



The   
Nation's  
Report Card

# Mathematics 2011

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS AT GRADES 4 AND 8

 **NATIONAL CENTER FOR  
EDUCATION STATISTICS**  
Institute of Education Sciences

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## 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.

Since 1969, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and other subjects. NAEP collects and reports information on student performance at the national and state levels, making the assessment an integral part of our nation's evaluation of the condition and progress of education. Only academic achievement data and related background information are collected. The privacy of individual students and their families is protected.

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.

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# Executive Summary

Nationally representative samples of 209,000 fourth-graders and 175,200 eighth-graders participated in the 2011 National Assessment of Educational Progress (NAEP) in mathematics. At each grade, students responded to questions designed to measure what they know and can do across five mathematics content areas: number properties and operations; measurement; geometry; data analysis, statistics, and probability; and algebra.

## Both fourth- and eighth-graders score higher in 2011 than in previous assessment years

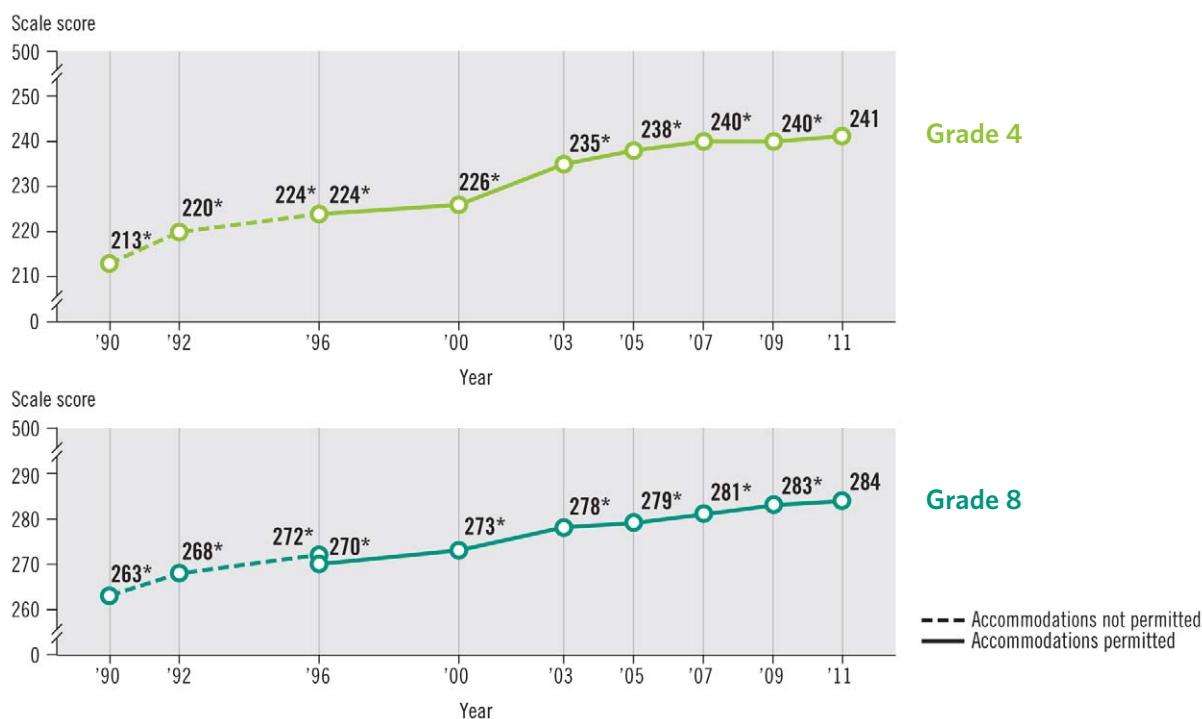
**At grade 4,** the average mathematics score in 2011 was 1 point higher than in 2009, and 28 points higher than in 1990 (**figure A**).

- Scores were higher in 2011 than in 2009 for White, Black, and Hispanic students but did not change significantly for Asian/Pacific Islander or American Indian/Alaska Native students. There were no significant changes in the White - Black or White - Hispanic score gaps from 2009 to 2011.
- Scores were higher in 2011 than in 2009 for both male and female students.

**At grade 8,** the average mathematics score in 2011 was 1 point higher than in 2009, and 21 points higher than in 1990.

- The average score for Hispanic students was higher in 2011 than in 2009, and the White - Hispanic score gap was smaller than in 2009. There were no other significant changes from 2009 to 2011 in the scores for other racial/ethnic groups.
- Female students scored higher in 2011 than in 2009, but the score for male students was not significantly different from the score in 2009.

**Figure A.** Trend in fourth- and eighth-grade NAEP mathematics average scores



\* Significantly different ( $p < .05$ ) from 2011.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

## Highest percentages to date of fourth- and eighth-graders performing at or above the *Proficient* level

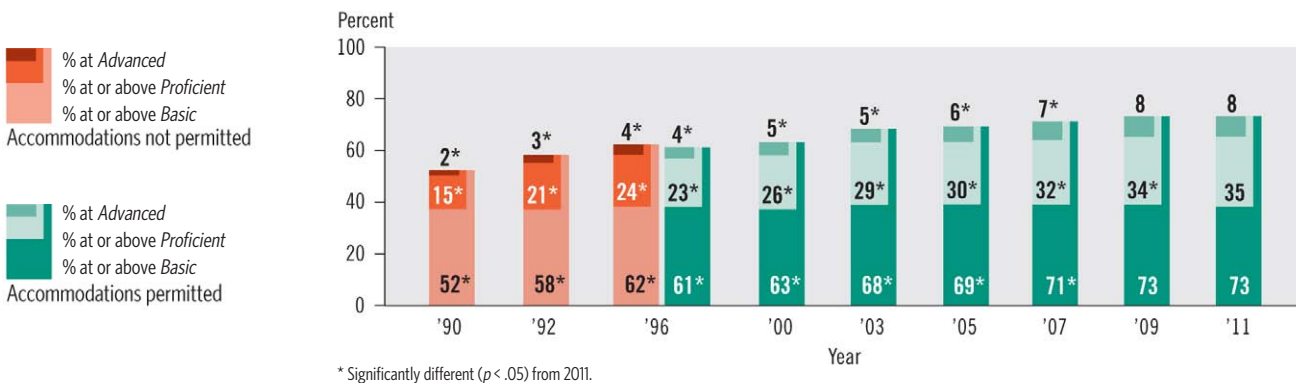
**At grade 4**, the percentages of students performing at or above the *Proficient* level and at *Advanced* were higher in 2011 than in any of the previous assessment years (**figure B**). The percentage of students at or above *Basic* did not change significantly from 2009 to 2011. Eighty-two percent of students had at least a basic knowledge of fourth-grade mathematics in 2011 compared to 50 percent of students in 1990.

**Figure B. Trend in fourth-grade NAEP mathematics achievement-level results**



**At grade 8**, the percentage of students at or above *Proficient* in 2011 was higher than in earlier assessment years (**figure C**). The percentages at or above *Basic* and at *Advanced* in 2011 were not significantly different from 2009 but were higher than in 1990. Seventy-three percent of students had at least a basic knowledge of eighth-grade mathematics in 2011 compared to 52 percent in 1990.

**Figure C. Trend in eighth-grade NAEP mathematics achievement-level results**



### Examples of knowledge and skills demonstrated by students performing at each achievement level

#### *Basic*

- Compute the difference of two 4-digit numbers (grade 4).
- Identify congruent angles in a figure (grade 8).

#### *Proficient*

- Draw a line segment of a given length (grade 4).
- Use an algebraic model to estimate height (grade 8).

#### *Advanced*

- Solve a story problem involving time (grade 4).
- Compare similar parallelograms (grade 8).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

## Scores in 18 states and jurisdictions higher than in 2009 at grade 4 or 8 and lower in 2 states

Changes in average mathematics scores for public school students from 2009 to 2011			
	Both grades	Grade 4 only	Grade 8 only
<b>Higher</b>	District of Columbia Hawaii New Mexico Rhode Island	Alabama Arizona Georgia Maryland Wyoming	Arkansas Colorado Maine Mississippi Nevada Ohio Oklahoma Texas West Virginia
<b>Lower</b>		New York	Missouri

Scores were not significantly different from 2009 at either grade in 32 states and jurisdictions.

### Other information presented in this report

- Results in 2011 for **additional racial/ethnic groups**
- **Calculator use** at grade 4
- **Mathematics coursetaking** at grade 8

## Score gaps narrow in some states

At grade 4	
<p><b>White – Black score gaps narrowed</b> from 1992 to 2011 in 16 of 35 participating states with samples large enough to report results for Black students.</p> <p>Alabama California Delaware Florida Georgia Louisiana Maryland Massachusetts</p> <p>Michigan Mississippi New Jersey New York North Carolina Pennsylvania Texas Virginia</p>	<p><b>White – Hispanic score gaps narrowed</b> from 1992 to 2011 in 4 of 21 participating states with samples large enough to report results for Hispanic students.</p> <p>Massachusetts New Jersey New York Rhode Island</p>
<p>Racial/ethnic gaps did not widen from 1992 to 2011 in any of the states that participated in both years.</p>	

At grade 8	
<p><b>Score gaps between higher- and lower-income students narrowed</b> from 2003 to 2011 in four states.</p> <p>Georgia Illinois</p> <p>Massachusetts New York</p>	<p><b>Score gaps between higher- and lower-income students widened</b> from 2003 to 2011 in one jurisdiction.</p> <p>District of Columbia</p>

NOTE: In NAEP, lower-income students are students identified as eligible for the National School Lunch Program (NSLP). Higher-income students are not eligible for NSLP.



