40	5	241	13	87	40	4
Florida	243	13	87	43	7	241	14	86	38	5
Georgia	236	21	79	33	5	234	22	78	30	3
Hawaii	233	24	76	33	4	236	22	78	34	4
Idaho	242	16	84	42	6	240	15	85	38	5
Illinois	239	21	79	40	7	235	22	78	33	4
Indiana	246	11	89	48	7	244	12	88	45	6
Iowa	244	13	87	46	6	241	14	86	40	5
Kansas	249	11	89	54	10	247	10	90	48	8
Kentucky	237	19	81	33	4	234	22	78	29	3
Louisiana	230	28	72	25	3	230	27	73	24	2
Maine	244	14	86	43	7	241	15	85	40	5
Maryland	242	19	81	43	9	239	21	79	37	6
Massachusetts	254	7	93	60	13	251	7	93	55	9
Michigan	238	20	80	39	6	237	20	80	35	4
Minnesota	249	12	88	54	12	245	13	87	47	7
Mississippi	228	30	70	22	1	227	30	70	20	1
Missouri	240	17	83	40	6	238	19	81	37	4
Montana	245	12	88	47	6	242	13	87	42	4
Nebraska	240	18	82	40	6	236	22	78	35	4
Nevada	233	26	74	33	4	230	27	73	27	2
New Hampshire	250	8	92	54	8	247	10	90	49	7
New Jersey	250	10	90	55	11	247	11	89	49	8
New Mexico	229	29	71	26	2	227	30	70	23	2
New York	244	15	85	45	8	242	15	85	42	5
North Carolina	243	16	84	43	7	241	15	85	39	5
North Dakota	248	8	92	50	6	243	10	90	41	4
Ohio	246	11	89	49	8	243	14	86	43	5
Oklahoma	238	17	83	34	3	236	18	82	31	2
Oregon	238	20	80	38	6	234	23	77	32	3
Pennsylvania	245	15	85	50	9	243	15	85	44	5
Rhode Island	236	20	80	36	4	235	21	79	32	3
South Carolina	236	22	78	36	5	238	19	81	36	5
South Dakota	242	14	86	43	4	240	14	86	38	3
Tennessee	234	23	77	31	4	231	24	76	26	2
Texas	243	13	87	41	6	242	12	88	39	5
Utah	241	16	84	42	5	238	18	82	37	3
Vermont	248	11	89	51	9	245	11	89	47	6
Virginia	245	11	89	44	8	242	14	86	39	5
Washington	244	15	85	46	9	241	16	84	41	6
West Virginia	238	17	83	35	4	235	20	80	30	2
Wisconsin	245	15	85	48	8	243	15	85	46	6
Wyoming	244	12	88	46	5	243	11	89	43	4
Other jurisdictions										
District of Columbia	213	52	48	14	3	214	49	51	13	2
DoDEA[1]	241	13	87	39	4	239	15	85	35	2

[1] Department of Defense Education Activity (overseas and domestic schools).

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), 2007 Mathematics Assessment.

Table A-11. **Average scale scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by eligibility for free/reduced-price school lunch and state: 2007**

State/jurisdiction	Eligible					Not eligible					Information not available				
		Percentage of students					Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**227**	**30**	**70**	**22**	**1**	**249**	**9**	**91**	**53**	**9**	**243**	**17**	**83**	**44**	**8**
Alabama	217	43	57	13	1	242	14	86	41	5	‡	‡	‡	‡	‡
Alaska	225	34	66	23	2	247	11	89	50	9	‡	‡	‡	‡	‡
Arizona	219	40	60	15	1	245	12	88	46	7	255	6	94	64	11
Arkansas	229	27	73	24	1	249	9	91	54	8	‡	‡	‡	‡	‡
California	219	42	58	16	1	243	16	84	46	9	233	28	72	31	4
Colorado	225	33	67	21	2	251	8	92	55	9	‡	‡	‡	‡	‡
Connecticut	222	36	64	16	1	252	7	93	57	10	‡	‡	‡	‡	‡
Delaware	232	21	79	23	1	248	8	92	50	7	‡	‡	‡	‡	‡
Florida	233	21	79	25	2	251	7	93	55	9	‡	‡	‡	‡	‡
Georgia	224	32	68	16	1	247	9	91	49	7	‡	‡	‡	‡	‡
Hawaii	224	33	67	20	2	242	16	84	43	6	‡	‡	‡	‡	‡
Idaho	232	25	75	27	2	248	8	92	50	7	‡	‡	‡	‡	‡
Illinois	223	36	64	17	1	249	10	90	51	9	‡	‡	‡	‡	‡
Indiana	235	20	80	30	2	253	5	95	58	10	‡	‡	‡	‡	‡
Iowa	231	24	76	26	2	249	8	92	52	7	‡	‡	‡	‡	‡
Kansas	237	19	81	34	4	255	5	95	63	12	‡	‡	‡	‡	‡
Kentucky	226	30	70	18	1	245	10	90	46	6	‡	‡	‡	‡	‡
Louisiana	225	33	67	17	1	243	12	88	42	6	‡	‡	‡	‡	‡
Maine	232	23	77	27	2	248	10	90	51	8	‡	‡	‡	‡	‡
Maryland	225	36	64	19	2	248	12	88	51	11	‡	‡	‡	‡	‡
Massachusetts	237	17	83	32	3	258	3	97	67	14	‡	‡	‡	‡	‡
Michigan	224	35	65	20	1	246	11	89	48	7	‡	‡	‡	‡	‡
Minnesota	232	25	75	28	3	253	7	93	60	12	‡	‡	‡	‡	‡
Mississippi	222	38	62	13	#	241	13	87	39	3	240	14	86	40	3
Missouri	228	29	71	22	1	247	10	90	50	8	‡	‡	‡	‡	‡
Montana	234	22	78	30	2	250	6	94	54	7	‡	‡	‡	‡	‡
Nebraska	225	34	66	21	2	246	11	89	49	7	‡	‡	‡	‡	‡
Nevada	221	39	61	16	1	242	15	85	42	5	231	26	74	31	2
New Hampshire	236	18	82	32	2	251	7	93	57	9	‡	‡	‡	‡	‡
New Jersey	233	22	78	26	2	255	6	94	62	12	258	6	94	62	18
New Mexico	221	38	62	16	1	242	14	86	43	5	‡	‡	‡	‡	‡
New York	233	24	76	28	3	252	6	94	58	9	‡	‡	‡	‡	‡
North Carolina	231	24	76	24	2	252	7	93	57	10	238	18	82	40	2
North Dakota	235	18	82	30	2	250	5	95	53	6	‡	‡	‡	‡	‡
Ohio	230	25	75	23	1	253	5	95	59	9	‡	‡	‡	‡	‡
Oklahoma	230	25	75	22	1	245	9	91	46	5	‡	‡	‡	‡	‡
Oregon	226	32	68	21	1	245	12	88	47	7	231	23	77	27	3
Pennsylvania	227	29	71	22	1	253	7	93	61	10	‡	‡	‡	‡	‡
Rhode Island	222	35	65	18	1	245	11	89	45	5	‡	‡	‡	‡	‡
South Carolina	226	30	70	20	1	249	9	91	54	8	‡	‡	‡	‡	‡
South Dakota	230	25	75	25	1	247	8	92	49	5	‡	‡	‡	‡	‡
Tennessee	223	36	64	17	1	242	12	88	40	5	‡	‡	‡	‡	‡
Texas	235	18	82	27	2	252	6	94	56	9	255	5	95	62	12
Utah	229	29	71	25	2	246	11	89	48	6	‡	‡	‡	‡	‡
Vermont	234	20	80	31	2	252	7	93	57	10	‡	‡	‡	‡	‡
Virginia	230	24	76	20	1	250	8	92	52	9	‡	‡	‡	‡	‡
Washington	230	26	74	26	2	251	9	91	56	11	244	14	86	47	9
West Virginia	229	27	73	22	1	244	11	89	43	5	‡	‡	‡	‡	‡
Wisconsin	228	32	68	25	2	252	6	94	58	9	‡	‡	‡	‡	‡
Wyoming	236	18	82	32	2	248	8	92	51	6	‡	‡	‡	‡	‡
Other jurisdictions															
District of Columbia	207	57	43	7	#	228	36	64	27	7	‡	‡	‡	‡	‡
DoDEA[1]	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	240	14	86	37	3

Rounds to zero.
‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.
[1] Department of Defense Education Activity (overseas and domestic schools).
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), 2007 Mathematics Assessment.

Table A-12. **Average scale scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by status as students with disabilities (SD) and state: 2007**

State/jurisdiction	SD					Not SD				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**220**	**40**	**60**	**19**	**2**	**241**	**16**	**84**	**41**	**6**
Alabama	197	69	31	8	1	232	25	75	28	3
Alaska	216	46	54	14	1	241	17	83	42	7
Arizona	209	54	46	13	2	234	24	76	32	4
Arkansas	216	49	51	18	2	240	16	84	39	5
California	205	59	41	14	2	232	28	72	31	5
Colorado	214	48	52	14	2	243	15	85	45	7
Connecticut	216	43	57	13	2	246	13	87	49	8
Delaware	227	32	68	22	2	244	10	90	43	5
Florida	223	37	63	18	1	245	10	90	44	6
Georgia	219	42	58	18	2	237	19	81	33	4
Hawaii	197	68	32	8	1	238	18	82	36	5
Idaho	216	47	53	14	1	243	12	88	43	6
Illinois	221	41	59	22	4	239	19	81	38	6
Indiana	228	28	72	25	2	248	8	92	50	7
Iowa	219	42	58	15	2	246	10	90	47	6
Kansas	226	35	65	23	3	251	8	92	54	9
Kentucky	223	37	63	19	2	237	18	82	33	4
Louisiana	213	52	48	11	1	233	22	78	27	2
Maine	226	32	68	21	2	245	11	89	46	7
Maryland	222	42	58	21	3	242	18	82	42	8
Massachusetts	238	17	83	33	4	255	5	95	61	12
Michigan	217	46	54	16	2	240	17	83	40	5
Minnesota	225	36	64	25	3	250	9	91	54	10
Mississippi	217	46	54	14	1	229	28	72	22	1
Missouri	225	35	65	23	2	241	16	84	40	6
Montana	223	38	62	18	1	246	9	91	47	6
Nebraska	220	40	60	17	2	241	16	84	41	5
Nevada	221	45	55	26	4	233	24	76	31	3
New Hampshire	230	25	75	25	1	252	5	95	57	9
New Jersey	229	30	70	25	3	251	8	92	56	10
New Mexico	208	56	44	9	#	230	27	73	26	2
New York	220	39	61	15	1	246	11	89	48	7
North Carolina	224	37	63	22	2	244	12	88	44	7
North Dakota	232	23	77	24	1	247	7	93	49	5
Ohio	227	29	71	22	2	247	10	90	49	7
Oklahoma	217	46	54	14	1	239	14	86	35	3
Oregon	216	46	54	16	1	239	18	82	38	5
Pennsylvania	223	38	62	26	3	248	11	89	51	8
Rhode Island	216	45	55	15	1	240	15	85	38	4
South Carolina	214	45	55	16	1	240	17	83	39	5
South Dakota	225	34	66	22	2	244	11	89	44	4
Tennessee	219	42	58	19	3	234	22	78	30	3
Texas	228	29	71	23	2	244	11	89	42	5
Utah	215	48	52	16	1	242	14	86	42	5
Vermont	221	39	61	16	1	251	6	94	55	8
Virginia	231	26	74	26	3	245	11	89	44	7
Washington	220	42	58	21	3	246	12	88	47	8
West Virginia	222	39	61	18	1	239	15	85	35	3
Wisconsin	223	37	63	21	2	247	12	88	51	8
Wyoming	224	36	64	19	1	247	8	92	48	5
Other jurisdictions										
District of Columbia	188	80	20	3	1	216	48	52	15	3
DoDEA[1]	218	43	57	13	#	243	11	89	40	3

Rounds to zero.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: The results for students with disabilities are based on students who were assessed and cannot be generalized to the total population of such students. 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), 2007 Mathematics Assessment.