# Introduction

The National Assessment of Educational Progress (NAEP) mathematics assessment measures students' knowledge and skills in mathematics and students' ability to apply their knowledge in problem-solving situations. The results from the 2011 assessment presented in this report are compared to those from previous years, showing how students' performance in mathematics has changed over time.

## The Mathematics Framework

The National Assessment Governing Board oversees the development of NAEP frameworks that describe the specific knowledge and skills to be assessed in each subject. Frameworks incorporate ideas and input from subject area experts, school administrators, policymakers, teachers, parents, and others. NAEP frameworks also describe the types of questions to be included and how they should be designed and scored.

## Mathematics content areas

To ensure an appropriate balance of content and allow for a variety of ways of knowing and doing mathematics, the *Mathematics Framework for the 2011 National Assessment of Educational Progress* specifies that each question in the assessment measure one of five mathematical content areas. Although the names of the content areas, as well as some of the topics in those areas, have changed over the years, there has been a consistent focus across frameworks on collecting information on students' performance in the following five areas:

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

At grade 4, number properties and operations questions focus on computation with or understanding of whole numbers and common fractions and decimals. At grade 8, questions measure computation with rational and common irrational numbers as well as students' ability to solve problems using proportional reasoning and apply properties of select number systems.

**Measurement** assesses students' knowledge of units of measurement for such attributes as capacity, length, area, volume, time, angles, and rates.

At grade 4, measurement questions focus on customary units such as inch, quart, pound, and hour, and common metric units such as centimeter, liter, and gram, as well as the geometric attribute of length. At grade 8, questions concentrate on the use of square units for measuring area and surface area, cubic units for measuring volume, degrees for measuring angles, and rates.

**Geometry** measures students' knowledge and understanding of shapes in two and three dimensions, and relationships between shapes such as symmetry and transformations.

At grade 4, geometry questions focus on simple figures and their attributes, including plane figures such as triangles and circles and solid figures such as cubes and spheres. At grade 8, questions address the properties of plane figures, especially parallel and perpendicular lines, angle relationships in polygons, cross sections of solids, and the Pythagorean theorem.

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

At grade 4, data analysis, statistics, and probability questions focus on students' understanding of how data are collected and organized, how to read and interpret various representations of data, and basic concepts of probability. At grade 8, questions address organizing and summarizing data (including tables, charts, and graphs), analyzing statistical claims, and probability.

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

At grade 4, algebra questions measure students' understanding of algebraic representation, patterns, and rules; graphing points on a line or a grid; and using symbols to represent unknown quantities. At grade 8, questions measure students' understanding of patterns and functions; algebraic expressions, equations, and inequalities; and algebraic representations, including graphs.

## Levels of mathematical complexity

The framework describes three levels of mathematical complexity that reflect the cognitive demands that questions make on students' thinking.

**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 on students' thinking and often require abstract reasoning or analysis in a novel situation.

## Mathematics Framework for the 2011 National Assessment of Educational Progress

The complete mathematics framework for the 2011 assessment is available at <http://www.nagb.org/publications/frameworks/math-2011-framework.pdf> and contains detailed information on the mathematical content areas, levels of complexity, format of assessment questions, and assessment design.

Updates to the framework over the years have provided more detail regarding the assessment design for grades 4 and 8 but have not changed the content, allowing for the comparison of students' performance in 2011 to previous assessment years.

Mathematical complexity involves *what* a question asks students to do and *not how* they might undertake it. The complexity of a question is not directly related to its format, and therefore it is possible for some multiple-choice questions to assess complex mathematics and for some constructed-response (i.e., open-ended) questions to assess routine mathematical ideas.

## Assessment Design

Because the 2011 mathematics assessment covered a breadth of content and included more questions than any one student could answer, each student took just a portion of the assessment. The 158 questions that made up the entire fourth-grade assessment were divided into 10 sections, each containing between 15 and 19 questions, depending on the balance between multiple-choice and constructed-response (i.e., open-ended) questions. The eighth-grade assessment contained 155 questions that were divided into 10 sections of between 14 and 17 questions. At both grades, each student responded to questions in two 25-minute sections.

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. Twenty percent of the fourth-grade assessment allowed for the use of a four-function calculator that was provided to students. Thirty percent of the eighth-grade assessment allowed for the use of a scientific or graphing calculator; students could either use their own calculator or one provided by NAEP.

The proportion of assessment questions devoted to each of the five content areas varied by grade to reflect the differences in emphasis in each area specified in the framework (**table 1**). The largest portion of the fourth-grade assessment focused on number properties and operations (40 percent), and the largest portion of the eighth-grade assessment focused on algebra (30 percent).

**Table 1. Target percentage distribution of NAEP mathematics questions, by grade and content area: 2011**

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

## Reporting NAEP Results

The 2011 mathematics assessment results are based on nationally representative samples of 209,000 fourth-graders from 8,500 schools and 175,200 eighth-graders from 7,610 schools. Because the elementary schools participating in NAEP are given the option of including all of their fourth-grade students in the sample, and fourth-grade response rates are typically higher, the number of students assessed at grade 4 is larger than the number of students at grade 8. Results for the nation reflect the performance of students attending public schools (including charter schools), private schools, Bureau of Indian Education schools, and Department of Defense schools. Results for states and other jurisdictions reflect the performance of students in public schools only and are reported along with the results for public school students in the nation.

SOURCE: U.S. Department of Education, National Assessment Governing Board, Mathematics Framework for the 2011 National Assessment of Educational Progress (NAEP), 2010.



## Scale scores

NAEP mathematics results for grades 4 and 8 are reported as average scores on a 0–500 scale. Because NAEP scales are developed independently for each subject, scores cannot be compared across subjects.

In addition to reporting an overall mathematics score for each grade, scores are reported at five percentiles to show trends in results for students performing at lower (10th and 25th percentiles), middle (50th percentile), and higher (75th and 90th percentiles) levels.

## 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. NAEP results are reported as percentages of students performing at or above the *Basic* and *Proficient* levels and at the *Advanced* level.

**Basic** denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each 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, the National Center for Education Statistics (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.

## Explore Additional Results

Not all of the results from the NAEP mathematics assessment are presented in this report. Additional results (including average scores in each of the five mathematical content areas) can be found on the Nation's Report Card website at [http://nationsreportcard.gov/mathematics\\_2011/](http://nationsreportcard.gov/mathematics_2011/) and in the NAEP Data Explorer at <http://nces.ed.gov/nationsreportcard/naepdata/>.



## Interpreting the Results

### Differences in performance over time and between student groups

National results from the 2011 mathematics assessment are compared to results from eight previous assessment years for both grades 4 and 8. State results from 2011 are compared to results from seven earlier assessments at grade 4 and eight earlier assessments at grade 8. Changes in students' performance over time are summarized by comparing the results in 2011 to 2009 and the first assessment year, except when pointing out consistent patterns across assessment years.

NAEP reports results using widely accepted statistical standards; findings are reported based on a statistical significance level set at .05 with appropriate adjustments for multiple comparisons (see the Technical Notes for more information). An asterisk (\*) is used in tables and figures to indicate that an earlier year's score or percentage is significantly different from the 2011 results. Only those differences that are found to be statistically significant are discussed as higher or lower. The same standard applies when comparing the performance of one student group to another.

A score that is significantly higher or lower in comparison to an earlier assessment year is reliable evidence that student performance has changed. However, NAEP is not designed to identify the causes of these changes. Although comparisons are made in students' performance based on demographic characteristics and educational experiences, the results cannot be used to establish a cause-and-effect relationship between student characteristics and achievement. Many factors may influence student achievement, including educational policies and practices, available resources, and the demographic characteristics of the student body. These factors may change over time and vary among student groups.

### Accommodations and exclusions in NAEP

It is important to assess all selected students from the population, including students with disabilities (SD) and English language learners (ELL). To accomplish this goal, many of the same accommodations that students use on other tests (e.g., extra testing time or individual rather than group administration) are provided for SD and ELL students participating in NAEP. Accommodations were first made available in mathematics at the national level in 1996 and at the state level in 2000. Prior to 1996, no accommodations were provided in the NAEP mathematics assessments.

Because providing accommodations represented a change in testing conditions that could potentially affect the measurement of changes over time, split samples of students were assessed nationally in 1996 and at the state level in 2000. In each of these years, accommodations were permitted in one sample and were not permitted in the other. Although the results for both samples are presented in the tables and figures, any comparisons to these years in the text are based on only the accommodated samples.

Even with the availability of accommodations, some students may still be excluded. Differences in student populations and in state policies and practices for identifying and including SD and ELL students should be considered when comparing variations in exclusion and accommodation rates. States and jurisdictions also vary in their proportions of special-needs students (especially ELL students).

The National Assessment Governing Board has been exploring ways to reduce variation in exclusion rates for SD and ELL students across states and districts. See the section in this report on NAEP Inclusion for more information about the Governing Board's new policy on inclusion.

## Fourth-graders post highest score to date

The average mathematics score for the nation's fourth-graders in 2011 was higher than the scores in the eight previous assessment years (figure 1). Students scored 1 point higher in 2011 than in 2009 and 28 points higher than in 1990.