Table A-13. **Average scale scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by status as English language learners (ELL) and state: 2007**

State/jurisdiction	ELL					Not ELL				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**217**	**44**	**56**	**13**	**1**	**242**	**16**	**84**	**42**	**6**
Alabama	213	51	49	11	2	229	29	71	26	3
Alaska	213	49	51	14	1	242	16	84	42	7
Arizona	203	64	36	6	1	237	20	80	35	5
Arkansas	222	35	65	16	#	239	18	82	38	5
California	212	51	49	10	1	239	20	80	40	6
Colorado	212	50	50	9	#	245	13	87	47	7
Connecticut	211	52	48	6	#	245	13	87	47	8
Delaware	226	27	73	14	#	242	13	87	41	5
Florida	223	36	64	16	1	243	12	88	42	6
Georgia	212	49	51	5	#	236	20	80	32	4
Hawaii	213	50	50	14	1	237	20	80	35	5
Idaho	214	51	49	10	#	243	12	88	43	6
Illinois	213	50	50	9	1	239	19	81	39	6
Indiana	233	23	77	26	3	246	10	90	47	7
Iowa	220	41	59	15	#	244	12	88	44	6
Kansas	229	28	72	21	2	250	9	91	54	9
Kentucky	221	38	62	16	1	235	20	80	31	3
Louisiana	‡	‡	‡	‡	‡	230	27	73	24	2
Maine	‡	‡	‡	‡	‡	243	14	86	42	6
Maryland	226	36	64	22	3	241	19	81	41	8
Massachusetts	230	26	74	24	2	254	6	94	60	11
Michigan	234	25	75	32	4	238	20	80	37	5
Minnesota	221	38	62	15	#	249	10	90	54	10
Mississippi	‡	‡	‡	‡	‡	228	30	70	21	1
Missouri	‡	‡	‡	‡	‡	240	18	82	39	5
Montana	215	47	53	6	#	245	11	89	46	5
Nebraska	211	52	48	8	#	240	17	83	40	5
Nevada	209	55	45	7	#	238	18	82	36	3
New Hampshire	229	31	69	25	2	249	8	92	52	8
New Jersey	218	45	55	14	1	250	9	91	53	10
New Mexico	209	55	45	7	#	233	23	77	29	3
New York	219	42	58	12	1	245	13	87	46	7
North Carolina	229	22	78	18	1	243	15	85	43	6
North Dakota	224	37	63	21	1	246	9	91	46	5
Ohio	231	29	71	27	5	245	12	88	46	7
Oklahoma	223	35	65	15	1	238	17	83	33	3
Oregon	210	56	44	7	#	240	17	83	39	5
Pennsylvania	211	53	47	8	2	245	14	86	48	7
Rhode Island	207	56	44	9	1	238	18	82	36	4
South Carolina	230	27	73	28	3	237	20	80	36	5
South Dakota	212	47	53	5	#	242	12	88	42	4
Tennessee	204	58	42	4	#	233	23	77	29	3
Texas	229	26	74	20	1	245	10	90	44	6
Utah	221	41	59	19	1	242	14	86	42	5
Vermont	230	31	69	28	6	247	11	89	50	7
Virginia	234	19	81	25	2	244	12	88	43	7
Washington	214	48	52	11	2	245	13	87	47	8
West Virginia	‡	‡	‡	‡	‡	236	19	81	32	3
Wisconsin	227	33	67	22	2	245	13	87	49	7
Wyoming	221	39	61	17	1	245	11	89	45	5
Other jurisdictions										
District of Columbia	209	58	42	9	1	214	50	50	14	3
DoDEA[1]	224	32	68	12	#	241	13	87	39	3

Rounds to zero.

‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: The results for English language learners are based on students who were assessed and cannot be generalized to the total population of such students. 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), 2007 Mathematics Assessment.

Table A-14. **Percentage of eighth-grade public school students at or above *Basic* in NAEP mathematics, by state: Various years, 1990–2007**

State/jurisdiction	Accommodations not permitted				Accommodations permitted			
	1990	1992	1996	2000	2000	2003	2005	2007
Nation (public)[1]	**51***	**56***	**61***	**65***	**62***	**67***	**68***	**70**
Alabama	40*	39*	45*	52	53	53	53	55
Alaska	—	—	68	—	—	70	69*	73
Arizona	48*	55*	57*	62	60*	61*	64	66
Arkansas	44*	44*	52*	52*	49*	58*	64	65
California	45*	50*	51*	52*	50*	56*	57	59
Colorado	57*	64*	67*	—	—	74	70*	75
Connecticut	60*	64*	70	72	70	73	70	73
Delaware	48*	52*	55*	—	—	68*	72	74
Florida	43*	49*	54*	—	—	62*	65	68
Georgia	47*	48*	51*	55*	54*	59*	62	64
Hawaii	40*	46*	51*	52*	51*	56*	56*	59
Idaho	63*	68*	—	71	70*	73	73	75
Illinois	50*	—	—	68	67	66	68	70
Indiana	56*	60*	68*	76	74	74	74	76
Iowa	70*	76	78	—	—	76	75	77
Kansas	—	—	—	77	76*	76*	77*	81
Kentucky	43*	51*	56*	63*	60*	65	64*	69
Louisiana	32*	37*	38*	48*	47*	57*	59	64
Maine	—	72*	77	76	73*	75*	74*	78
Maryland	50*	54*	57*	65*	62*	67*	66*	74
Massachusetts	—	63*	68*	76*	70*	76*	80*	85
Michigan	53*	58*	67	70	68	68	68	66
Minnesota	67*	74*	75*	80	80	82	79	81
Mississippi	—	33*	36*	41*	42*	47*	52	54
Missouri	—	62*	64*	67*	64*	71	68	72
Montana	74*	—	75	80	79	79	80	79
Nebraska	68*	70*	76	74	73	74	75	74
Nevada	—	—	—	58	55*	59	60	60
New Hampshire	65*	71*	—	—	—	79	77	78
New Jersey	58*	62*	—	—	—	72*	74	77
New Mexico	43*	48*	51*	50*	48*	52*	53	57
New York	50*	57*	61*	68	63*	70	70	70
North Carolina	38*	47*	56*	70	67*	72	72	73
North Dakota	75*	78*	77*	77*	76*	81*	81*	86
Ohio	53*	59*	—	75	73	74	74	76
Oklahoma	52*	59*	—	64	62	65	63	66
Oregon	62*	—	67*	71	71	70	72	73
Pennsylvania	56*	62*	—	—	—	69*	72*	77
Rhode Island	49*	56*	60*	64	59*	63	63	65
South Carolina	—	48*	48*	55*	53*	68	71	71
South Dakota	—	—	—	—	—	78	80	81
Tennessee	—	47*	53*	53*	52*	59	61	64
Texas	45*	53*	59*	68*	67*	69*	72*	78
Utah	—	67*	70	68*	66*	72	71	72
Vermont	—	—	72*	75*	73*	77*	78*	81
Virginia	52*	57*	58*	67*	65*	72*	75	77
Washington	—	—	67*	—	—	72	75	75
West Virginia	42*	47*	54*	62	58	63	60	61
Wisconsin	66*	71*	75	—	—	75	76	76
Wyoming	64*	67*	68*	70*	69*	77*	76*	80
Other jurisdictions								
District of Columbia	17*	22*	20*	23*	23*	29*	31	34
DoDEA[2]	—	—	64*	70*	68*	79	76	78

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Table A-15. **Percentage of eighth-grade public school students at or above *Proficient* in NAEP mathematics, by state: Various years, 1990–2007**

State/jurisdiction	Accommodations not permitted				Accommodations permitted			
	1990	1992	1996	2000	2000	2003	2005	2007
Nation (public)[1]	**15***	**20***	**23***	**26***	**25***	**27***	**28***	**31**
Alabama	9*	10*	12*	16	16	16	15	18
Alaska	—	—	30	—	—	30	29	32
Arizona	13*	15*	18*	21*	20*	21*	26	26
Arkansas	9*	10*	13*	14*	13*	19*	22	24
California	12*	16*	17*	18*	17*	22	22*	24
Colorado	17*	22*	25*	—	—	34	32*	37
Connecticut	22*	26*	31	34	33	35	35	35
Delaware	14*	15*	19*	—	—	26*	30	31
Florida	12*	15*	17*	—	—	23*	26	27
Georgia	14*	13*	16*	19*	19*	22*	23	25
Hawaii	12*	14*	16*	16*	16*	17*	18*	21
Idaho	18*	22*	—	27*	26*	28*	30*	34
Illinois	15*	—	—	27	26*	29	29	31
Indiana	17*	20*	24*	31	29*	31*	30*	35
Iowa	25*	31*	31	—	—	33	34	35
Kansas	—	—	—	34*	34*	34*	34*	40
Kentucky	10*	14*	16*	21*	20*	24*	23*	27
Louisiana	5*	7*	7*	12*	11*	17	16	19
Maine	—	25*	31	32	30	29*	30*	34
Maryland	17*	20*	24*	29*	27*	30*	30*	37
Massachusetts	—	23*	28*	32*	30*	38*	43*	51
Michigan	16*	19*	28	28	28	28	29	29
Minnesota	23*	31*	34*	40	39	44	43	43
Mississippi	—	6*	7*	8*	9*	12	14	14
Missouri	—	20*	22*	22*	21*	28	26*	30
Montana	27*	—	32*	37	36	35	36	38
Nebraska	24*	26*	31	31	30*	32	35	35
Nevada	—	—	—	20*	18*	20*	21	23
New Hampshire	20*	25*	—	—	—	35	35	38
New Jersey	21*	24*	—	—	—	33*	36*	40
New Mexico	10*	11*	14	13*	12*	15	14*	17
New York	15*	20*	22*	26	24*	32	31	30
North Carolina	9*	12*	20*	30*	27*	32	32	34
North Dakota	27*	29*	33*	31*	30*	36*	35*	41
Ohio	15*	18*	—	31*	30*	30*	33	35
Oklahoma	13*	17*	—	19	18	20	21	21
Oregon	21*	—	26*	32	31	32	34	35
Pennsylvania	17*	21*	—	—	—	30*	31*	38
Rhode Island	15*	16*	20*	24*	22*	24*	24*	28
South Carolina	—	15*	14*	18*	17*	26*	30	32
South Dakota	—	—	—	—	—	35*	36	39
Tennessee	—	12*	15*	17*	16*	21	21	23
Texas	13*	18*	21*	24*	24*	25*	31*	35
Utah	—	22*	24*	26*	25*	31	30	32
Vermont	—	—	27*	32*	31*	35*	38*	41
Virginia	17*	19*	21*	26*	25*	31*	33	37
Washington	—	—	26*	—	—	32*	36	36
West Virginia	9*	10*	14*	18	17	20	18	19
Wisconsin	23*	27*	32*	—	—	35	36	37
Wyoming	19*	21*	22*	25*	23*	32	29*	36
Other jurisdictions								
District of Columbia	3*	4*	5*	6*	6*	6*	7	8
DoDEA[2]	—	—	22*	27*	26*	33	33	33

— Not available. The jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

* Significantly different ($p < .05$) from 2007 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 Education Activity (overseas and domestic schools). Before 2005, DoDEA overseas and domestic schools were separate jurisdictions in NAEP. Pre-2005 data presented here were recalculated for comparability.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics Assessments.

Table A-16. **Average scale scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by race/ethnicity and state: 2007**

State/jurisdiction	White					Black					Hispanic				
		Percentage of students					Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**290**	**19**	**81**	**41**	**9**	**259**	**53**	**47**	**11**	**1**	**264**	**46**	**54**	**15**	**2**
Alabama	278	30	70	27	4	246	69	31	4	#	249	63	37	3	#
Alaska	294	14	86	44	10	271	37	63	15	3	274	34	66	23	2
Arizona	289	19	81	40	8	266	42	58	15	2	262	48	52	12	1
Arkansas	282	26	74	31	5	254	58	42	9	1	256	54	46	8	#
California	287	22	78	39	8	253	62	38	10	1	256	56	44	10	1
Colorado	296	15	85	48	13	272	40	60	21	4	264	47	53	13	2
Connecticut	293	17	83	44	11	255	56	44	7	#	254	56	44	10	1
Delaware	294	14	86	43	9	265	44	56	10	1	267	42	58	17	1
Florida	289	20	80	37	8	259	52	48	11	1	270	39	61	21	3
Georgia	288	20	80	37	6	261	52	48	11	1	266	45	55	16	2
Hawaii	278	28	72	28	5	‡	‡	‡	‡	‡	264	47	53	15	1
Idaho	287	21	79	38	7	‡	‡	‡	‡	‡	264	47	53	16	2
Illinois	291	19	81	41	9	253	59	41	7	#	265	45	55	13	1
Indiana	290	18	82	40	9	259	53	47	9	#	267	45	55	20	2
Iowa	288	19	81	38	7	257	60	40	11	3	261	50	50	13	1
Kansas	295	13	87	46	10	267	43	57	16	2	269	42	58	16	2
Kentucky	282	27	73	29	5	257	58	42	11	1	‡	‡	‡	‡	‡
Louisiana	283	21	79	28	3	258	56	44	7	1	‡	‡	‡	‡	‡
Maine	287	21	79	35	7	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	300	12	88	53	15	265	47	53	13	1	272	36	64	21	3
Massachusetts	305	9	91	58	17	264	46	54	13	1	270	41	59	19	5
Michigan	285	24	76	35	8	244	72	28	5	#	259	56	44	11	#
Minnesota	297	14	86	48	13	260	52	48	14	1	269	44	56	18	2
Mississippi	279	26	74	24	3	251	65	35	4	#	‡	‡	‡	‡	‡
Missouri	288	19	81	36	7	253	62	38	6	#	270	38	62	17	1
Montana	291	17	83	41	8	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Nebraska	291	18	82	41	9	240	72	28	5	1	261	50	50	11	2
Nevada	282	27	73	32	5	255	56	44	12	1	257	56	44	11	1
New Hampshire	289	21	79	39	8	‡	‡	‡	‡	‡	264	46	54	14	2
New Jersey	298	13	87	51	14	264	45	55	14	1	271	37	63	20	2
New Mexico	285	23	77	33	6	264	48	52	12	2	260	52	48	10	1
New York	290	18	82	39	8	258	54	46	10	1	264	46	54	15	2
North Carolina	295	15	85	46	12	266	47	53	14	1	273	39	61	23	4
North Dakota	295	11	89	44	7	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	291	17	83	42	8	258	53	47	9	#	276	37	63	25	5
Oklahoma	280	26	74	25	4	258	57	43	9	1	259	54	46	8	#
Oregon	289	22	78	39	10	272	41	59	28	3	261	50	50	14	1
Pennsylvania	293	16	84	44	9	257	55	45	13	1	264	45	55	17	3
Rhode Island	284	25	75	35	6	250	61	39	9	#	251	61	39	7	1
South Carolina	293	17	83	44	11	265	45	55	15	1	272	38	62	23	5
South Dakota	292	15	85	43	8	‡	‡	‡	‡	‡	269	43	57	18	5
Tennessee	282	25	75	30	5	254	62	38	7	1	264	49	51	13	2
Texas	300	10	90	53	13	271	36	64	16	1	277	30	70	23	3
Utah	286	22	78	36	7	‡	‡	‡	‡	‡	256	56	44	12	1
Vermont	292	18	82	42	10	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	296	14	86	47	12	268	44	56	15	1	275	36	64	24	5
Washington	291	19	81	42	10	264	44	56	16	4	263	46	54	13	2
West Virginia	271	37	63	19	2	250	69	31	4	#	‡	‡	‡	‡	‡
Wisconsin	292	17	83	42	9	247	70	30	6	#	268	41	59	18	2
Wyoming	290	17	83	39	7	‡	‡	‡	‡	‡	274	36	64	22	3
Other jurisdictions															
District of Columbia	‡	‡	‡	‡	‡	245	69	31	6	#	251	62	38	9	1
DoDEA[1]	291	16	84	40	7	272	36	64	15	2	282	26	74	28	4