Other national results highlighted in this section show higher scores in 2011 than 2009 for White, Black, and Hispanic students; both male and female students; and students from lower- and higher-income families. State results show higher scores in 2011 than 2009 for 9 of the 52 participating states and jurisdictions, and a lower score in 1 state.

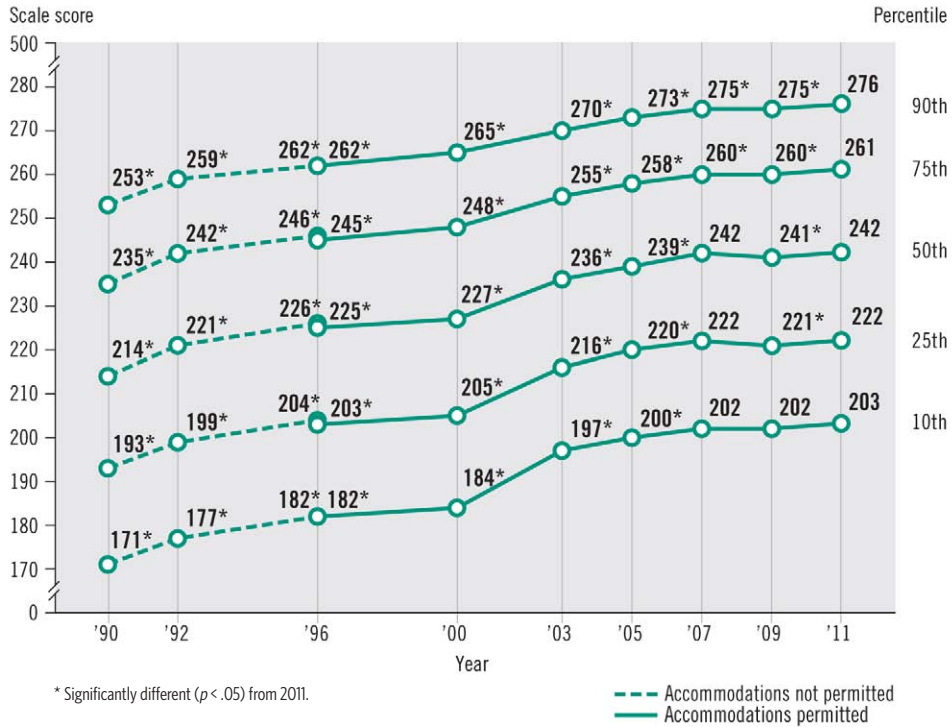
**Figure 1. Trend in fourth-grade NAEP mathematics average scores**



## Scores higher than in 2009 for all but the lowest-performing students

Scores were higher in 2011 than in 2009 for students at each of the percentiles reported on except the 10th percentile, at which there was no significant change in comparison to 2009 (figure 2). Scores at all five percentiles were higher in 2011 than in 1990, with larger gains for lower-performing students at the 10th and 25th percentiles than for higher-performing students at the 90th percentile.

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



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

## A closer look at some of the background characteristics of lower- and higher-performing students

Profiles of students scoring at the lower end of the scale (below the 25th percentile) and those scoring at the higher end (above the 75th percentile) show how the two groups differed demographically.

Among fourth-graders who scored **below the 25th percentile** (i.e., below a score of 222) in 2011,

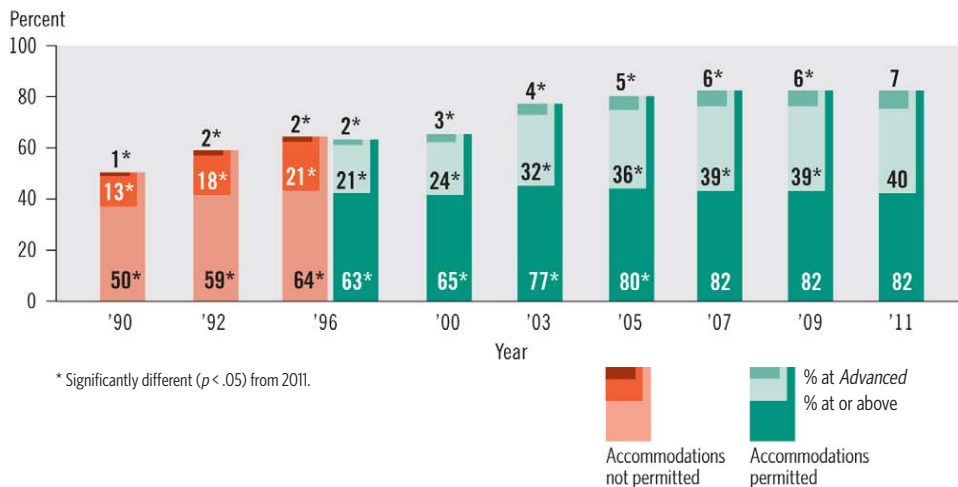
- **31%** were White, **28%** were Black, **34%** were Hispanic, and **2%** were Asian;
- **74%** were eligible for free/reduced-price school lunch;
- **24%** were identified as students with disabilities; and
- **22%** were identified as English language learners.

Among fourth-graders who scored **above the 75th percentile** (i.e., above a score of 261) in 2011,

- **72%** were White, **5%** were Black, **10%** were Hispanic, and **10%** were Asian;
- **23%** were eligible for free/reduced-price school lunch;
- **4%** were identified as students with disabilities; and
- **3%** were identified as English language learners.

The percentages of students performing at or above *Proficient* and at *Advanced* were higher in 2011 than in any of the previous assessment years (figure 3). The percentage of students at or above *Basic* did not change significantly from 2009 to 2011 but was higher in 2011 than in 1990.

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

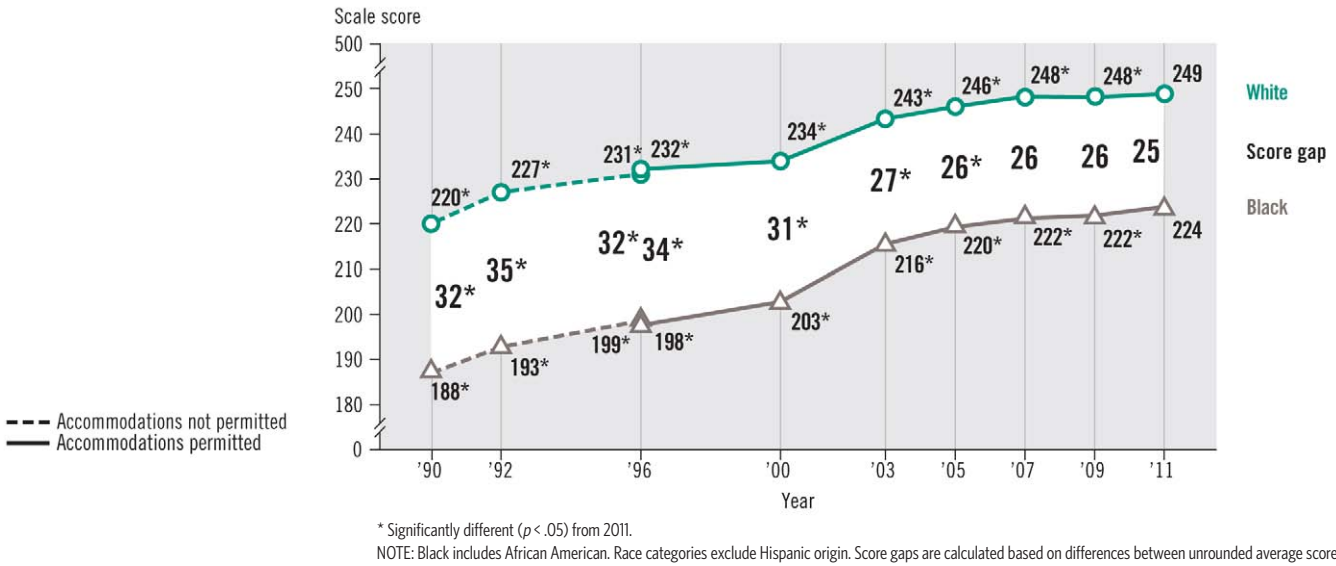


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

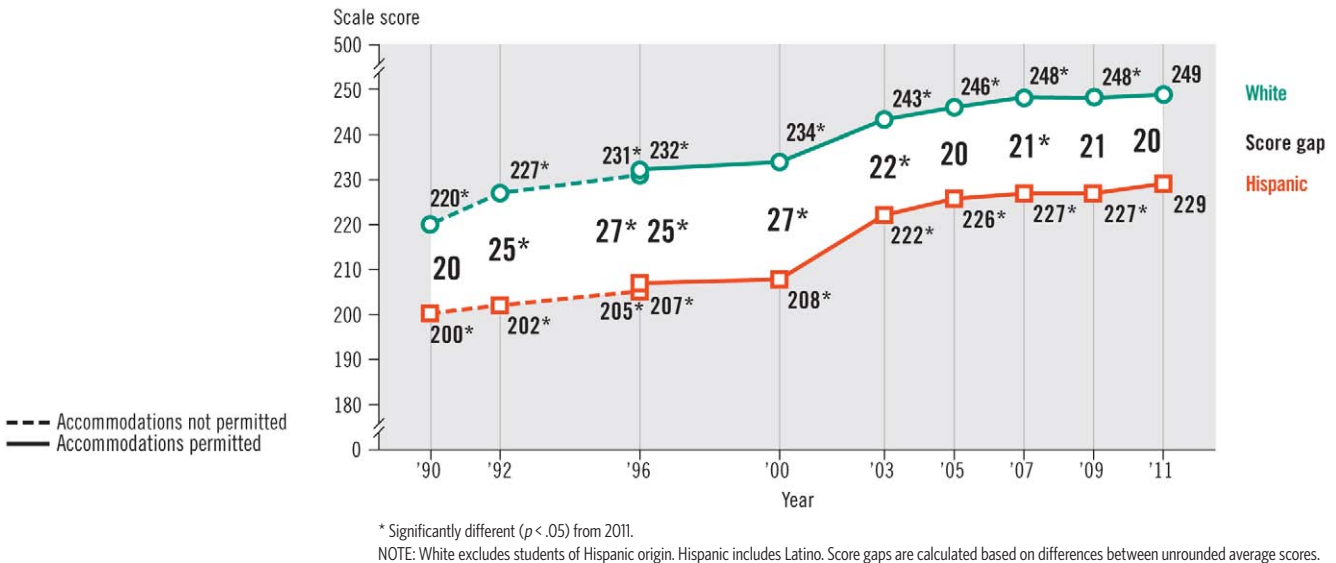
## White, Black, and Hispanic students make gains; gaps persist