See notes at end of table.

Table A-16. **Average scale scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by race/ethnicity and state: 2007—Continued**

State/jurisdiction	Asian/Pacific Islander					American Indian/Alaska Native				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**296**	**18**	**82**	**49**	**17**	**265**	**44**	**56**	**17**	**2**
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	282	29	71	33	6	260	51	49	12	2
Arizona	303	11	89	52	22	258	50	50	12	1
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
California	293	21	79	46	14	263	50	50	17	3
Colorado	297	18	82	48	17	‡	‡	‡	‡	‡
Connecticut	307	8	92	61	24	‡	‡	‡	‡	‡
Delaware	309	11	89	65	26	‡	‡	‡	‡	‡
Florida	293	20	80	48	14	‡	‡	‡	‡	‡
Georgia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Hawaii	268	42	58	20	3	‡	‡	‡	‡	‡
Idaho	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Illinois	303	13	87	55	23	‡	‡	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Kansas	302	14	86	52	23	‡	‡	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	313	8	92	66	30	‡	‡	‡	‡	‡
Massachusetts	315	6	94	74	28	‡	‡	‡	‡	‡
Michigan	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Minnesota	283	28	72	34	8	266	43	57	19	2
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Montana	‡	‡	‡	‡	‡	260	50	50	15	2
Nebraska	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Nevada	285	24	76	36	7	‡	‡	‡	‡	‡
New Hampshire	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
New Jersey	314	7	93	69	30	‡	‡	‡	‡	‡
New Mexico	‡	‡	‡	‡	‡	253	60	40	7	1
New York	302	14	86	53	23	‡	‡	‡	‡	‡
North Carolina	299	15	85	50	18	261	49	51	17	1
North Dakota	‡	‡	‡	‡	‡	264	44	56	14	1
Ohio	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Oklahoma	‡	‡	‡	‡	‡	269	40	60	17	2
Oregon	299	18	82	53	17	264	51	49	16	3
Pennsylvania	314	9	91	66	36	‡	‡	‡	‡	‡
Rhode Island	282	29	71	31	8	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	‡	‡	‡	‡	‡	261	46	54	14	1
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Texas	309	8	92	67	21	‡	‡	‡	‡	‡
Utah	277	32	68	32	5	‡	‡	‡	‡	‡
Vermont	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	299	16	84	53	18	‡	‡	‡	‡	‡
Washington	289	24	76	41	14	265	45	55	18	3
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	290	23	77	40	12	‡	‡	‡	‡	‡
Wyoming	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Other jurisdictions										
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DoDEA[1]	284	23	77	34	5	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Results are not shown for students whose race/ethnicity was "unclassified." 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), 2007 Mathematics Assessment.

Table A-17. **Average scale scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by gender and state: 2007**

State/jurisdiction	Male					Female				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**281**	**29**	**71**	**33**	**8**	**279**	**30**	**70**	**29**	**6**
Alabama	267	44	56	21	3	265	45	55	15	2
Alaska	282	27	73	33	8	283	27	73	32	6
Arizona	277	32	68	30	6	274	35	65	23	4
Arkansas	274	37	63	26	5	274	34	66	22	3
California	270	41	59	25	6	270	40	60	23	4
Colorado	287	25	75	38	10	286	25	75	37	9
Connecticut	282	29	71	35	9	283	25	75	34	8
Delaware	285	24	76	34	8	281	27	73	29	5
Florida	278	32	68	29	6	277	32	68	26	5
Georgia	275	36	64	26	5	274	36	64	23	4
Hawaii	267	42	58	20	4	270	39	61	22	2
Idaho	285	24	76	36	7	282	26	74	32	5
Illinois	282	29	71	33	8	279	31	69	29	6
Indiana	286	24	76	37	9	284	25	75	33	6
Iowa	287	21	79	37	8	284	24	76	33	6
Kansas	291	19	81	41	10	289	18	82	39	7
Kentucky	280	30	70	30	6	277	32	68	24	4
Louisiana	273	36	64	20	3	272	37	63	18	2
Maine	288	21	79	37	7	285	23	77	32	7
Maryland	287	25	75	38	12	284	27	73	35	9
Massachusetts	300	14	86	53	17	296	16	84	48	13
Michigan	278	32	68	30	7	275	35	65	27	5
Minnesota	292	19	81	44	12	292	19	81	43	11
Mississippi	266	44	56	16	2	264	48	52	12	1
Missouri	282	27	73	32	7	279	28	72	28	4
Montana	287	22	78	39	8	287	20	80	36	7
Nebraska	285	24	76	37	8	282	27	73	32	7
Nevada	271	39	61	24	4	270	41	59	22	3
New Hampshire	288	22	78	38	8	287	23	77	38	7
New Jersey	290	23	77	43	12	288	22	78	38	9
New Mexico	268	43	57	19	3	267	44	56	16	2
New York	281	30	70	31	8	280	29	71	29	6
North Carolina	285	26	74	36	9	283	28	72	33	7
North Dakota	293	14	86	43	8	290	15	85	39	6
Ohio	286	23	77	38	8	283	24	76	33	5
Oklahoma	277	32	68	24	4	273	35	65	18	2
Oregon	285	27	73	37	10	283	27	73	33	7
Pennsylvania	289	21	79	42	10	283	25	75	35	6
Rhode Island	276	34	66	29	6	275	35	65	27	4
South Carolina	281	29	71	33	8	282	29	71	31	7
South Dakota	290	19	81	41	8	287	19	81	37	5
Tennessee	277	34	66	26	5	271	38	62	20	3
Texas	287	22	78	37	8	285	23	77	32	6
Utah	282	27	73	34	7	280	29	71	30	5
Vermont	292	19	81	43	12	290	19	81	40	9
Virginia	289	22	78	40	10	286	24	76	34	8
Washington	285	26	74	37	10	285	24	76	35	8
West Virginia	271	38	62	21	3	269	40	60	16	2
Wisconsin	287	24	76	40	10	284	24	76	34	6
Wyoming	288	20	80	37	7	286	20	80	34	6
Other jurisdictions										
District of Columbia	248	66	34	8	1	248	66	34	8	1
DoDEA[1]	285	23	77	34	6	285	22	78	32	4

[1] Department of Defense Education Activity (overseas and domestic schools).

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), 2007 Mathematics Assessment.

Table A-18. **Average scale scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by eligibility for free/reduced-price school lunch and state: 2007**

State/jurisdiction	Eligible					Not eligible					Information not available				
		Percentage of students					Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**265**	**45**	**55**	**15**	**2**	**291**	**19**	**81**	**42**	**10**	**274**	**36**	**64**	**28**	**6**
Alabama	250	63	37	6	#	281	27	73	30	5	‡	‡	‡	‡	‡
Alaska	266	45	55	17	3	292	16	84	41	10	‡	‡	‡	‡	‡
Arizona	262	48	52	13	1	286	23	77	36	8	294	18	82	48	8
Arkansas	263	46	54	14	2	285	23	77	35	6	‡	‡	‡	‡	‡
California	257	54	46	12	1	283	28	72	36	9	266	43	57	24	5
Colorado	267	42	58	17	2	296	16	84	48	14	‡	‡	‡	‡	‡
Connecticut	256	53	47	10	1	292	18	82	44	11	‡	‡	‡	‡	‡
Delaware	270	39	61	16	2	290	19	81	39	9	‡	‡	‡	‡	‡
Florida	265	45	55	16	1	287	22	78	37	9	‡	‡	‡	‡	‡
Georgia	262	51	49	12	1	287	22	78	36	7	‡	‡	‡	‡	‡
Hawaii	258	52	48	13	1	276	33	67	27	4	‡	‡	‡	‡	‡
Idaho	273	36	64	22	3	290	19	81	41	8	‡	‡	‡	‡	‡
Illinois	262	49	51	13	2	292	17	83	42	10	‡	‡	‡	‡	‡
Indiana	271	39	61	20	3	293	16	84	43	10	‡	‡	‡	‡	‡
Iowa	270	39	61	20	3	292	16	84	42	9	‡	‡	‡	‡	‡
Kansas	275	33	67	23	3	299	11	89	50	12	‡	‡	‡	‡	‡
Kentucky	267	43	57	15	1	288	21	79	37	8	‡	‡	‡	‡	‡
Louisiana	264	47	53	11	1	284	21	79	30	4	‡	‡	‡	‡	‡
Maine	275	33	67	21	3	292	16	84	40	9	‡	‡	‡	‡	‡
Maryland	268	43	57	15	3	293	20	80	45	13	‡	‡	‡	‡	‡
Massachusetts	275	35	65	25	4	306	8	92	60	19	‡	‡	‡	‡	‡
Michigan	259	53	47	14	1	285	24	76	36	8	‡	‡	‡	‡	‡
Minnesota	273	36	64	22	3	298	13	87	50	14	‡	‡	‡	‡	‡
Mississippi	257	57	43	7	#	280	25	75	26	3	‡	‡	‡	‡	‡
Missouri	266	45	55	16	2	290	16	84	39	8	‡	‡	‡	‡	‡
Montana	272	36	64	22	2	295	13	87	46	10	‡	‡	‡	‡	‡
Nebraska	265	45	55	17	2	293	16	84	43	10	‡	‡	‡	‡	‡
Nevada	259	53	47	13	2	279	31	69	30	5	265	44	56	16	1
New Hampshire	271	40	60	18	3	291	19	81	42	9	291	19	81	38	11
New Jersey	266	43	57	17	2	297	14	86	50	14	‡	‡	‡	‡	‡
New Mexico	258	55	45	9	1	282	27	73	30	6	‡	‡	‡	‡	‡
New York	268	43	57	19	4	292	16	84	42	9	‡	‡	‡	‡	‡
North Carolina	268	42	58	17	2	296	15	85	48	13	‡	‡	‡	‡	‡
North Dakota	280	27	73	29	4	296	10	90	45	8	‡	‡	‡	‡	‡
Ohio	268	40	60	16	1	293	16	84	44	9	‡	‡	‡	‡	‡
Oklahoma	264	46	54	13	1	285	21	79	30	6	‡	‡	‡	‡	‡
Oregon	270	41	59	20	3	294	17	83	45	13	275	35	65	26	4
Pennsylvania	267	41	59	19	2	294	16	84	46	10	‡	‡	‡	‡	‡
Rhode Island	257	55	45	10	1	285	24	76	36	7	‡	‡	‡	‡	‡
South Carolina	269	41	59	18	2	294	17	83	45	12	‡	‡	‡	‡	‡
South Dakota	275	31	69	24	3	294	13	87	46	9	‡	‡	‡	‡	‡
Tennessee	262	50	50	12	1	284	24	76	32	6	‡	‡	‡	‡	‡
Texas	275	32	68	21	2	297	12	88	49	12	‡	‡	‡	‡	‡
Utah	267	42	58	19	3	287	22	78	38	7	‡	‡	‡	‡	‡
Vermont	277	31	69	24	3	296	14	86	48	13	‡	‡	‡	‡	‡
Virginia	268	43	57	15	2	295	16	84	46	12	‡	‡	‡	‡	‡
Washington	268	41	59	19	3	294	17	83	45	12	‡	‡	‡	‡	‡
West Virginia	260	51	49	10	1	279	27	73	26	4	‡	‡	‡	‡	‡
Wisconsin	266	44	56	18	2	293	16	84	45	11	‡	‡	‡	‡	‡
Wyoming	275	33	67	23	3	291	15	85	41	8	‡	‡	‡	‡	‡
Other jurisdictions															
District of Columbia	243	72	28	4	#	259	55	45	15	2	‡	‡	‡	‡	‡
DoDEA[1]	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	285	22	78	33	5

Rounds to zero.

‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Education Activity (overseas and domestic schools).

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), 2007 Mathematics Assessment.

Table A-19. **Average scale scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by status as students with disabilities (SD) and state: 2007**

State/jurisdiction	SD					Not SD				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**246**	**67**	**33**	**8**	**1**	**284**	**26**	**74**	**33**	**7**
Alabama	220	91	9	1	#	271	40	60	20	3
Alaska	245	71	29	7	1	286	23	77	35	8
Arizona	237	73	27	4	#	279	30	70	28	5
Arkansas	233	82	18	3	1	279	30	70	27	4
California	228	81	19	5	1	274	38	62	25	5
Colorado	254	60	40	11	3	289	21	79	40	10
Connecticut	245	63	37	9	1	287	22	78	38	9
Delaware	258	56	44	12	2	285	23	77	33	7
Florida	246	66	34	8	1	281	27	73	30	6
Georgia	246	66	34	6	1	276	34	66	26	4
Hawaii	224	85	15	2	#	275	35	65	24	3
Idaho	245	71	29	5	1	287	21	79	37	7
Illinois	246	68	32	7	#	284	26	74	33	8
Indiana	254	60	40	11	1	289	20	80	38	8
Iowa	247	67	33	6	1	291	16	84	40	8
Kansas	257	57	43	9	2	293	15	85	43	9
Kentucky	249	65	35	7	#	281	28	72	29	5
Louisiana	242	73	27	4	#	276	32	68	21	2
Maine	259	54	46	11	1	290	17	83	37	8
Maryland	262	51	49	16	4	287	25	75	38	10
Massachusetts	271	38	62	18	2	301	13	87	54	16
Michigan	238	76	24	4	#	281	29	71	32	7
Minnesota	256	58	42	11	1	296	15	85	47	13
Mississippi	230	86	14	#	#	268	43	57	15	2
Missouri	249	64	36	7	1	284	24	76	32	6
Montana	248	67	33	5	1	292	16	84	41	8
Nebraska	248	64	36	8	1	288	21	79	38	8
Nevada	240	72	28	9	2	274	37	63	24	4
New Hampshire	258	56	44	9	1	293	16	84	44	9
New Jersey	251	62	38	9	1	294	17	83	45	12
New Mexico	240	77	23	6	1	271	40	60	19	3
New York	249	64	36	6	#	284	25	75	33	7
North Carolina	257	57	43	14	2	287	23	77	37	9
North Dakota	263	46	54	9	1	294	12	88	44	7
Ohio	250	63	37	7	1	288	20	80	38	7
Oklahoma	242	75	25	3	#	277	31	69	23	3
Oregon	251	63	37	9	2	287	23	77	37	9
Pennsylvania	254	56	44	14	2	291	19	81	42	9
Rhode Island	243	71	29	5	#	281	28	72	32	6
South Carolina	245	68	32	7	#	285	26	74	34	8
South Dakota	251	62	38	8	1	292	15	85	42	7
Tennessee	246	68	32	15	2	276	34	66	24	4
Texas	250	64	36	8	1	288	19	81	37	7
Utah	234	79	21	3	1	285	24	76	35	7
Vermont	261	52	48	12	2	296	13	87	47	12
Virginia	260	55	45	13	2	290	20	80	40	10
Washington	240	72	28	7	1	289	21	79	38	10
West Virginia	237	79	21	4	#	276	32	68	21	3
Wisconsin	249	63	37	8	#	290	19	81	40	9
Wyoming	252	65	35	6	#	292	14	86	40	7
Other jurisdictions										
District of Columbia	211	93	7	1	#	252	63	37	9	1
DoDEA[1]	252	65	35	6	2	288	19	81	35	5

Rounds to zero.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: The results for students with disabilities are based on students who were assessed and cannot be generalized to the total population of such students. 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), 2007 Mathematics Assessment.

Table A-20. **Average scale scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by status as English language learners (ELL) and state: 2007**

State/jurisdiction	ELL					Not ELL				
		Percentage of students					Percentage of students			
	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*	Average scale score	Below *Basic*	At or above *Basic*	At or above *Proficient*	*At Advanced*
Nation (public)	**245**	**70**	**30**	**6**	**1**	**282**	**27**	**73**	**33**	**7**
Alabama	‡	‡	‡	‡	‡	266	44	56	18	2
Alaska	254	59	41	8	1	288	21	79	37	8
Arizona	238	76	24	4	1	279	29	71	29	5
Arkansas	247	69	31	4	1	275	34	66	25	4
California	241	74	26	5	1	278	32	68	29	6
Colorado	244	72	28	3	1	289	22	78	40	10
Connecticut	227	87	13	1	#	285	25	75	36	9
Delaware	‡	‡	‡	‡	‡	284	25	75	32	7
Florida	243	72	28	6	1	279	30	70	28	6
Georgia	237	80	20	1	#	276	35	65	25	4
Hawaii	233	82	18	3	1	271	38	62	22	3
Idaho	247	70	30	7	#	286	23	77	36	7
Illinois	257	56	44	12	3	281	29	71	31	7
Indiana	261	55	45	17	4	286	23	77	36	8
Iowa	253	59	41	7	1	286	22	78	36	7
Kansas	255	58	42	8	#	292	17	83	42	9
Kentucky	‡	‡	‡	‡	‡	279	31	69	28	5
Louisiana	‡	‡	‡	‡	‡	272	36	64	19	2
Maine	‡	‡	‡	‡	‡	287	21	79	34	7
Maryland	‡	‡	‡	‡	‡	286	26	74	37	10
Massachusetts	251	67	33	16	3	299	13	87	52	15
Michigan	‡	‡	‡	‡	‡	277	33	67	29	6
Minnesota	258	54	46	12	1	293	17	83	45	12
Mississippi	‡	‡	‡	‡	‡	265	46	54	14	2
Missouri	‡	‡	‡	‡	‡	281	27	73	30	5
Montana	237	75	25	1	#	289	18	82	39	8
Nebraska	241	77	23	1	#	285	24	76	35	8
Nevada	238	77	23	5	#	274	36	64	25	4
New Hampshire	‡	‡	‡	‡	‡	288	22	78	38	8
New Jersey	257	55	45	11	#	290	21	79	41	11
New Mexico	242	75	25	3	#	272	38	62	20	3
New York	236	77	23	2	#	282	28	72	31	7
North Carolina	259	58	42	12	1	285	26	74	35	8
North Dakota	‡	‡	‡	‡	‡	292	14	86	42	7
Ohio	261	51	49	17	2	285	23	77	36	7
Oklahoma	255	59	41	6	2	275	33	67	22	3
Oregon	248	68	32	6	#	287	23	77	37	9
Pennsylvania	‡	‡	‡	‡	‡	287	22	78	39	8
Rhode Island	‡	‡	‡	‡	‡	277	33	67	28	5
South Carolina	‡	‡	‡	‡	‡	282	29	71	32	8
South Dakota	‡	‡	‡	‡	‡	289	18	82	39	7
Tennessee	‡	‡	‡	‡	‡	274	36	64	23	4
Texas	252	64	36	5	#	288	20	80	37	7
Utah	252	59	41	11	1	284	25	75	34	6
Vermont	‡	‡	‡	‡	‡	291	19	81	42	10
Virginia	263	48	52	15	4	288	22	78	38	9
Washington	243	71	29	5	1	287	23	77	38	10
West Virginia	‡	‡	‡	‡	‡	270	39	61	18	2
Wisconsin	260	53	47	12	3	287	23	77	38	8
Wyoming	‡	‡	‡	‡	‡	288	19	81	37	7
Other jurisdictions										
District of Columbia	226	85	15	2	#	249	65	35	8	1
DoDEA[1]	‡	‡	‡	‡	‡	286	21	79	34	5