Average scores for White, Black, and Hispanic students were higher in 2011 than in any of the previous assessment years (figures 4 and 5). The 25-point score gap between White and Black students in 2011 was not significantly different from the gap in 2009. However, larger gains from 1990 to 2011 for Black students than for White students contributed to a smaller gap in 2011 in comparison to the first assessment year. The 20-point score gap between White and Hispanic students in 2011 was not significantly different from the gap in either 2009 or 1990.

**Figure 4. Trend in fourth-grade NAEP mathematics average scores and score gaps for White and Black students**



**Figure 5. Trend in fourth-grade NAEP mathematics average scores and score gaps for White and Hispanic students**



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

The average score for Asian/Pacific Islander students in 2011 did not change significantly from the score in 2009 but was higher than the score in 1990 (figure 6). Asian/Pacific Islander students scored 7 points higher on average than White students in 2011, which was unchanged from the score gap in 2009.

The average score for American Indian/Alaska Native students in 2011 was not significantly different from the score in 2009 (figure 7). The 24-point score gap between American Indian/Alaska Native and White students in 2011 was also not significantly different from the gap in 2009.

**Figure 6. Trend in fourth-grade NAEP mathematics average scores and score gaps for Asian/Pacific Islander and White students**



\* Significantly different ( $p < .05$ ) from 2011.

<sup>1</sup> Score gaps reflect the average score for Asian/Pacific Islander students minus the score for White students.

NOTE: Special analyses raised concerns about the accuracy and precision of the results for Asian/Pacific Islander students in 2000; therefore, they are omitted from this figure. Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores. Score differences between Asian/Pacific Islander and White students were not found to be statistically significant in 1990, 1992, and 1996.

**Figure 7. Trend in fourth-grade NAEP mathematics average scores and score gaps for White and American Indian/Alaska Native students**



\* Significantly different ( $p < .05$ ) from 2011.

NOTE: Sample sizes were insufficient to permit reliable estimates for American Indian/Alaska Native students in 1990, 1992, and 1996 (accommodations-not-permitted sample).

Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores. The score difference between White and American Indian/Alaska Native students was not found to be statistically significant in 1996.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

The percentage of White fourth-graders was smaller in 2011 than in any of the earlier assessment years, and the percentage of Hispanic students was larger (table 2). In comparison to the first assessment year in 1990, the percentage of Asian/Pacific Islander students was larger in 2011, and the percentage of Black students was smaller.

**Table 2. Percentage distribution of students assessed in fourth-grade NAEP mathematics, by race/ethnicity: Various years, 1990-2011**

Race/ethnicity	1990 <sup>1</sup>	1992 <sup>1</sup>	1996	2000	2003	2005	2007	2009	2011
White	75*	73*	66*	64*	60*	58*	57*	56*	54
Black	18*	17*	16	16	17*	16*	16	16	15
Hispanic	6*	6*	11*	15*	18*	19*	20*	21*	22
Asian/Pacific Islander	1*	2*	5	‡	4*	4*	5	5	5
American Indian/Alaska Native	1*	1*	1	1	1	1	1	1	1
Two or more races	#*	1*	1*	1*	1*	1*	1*	2*	2

# Rounds to zero.

‡ Reporting standards not met. Special analyses raised concerns about the accuracy and precision of the results for Asian/Pacific Islander students in 2000; therefore, they are omitted from this table.

\* Significantly different ( $p < .05$ ) from 2011.

<sup>1</sup> Accommodations not permitted.

NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Prior to 2011, students in the two or more races category were categorized as unclassified. The percentages of American Indian/Alaska Native students in 1990 (0.56) and 1992 (0.56) were significantly different from the percentage in 2011 (1.10). Detail may not sum to totals because of rounding.

## NAEP Results for Newly Reported Racial/Ethnic Groups

In compliance with new standards from the U.S. Office of Management and Budget for collecting and reporting data on race/ethnicity, additional information on students' race/ethnicity was collected in 2011 so that results could be reported separately for Asian students, Native Hawaiian/Other Pacific Islander students, and students categorized as being two or more races (multiracial). See the Technical Notes for more information.

The average score in 2011 for Asian students was higher than the scores for all other reported racial/ethnic groups (table 3). Native Hawaiian/Other Pacific Islander students scored higher on average than Black, Hispanic, and American Indian/Alaska Native students, but lower than White and multiracial students. The score for multiracial students was higher than the scores for Black, Hispanic, and American Indian/Alaska Native students, but lower than the score for White students.

**Table 3. Percentage of students, average scores, and achievement-level results in fourth-grade NAEP mathematics, by selected racial/ethnic groups: 2011**

Selected racial/ethnic groups	Percentage of students	Average scale score	Percentage of students			
			Below <i>Basic</i>	At <i>Basic</i>	At <i>Proficient</i>	At <i>Advanced</i>
Asian	5	257	7	28	44	20
Native Hawaiian/Other Pacific Islander	#	236	23	43	28	7
Two or more races	2	245	13	42	35	10

# Rounds to zero.

NOTE: Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.



## Percentages of Hispanic students at *Proficient* and *Advanced* higher than in 2009

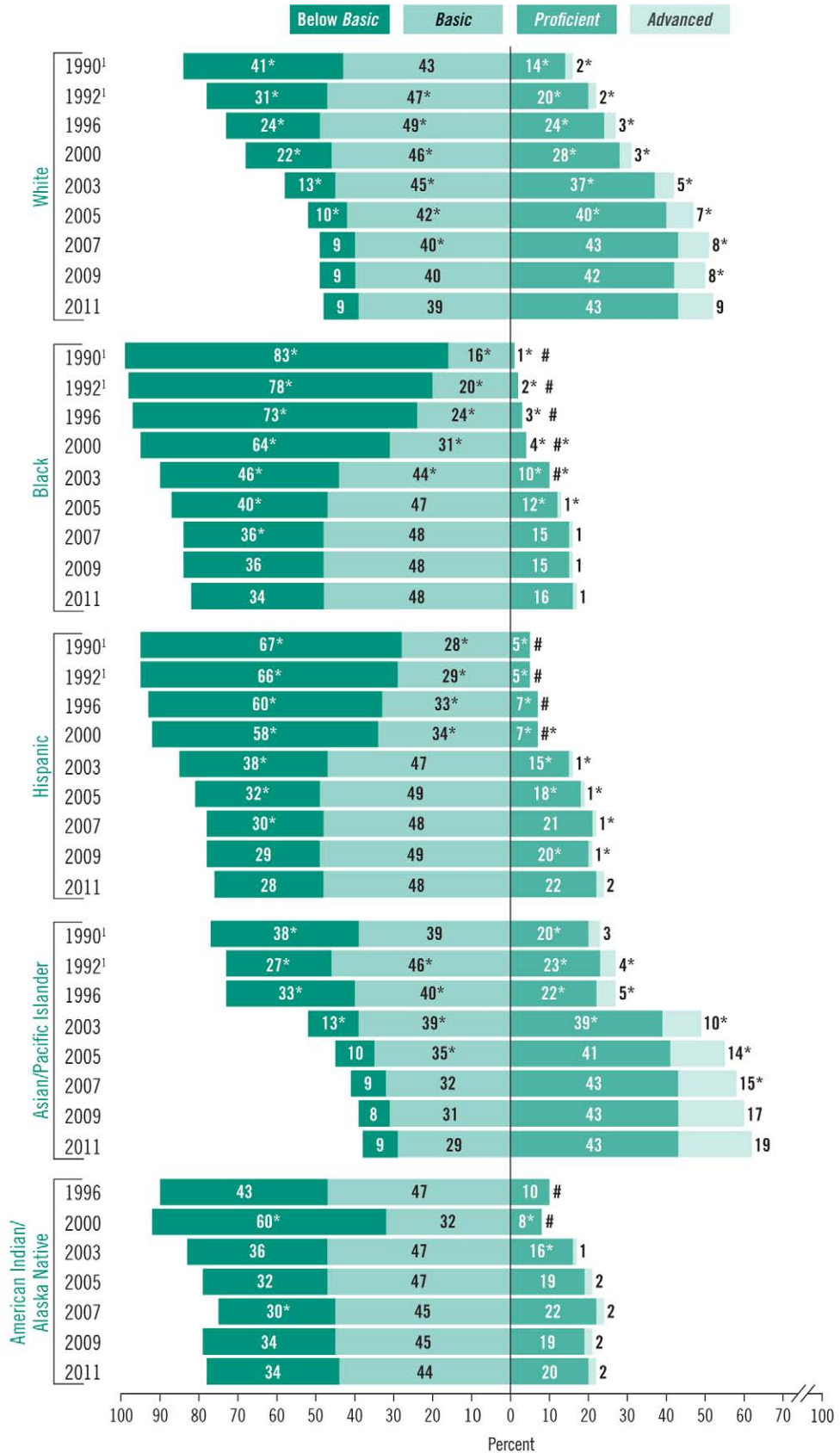
A closer look at achievement-level results shows where improvements were made for different racial/ethnic groups. The percentages of Hispanic students performing at *Proficient* and at *Advanced* were higher in 2011 than in 2009 (figure 8). The percentage of White students at *Advanced* was also higher in 2011 than in 2009. There was no significant change from 2009 to 2011 in the percentages of students in any of the five racial/ethnic groups performing below or at the *Basic* level.