Rounds to zero.

‡ Reporting standards not met. Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Education Activity (overseas and domestic schools).

NOTE: The results for English language learners are based on students who were assessed and cannot be generalized to the total population of such students. 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), 2007 Mathematics Assessment.

U.S. DEPARTMENT OF EDUCATION

The National Assessment of Educational Progress (NAEP) is a congressionally authorized project sponsored by the U.S. Department of Education. The National Center for Education Statistics, a department within the Institute of Education Sciences, administers NAEP. The Commissioner of Education Statistics is responsible by law for carrying out the NAEP project.

Margaret Spellings
Secretary
U.S. Department of Education

Grover J. Whitehurst
Director
Institute of Education Sciences

Mark Schneider
Commissioner
National Center for Education Statistics

THE NATIONAL ASSESSMENT GOVERNING BOARD

In 1988, Congress created the National Assessment Governing Board to set policy for the National Assessment of Educational Progress, commonly known as The Nation's Report Card ™. The Governing Board is an independent, bipartisan group whose members include governors, state legislators, local and state school officials, educators, business representatives, and members of the general public.

Darvin M. Winick, Chair
President
Winick & Associates
Austin, Texas

Amanda P. Avallone, Vice Chair
Assistant Principal and Eighth-Grade Teacher
Summit Middle School
Boulder, Colorado

Francie Alexander
Chief Academic Officer, Scholastic, Inc.
Senior Vice President, Scholastic Education
New York, New York

David J. Alukonis
Chairman
Hudson School Board
Hudson, New Hampshire

Barbara Byrd-Bennett
Executive Superintendent-in-Residence
Cleveland State University
Cleveland, Ohio

Gregory Cizek
Professor of Educational Measurement
University of North Carolina
Chapel Hill, North Carolina

Shirley V. Dickson
Educational Consultant
Aliso Viejo, California

Honorable David P. Driscoll
Former Commissioner of Education
Massachusetts Department of Education
Malden, Massachusetts

John Q. Easton
Executive Director
Consortium on Chicago School Research
University of Chicago
Chicago, Illinois

Alan J. Friedman
Consultant
Museum Development and Science Communication
New York, New York

David W. Gordon
County Superintendent of Schools
Sacramento County Office of Education
Sacramento, California

Robin C. Hall
Principal
Beecher Hills Elementary School
Atlanta, Georgia

Kathi M. King
Twelfth-Grade Teacher
Messalonskee High School
Oakland, Maine

Honorable Keith King
Former Member
Colorado House of Representatives
Denver, Colorado

Kim Kozbial-Hess
Fourth-Grade Teacher
Hawkins Elementary School
Toledo, Ohio

James S. Lanich
President
California Business for Education Excellence
Sacramento, California

Honorable Cynthia L. Nava
Senator
New Mexico State Senate
Las Cruces, New Mexico

Andrew C. Porter
Dean
Graduate School of Education
University of Pennsylvania
Philadelphia, Pennsylvania

Luis A. Ramos
Community Relations Manager
PPL Susquehanna
Berwick, Pennsylvania

Mary Frances Taymans, SND
Executive Director
Secondary Schools Department
National Catholic Educational Association
Washington, D.C.

Oscar A. Troncoso
Principal
Anthony High School
Anthony, Texas

Honorable Michael E. Ward
Former North Carolina Superintendent of Public Instruction
Hattiesburg, Mississippi

Eileen L. Weiser
Former Member, State Board of Education
Michigan Department of Education
Lansing, Michigan

Grover J. Whitehurst (Ex officio)
Director
Institute of Education Sciences
U.S. Department of Education
Washington, D.C.

Charles E. Smith
Executive Director
National Assessment Governing Board
Washington, D.C.

THE NATION'S REPORT CARD

Mathematics 2007

September 2007

MORE INFORMATION

The report release site is http://nationsreportcard.gov. The NCES web electronic catalog is http://nces.ed.gov/pubsearch.

For ordering information, write to
U.S. Department of Education
ED Pubs
P.O. Box 1398
Jessup, MD 20794-1398

or call toll free 1-877-4ED-Pubs

or order online at http://www.edpubs.org.

SUGGESTED CITATION

Lee, J., Grigg, W., and Dion, G. (2007). *The Nation's Report Card: Mathematics 2007* (NCES 2007–494). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

CONTENT CONTACT

Emmanuel Sikali
202-502-7419
Emmanual.Sikali@ed.gov

"THE DEPARTMENT OF EDUCATION'S MISSION IS TO PROMOTE STUDENT ACHIEVEMENT AND PREPARATION FOR GLOBAL COMPETITIVENESS BY FOSTERING EDUCATIONAL EXCELLENCE AND ENSURING EQUAL ACCESS."

www.ed.gov