In comparison to 1990, the percentage of students performing below the *Basic* level was lower in 2011, and the percentage at *Proficient* was higher for all the racial/ethnic groups with samples large enough to report results. The percentages of Black and Hispanic students at *Basic* were higher in 2011 than in 1990, and the percentage of White students at *Advanced* was higher.

Higher percentages of Black and American Indian/Alaska Native students than other racial/ethnic groups continued to perform below *Basic* in 2011. The percentage of Asian/Pacific Islander students at *Advanced* was higher than the percentages of other racial/ethnic groups in 2011.



Figure 8. Trend in fourth-grade NAEP mathematics achievement-level results, by race/ethnicity



# Rounds to zero.  
 \* Significantly different ( $p < .05$ ) from 2011.  
<sup>1</sup> Accommodations not permitted.  
 NOTE: Special analyses raised concerns about the accuracy and precision of the results for Asian/Pacific Islander students in 2000; therefore, they are omitted from this figure. Sample sizes were insufficient to permit reliable estimates for American Indian/Alaska Native students in 1990 and 1992. 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 or two or more races. 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, 1990–2011 Mathematics Assessments.

## No significant change in gender gap from 2009

In 2011, male students scored 1 point higher on average than female students (figure 9). Scores for both male and female students were higher in 2011 than in any of the earlier assessment years. The average score for male students in 2011 (241.4) was 1 point higher than the score in 2009 (240.6), and the average score for female students was also 1 point higher.

**Figure 9.** Trend in fourth-grade NAEP mathematics average scores and score gaps, by gender



# Rounds to zero.

\* Significantly different ( $p < .05$ ) from 2011.

NOTE: Score gaps are calculated based on differences between unrounded average scores.

Score differences between male and female students were not found to be statistically significant in 1990, 1992, 1996 (accommodations-permitted sample), and 2000.

--- Accommodations not permitted  
— Accommodations permitted



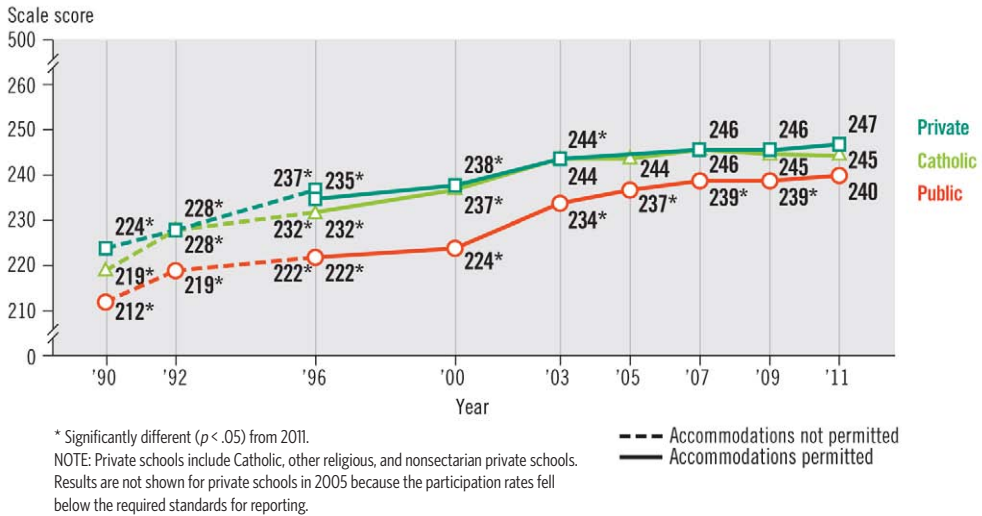
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

## Private school students score higher than those in public schools

In 2011, the average mathematics score for fourth-graders attending public schools was 7 points lower than the overall score for students attending private schools, and 5 points lower than for students attending Catholic schools specifically (figure 10). There may be many reasons why private school students perform differently, on average, from public school students. Differences in demographic composition, availability of resources, admissions policies, parental involvement, and other factors not measured in NAEP may influence student achievement scores.

The average score for public school students was 1 point higher in 2011 than in 2009, while there was no significant change in the score for private school students overall or for Catholic school students over the same period. Scores for all three groups were higher in 2011 than in 1990; however, the 7-point score gap between private and public school students in 2011 was not significantly different from the gap in 1990.

**Figure 10.** Trend in fourth-grade NAEP mathematics average scores, by type of school



Ninety-two percent of fourth-graders attended public schools in 2011, and 8 percent attended private schools, including 4 percent in Catholic schools (table 4). In comparison to 1990, the percentage of students attending public schools in 2011 was larger, and the percentage attending private schools was smaller.

**Table 4.** Percentage distribution of students assessed in fourth-grade NAEP mathematics, by type of school: Various years, 1990-2011

Type of school	1990 <sup>1</sup>	1992 <sup>1</sup>	1996	2000	2003	2005	2007	2009	2011
Public	89*	88*	89*	90*	90*	90*	91*	91	92
Private	11*	12*	11*	10*	10*	10	9*	9	8
Catholic	7*	8*	8*	5*	5*	5*	4*	4	4

\* Significantly different ( $p < .05$ ) from 2011.

<sup>1</sup> Accommodations not permitted.

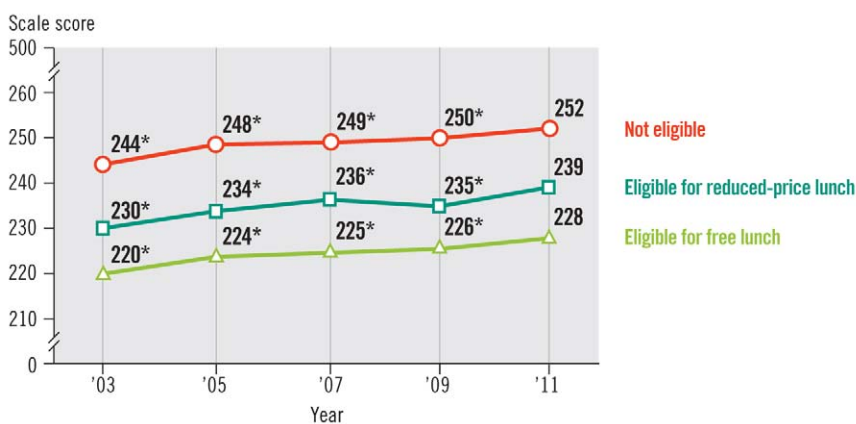
NOTE: Private schools include Catholic, other religious, and nonsectarian private schools. Detail may not sum to totals because of rounding.

## Highest scores to date for students across income levels

Students' eligibility for the National School Lunch Program (NSLP) is used in NAEP as an indicator of family income. Students from lower-income families are eligible for either free or reduced-price school lunches, while students from higher-income families are not (see the Technical Notes for eligibility criteria). Because of the improved quality of the data on students' eligibility in more recent years, results are only compared back to 2003.

Average mathematics scores were higher in 2011 than in earlier assessment years both for students who were eligible for free and reduced-price school lunch, as well as for students who were not eligible (figure 11). In 2011, fourth-graders who were eligible for free lunch scored 24 points lower on average than those not eligible. Students eligible for reduced-price lunch scored 13 points lower than those not eligible.

**Figure 11.** Trend in fourth-grade NAEP mathematics average scores, by eligibility for free or reduced-price school lunch



\* Significantly different ( $p < .05$ ) from 2011.

In comparison to previous assessment years, the percentage of fourth-graders eligible for free school lunch was larger in 2011, and the percentages of students eligible for reduced-price school lunch or not eligible for NSLP were smaller (table 5).

**Table 5.** Percentage distribution of students assessed in fourth-grade NAEP mathematics, by eligibility for free or reduced-price school lunch: Various years, 2003-11

Eligibility status	2003	2005	2007	2009	2011
Eligible for free lunch	33*	35*	36*	38*	43
Eligible for reduced-price lunch	8*	7*	6*	6*	5
Not eligible	50*	50*	52*	49*	46
Information not available	10*	8*	7	7*	6

\* Significantly different ( $p < .05$ ) from 2011.

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

## More students have teachers not permitting calculators during mathematics lessons in 2011 than in previous years

Teachers reported on the extent to which they permitted students to use calculators during mathematics lessons. Teachers selected one of three responses indicating “unrestricted use,” “restricted use,” or “calculators are not permitted.”

Sixty-two percent of fourth-graders had teachers who reported permitting the restricted use of calculators in 2011 (**table 6**). Because teachers were asked the same question as part of the 2005, 2007, and 2009 assessments, the percentages can be compared over time. A higher percentage of students had teachers who did not permit the use of calculators in 2011 than in earlier assessment years, while the percentage permitting restricted use was lower in 2011 than in earlier years.

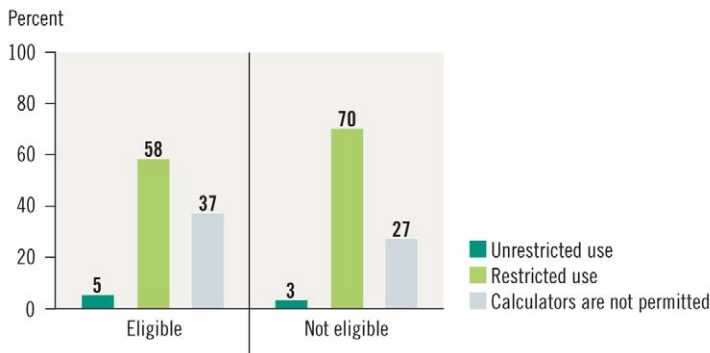
**Table 6.** Percentage of students assessed in fourth-grade NAEP mathematics, by the extent of calculator use in mathematics lessons: Various years, 2005-11

Extent of calculator use	2005	2007	2009	2011
Unrestricted use	5*	4	4	4
Restricted use	75*	69*	67*	62
Calculators are not permitted	20*	27*	29*	34

\* Significantly different ( $p < .05$ ) from 2011.

The extent to which students had teachers who permitted calculator use for mathematics lessons was different for those who were or were not eligible for NSLP. The percentage of students whose teachers permitted restricted use of calculators was higher for students who were not eligible for NSLP than for students who were eligible, and the percentage of students whose teachers did not permit them to use calculators was higher for eligible students (**figure 12**).

**Figure 12.** Percentage of students assessed in fourth-grade NAEP mathematics, by eligibility for free/reduced-price school lunch and extent of calculator use in mathematics lessons: 2011

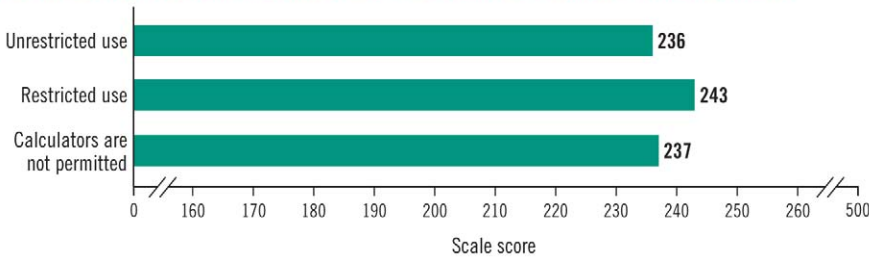


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005-11 Mathematics Assessments.

In 2011, students whose teachers permitted restricted use of calculators during mathematics lessons scored higher on average than students whose teachers allowed unrestricted use or did not permit the use of calculators (figure 13).

**Figure 13.** Average scores in fourth-grade NAEP mathematics, by teachers' responses to a question about the extent to which their students use calculators during mathematics lessons: 2011

To what extent are students permitted to use calculators during mathematics lessons?



### Explore Additional Results

Results for other background questions from the fourth-grade student, teacher, and school questionnaires are available in the NAEP Data Explorer at <http://nces.ed.gov/nationsreportcard/naepdata/>.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

# State Performance at Grade 4

NAEP state results make it possible to examine the progress of students in each participating state over time. The national and state results presented in this section are for public school students only and may differ from the national results presented earlier that are based on data for both public and private school students. All 50 states, the District of Columbia, and Department of Defense schools participated in the 2011 mathematics assessment. These 52 states and jurisdictions are all referred to as “states” in the following summary of results. State results for grade 4 are also available for seven earlier assessment years (**table 7**). While all states have participated in the assessments since 2003, not all have participated or met the criteria for reporting in earlier assessment years.

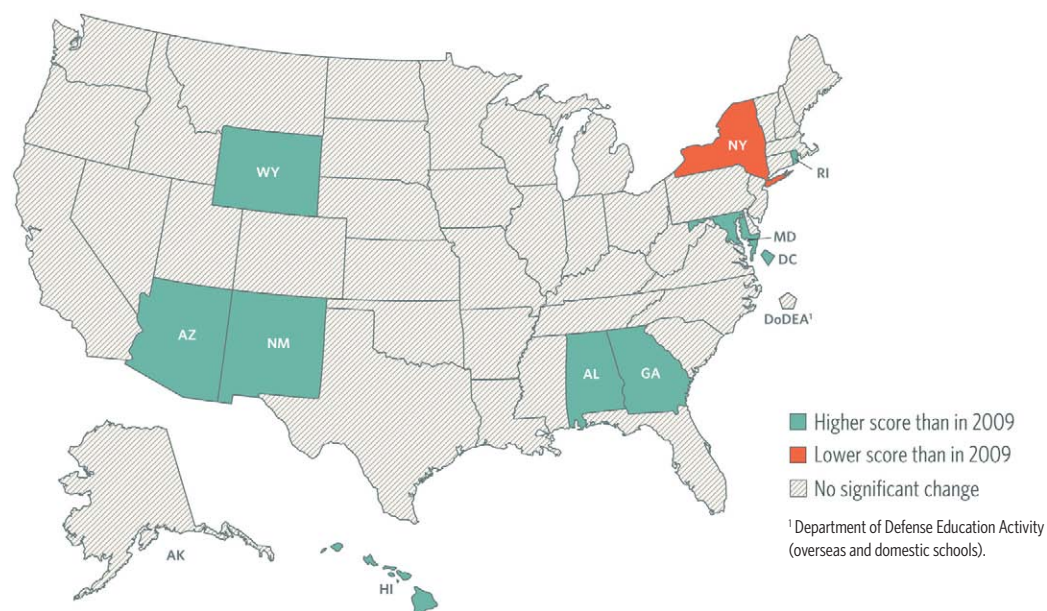
## Scores higher than in 2009 for students in nine states and lower in one state

The map below highlights changes in states' average fourth-grade mathematics scores from 2009 to 2011 (**figure 14**). Scores were higher in 2011 than in 2009 in Alabama, Arizona, the District of Columbia, Georgia, Hawaii, Maryland, New Mexico, Rhode Island, and Wyoming. The average score in New York was lower in 2011 than in 2009.

Forty percent<sup>1</sup> of fourth-grade public school students performed at or above the *Proficient* level in 2011, with percentages ranging from 22 percent<sup>1</sup> in the District of Columbia to 58 percent in Massachusetts (**figure 15**). Among the nine states that had higher average scores in 2011 than in 2009, only Arizona and the District of Columbia also had higher percentages of students at or above *Proficient* in 2011 (see appendix **table A-14**).

<sup>1</sup> The percentage is based on the sum of the unrounded percentages as opposed to the rounded percentages shown in the figure.

**Figure 14.** Changes in fourth-grade NAEP mathematics average scores between 2009 and 2011



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2011 Mathematics Assessments.



**Table 7. Average scores in NAEP mathematics for fourth-grade public school students, by state/jurisdiction:  
Various years, 1992–2011**

State/jurisdiction	Accommodations not permitted			Accommodations permitted					
	1992	1996	2000	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>219*</b>	<b>222*</b>	<b>226*</b>	<b>224*</b>	<b>234*</b>	<b>237*</b>	<b>239*</b>	<b>239*</b>	<b>240</b>
Alabama	208*	212*	218*	217*	223*	225*	229	228*	231
Alaska	—	224*	—	—	233*	236	237	237	236
Arizona	215*	218*	219*	219*	229*	230*	232*	230*	235
Arkansas	210*	216*	217*	216*	229*	236	238	238	238
California	208*	209*	214*	213*	227*	230*	230*	232	234
Colorado	221*	226*	—	—	235*	239*	240*	243	244
Connecticut	227*	232*	234*	234*	241	242	243	245	242
Delaware	218*	215*	—	—	236*	240	242*	239	240
Florida	214*	216*	—	—	234*	239	242	242	240
Georgia	216*	215*	220*	219*	230*	234*	235*	236*	238
Hawaii	214*	215*	216*	216*	227*	230*	234*	236*	239
Idaho	222*	—	227*	224*	235*	242	241	241	240
Illinois	—	—	225*	223*	233*	233*	237	238	239
Indiana	221*	229*	234*	233*	238*	240*	245	243	244
Iowa	230*	229*	233*	231*	238*	240*	243	243	243
Kansas	—	—	232*	232*	242*	246	248	245	246
Kentucky	215*	220*	221*	219*	229*	231*	235*	239	241
Louisiana	204*	209*	218*	218*	226*	230	230	229	231
Maine	232*	232*	231*	230*	238*	241*	242	244	244
Maryland	217*	221*	222*	222*	233*	238*	240*	244*	247
Massachusetts	227*	229*	235*	233*	242*	247*	252	252	253
Michigan	220*	226*	231*	229*	236	238	238	236	236
Minnesota	228*	232*	235*	234*	242*	246*	247	249	249
Mississippi	202*	208*	211*	211*	223*	227*	228	227	230
Missouri	222*	225*	229*	228*	235*	235*	239	241	240
Montana	—	228*	230*	228*	236*	241*	244	244	244
Nebraska	225*	228*	226*	225*	236*	238	238	239	240
Nevada	—	218*	220*	220*	228*	230*	232*	235	237
New Hampshire	230*	—	—	—	243*	246*	249*	251	252
New Jersey	227*	227*	—	—	239*	244*	249	247	248
New Mexico	213*	214*	214*	213*	223*	224*	228*	230*	233
New York	218*	223*	227*	225*	236	238	243*	241*	238
North Carolina	213*	224*	232*	230*	242*	241*	242*	244	245
North Dakota	229*	231*	231*	230*	238*	243*	245	245	245
Ohio	219*	—	231*	230*	238*	242	245	244	244
Oklahoma	220*	—	225*	224*	229*	234*	237	237	237
Oregon	—	223*	227*	224*	236	238	236	238	237
Pennsylvania	224*	226*	—	—	236*	241*	244	244	246
Rhode Island	215*	220*	225*	224*	230*	233*	236*	239*	242
South Carolina	212*	213*	220*	220*	236	238	237	236	237
South Dakota	—	—	—	—	237*	242	241	242	241
Tennessee	211*	219*	220*	220*	228*	232	233	232	233
Texas	218*	229*	233*	231*	237*	242	242	240	241
Utah	224*	227*	227*	227*	235*	239*	239*	240	243
Vermont	—	225*	232*	232*	242*	244*	246	248	247
Virginia	221*	223*	230*	230*	239*	240*	244	243	245
Washington	—	225*	—	—	238*	242	243	242	243
West Virginia	215*	223*	225*	223*	231*	231*	236	233	235
Wisconsin	229*	231*	—	—	237*	241*	244	244	245
Wyoming	225*	223*	229*	229*	241*	243	244	242*	244
Other jurisdictions									
District of Columbia	193*	187*	193*	192*	205*	211*	214*	219*	222
DoDEA <sup>1</sup>	—	224*	228*	227*	237*	239*	240	240	241

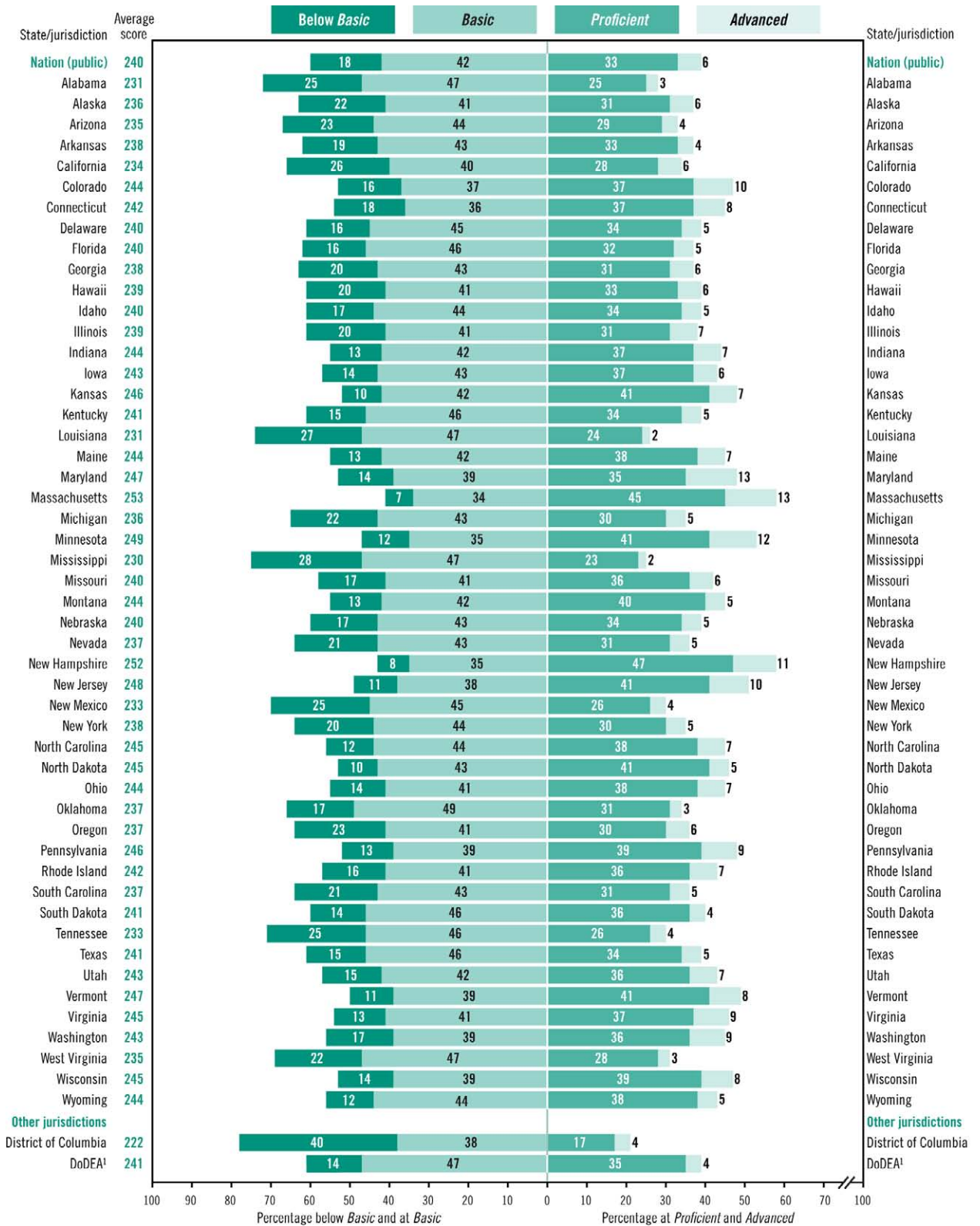
— Not available. The state/jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup> 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), various years, 1992–2011 Mathematics Assessments.

**Figure 15. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by state/jurisdiction: 2011**



<sup>1</sup> 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), 2011 Mathematics Assessment.

## States vary in racial/ethnic makeup

The performance of students in individual states should be interpreted in the context of differences in their demographic makeup. For example, the proportions of students from different racial/ethnic groups reported in NAEP varied widely across states in 2011 (**figure 16**).

- White students made up the largest proportion of fourth-grade public school students in the nation (52 percent), with percentages in the states ranging from 8 percent in the District of Columbia to 92 percent in Maine, Vermont, and West Virginia.
- Black students made up 16 percent of fourth-grade public school students nationally, ranging from 1 percent of the students in Idaho, Montana, and Wyoming to 77 percent in the District of Columbia.
- Hispanic students made up 24 percent of fourth-grade public school students in the nation, ranging from 1 percent of the students in Vermont and West Virginia to 60 percent in New Mexico.
- Asian students made up 5 percent of fourth-grade public school students in the nation but over one-third of the students in Hawaii (36 percent).
- American Indian/Alaska Native students made up 1 percent of fourth-grade public school students in the nation but about one-fifth of the students in Alaska (23 percent) and in Oklahoma (18 percent).

Although not shown in the figure, Native Hawaiian/Other Pacific Islander students made up 33 percent of the students in Hawaii, and 2 percent or less of the students in all the other states. The Department of Defense schools had the highest proportion of multiracial students (11 percent); 8 percent or less of the students in other states identified with two or more races.

Almost all of the states that participated in the mathematics assessment in 1992 had larger percentages of Hispanic students and smaller percentages of White students in 2011 (see appendix **table A-12**). There were no significant changes in the percentages of Hispanic students in New York or White students in Alabama, Louisiana, South Carolina, or Tennessee; and the percentages of White students in the District of Columbia and Mississippi were higher in 2011 than in 1992.

## White – Black score gaps narrow from 1992 in 16 states, and White – Hispanic score gaps narrow in 4 states

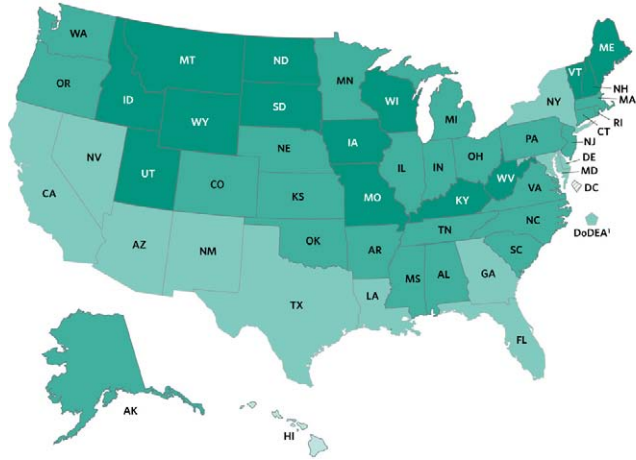
Average mathematics scores for White, Black, and Hispanic students were higher in 2011 than in 1992 for fourth-graders in the nation and in all the states that participated in both assessment years and had samples large enough to report results for each group (**figure 17**). The White – Black score gap narrowed from 1992 to 2011 in 16 of the 35 states with samples large enough to report results for Black students. The White – Hispanic gap narrowed from 1992 to 2011 in 4 of the 21 states with samples large enough to report results for Hispanic students. Both the White – Black and White – Hispanic score gaps narrowed in Massachusetts, New Jersey, and New York.

### State Profiles

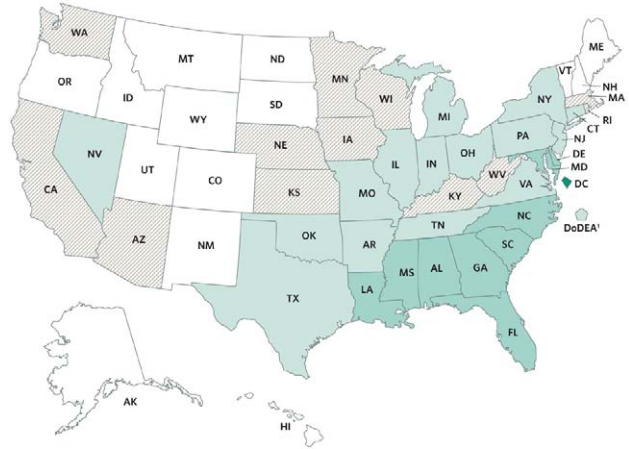
Additional information on each state's school and student populations and their performance on NAEP assessments is available at <http://nces.ed.gov/nationsreportcard/states/>.

Figure 16. Percentage range of fourth-grade public school students assessed in NAEP mathematics, by race/ethnicity: 2011

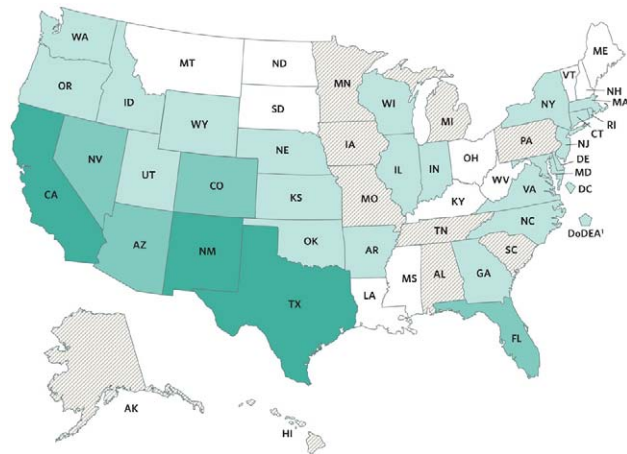
White



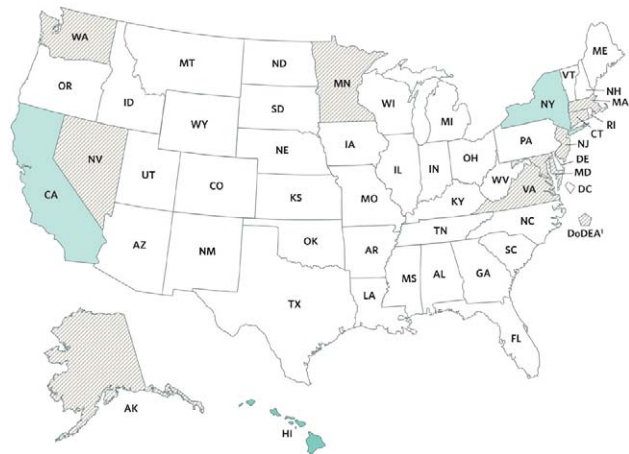
Black



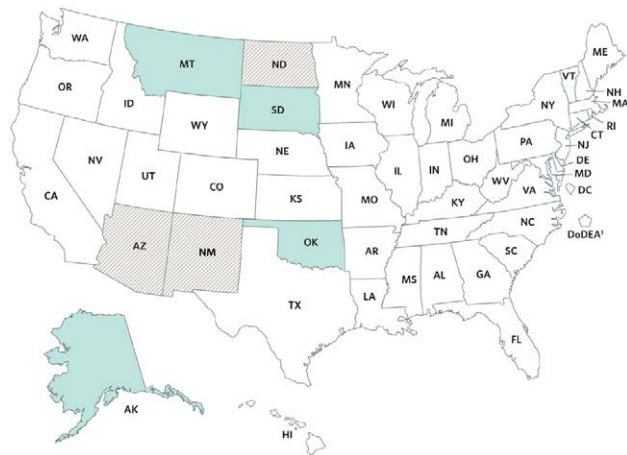
Hispanic



Asian



American Indian/Alaska Native



- Less than 5%
- ▨ 5-9%
- 10-24%
- 25-49%
- 50-74%
- 75% or more

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).  
NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Results are not shown for students whose race/ethnicity was Native Hawaiian/ Other Pacific Islander or two or more races.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

**Figure 17. Changes between 1992 and 2011 NAEP mathematics average scores and score gaps for fourth-grade public school students, by selected race/ethnicity categories and state/jurisdiction**

State/jurisdiction	Race/ethnicity				Score gap	
	Overall	White	Black	Hispanic	White – Black	White – Hispanic
<b>Nation (public)</b>	▲	▲	▲	▲	Narrowed	Narrowed
Alabama	▲	▲	▲	‡	Narrowed	‡
Alaska	—	—	—	—	—	—
Arizona	▲	▲	▲	▲	◆	◆
Arkansas	▲	▲	▲	‡	◆	‡
California	▲	▲	▲	▲	Narrowed	◆
Colorado	▲	▲	▲	▲	◆	◆
Connecticut	▲	▲	▲	▲	◆	◆
Delaware	▲	▲	▲	‡	Narrowed	‡
Florida	▲	▲	▲	▲	Narrowed	◆
Georgia	▲	▲	▲	‡	Narrowed	‡
Hawaii	▲	▲	▲	▲	◆	◆
Idaho	▲	▲	‡	▲	‡	◆
Illinois	—	—	—	—	—	—
Indiana	▲	▲	▲	‡	◆	‡
Iowa	▲	▲	‡	‡	‡	‡
Kansas	—	—	—	—	—	—
Kentucky	▲	▲	▲	‡	◆	‡
Louisiana	▲	▲	▲	‡	Narrowed	‡
Maine	▲	▲	‡	‡	‡	‡
Maryland	▲	▲	▲	▲	Narrowed	◆
Massachusetts	▲	▲	▲	▲	Narrowed	Narrowed
Michigan	▲	▲	▲	‡	Narrowed	‡
Minnesota	▲	▲	▲	‡	◆	‡
Mississippi	▲	▲	▲	‡	Narrowed	‡
Missouri	▲	▲	▲	‡	◆	‡
Montana	—	—	—	—	—	—
Nebraska	▲	▲	▲	▲	◆	◆
Nevada	—	—	—	—	—	—
New Hampshire	▲	▲	‡	‡	‡	‡
New Jersey	▲	▲	▲	▲	Narrowed	Narrowed
New Mexico	▲	▲	▲	▲	◆	◆
New York	▲	▲	▲	▲	Narrowed	Narrowed
North Carolina	▲	▲	▲	‡	Narrowed	‡
North Dakota	▲	▲	‡	‡	‡	‡
Ohio	▲	▲	▲	‡	◆	‡
Oklahoma	▲	▲	▲	▲	◆	◆
Oregon	—	—	—	—	—	—
Pennsylvania	▲	▲	▲	▲	Narrowed	◆
Rhode Island	▲	▲	▲	▲	◆	Narrowed
South Carolina	▲	▲	▲	‡	◆	‡
South Dakota	—	—	—	—	—	—
Tennessee	▲	▲	▲	‡	◆	‡
Texas	▲	▲	▲	▲	Narrowed	◆
Utah	▲	▲	‡	▲	‡	◆
Vermont	—	—	—	—	—	—
Virginia	▲	▲	▲	‡	Narrowed	‡
Washington	—	—	—	—	—	—
West Virginia	▲	▲	▲	‡	◆	‡
Wisconsin	▲	▲	▲	▲	◆	◆
Wyoming	▲	▲	‡	▲	‡	◆
Other jurisdictions						
District of Columbia	▲	▲	▲	▲	◆	◆
DoDEA <sup>1</sup>	—	—	—	—	—	—

▲ Higher in 2011. — State/jurisdiction did not participate in 1992.  
 ◆ Not significantly different from 2011. ‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).  
 NOTE: Included in the overall results but not shown separately are students whose race/ethnicity was Asian/Pacific Islander, American Indian/Alaska Native, unclassified, or two or more races. Black includes African American, and Hispanic includes Latino. 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), 1992 and 2011 Mathematics Assessments.

# Assessment Content at Grade 4

Additional insight into students' performance on the NAEP mathematics assessment can be obtained by examining what fourth-graders are expected to know and be able to do and how they performed on some of the assessment questions designed to measure their knowledge and skills.

## Mathematics Achievement-Level Descriptions for Grade 4

NAEP mathematics achievement-level descriptions outline expectations of student performance at each grade. The specific descriptions of what fourth-graders should know and be able to do at the *Basic*, *Proficient*, and *Advanced* mathematics achievement levels are presented below. (Note that the shaded text is a short, general summary to describe performance at each achievement level.)

NAEP achievement levels are cumulative; therefore, students performing at the *Proficient* level also display the competencies associated with the *Basic* level, and students at the *Advanced* level also demonstrate the skills and knowledge associated with both the *Basic* and the *Proficient* levels. The cut score indicating the lower end of the score range for each level is noted in parentheses.

### *Basic* (214)

**Fourth-grade students performing at the *Basic* level should show some evidence of understanding the mathematical concepts and procedures in the five NAEP content areas.**

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—although not always accurately—four-function calculators, rulers, and geometric shapes. Their written responses are often minimal and presented without supporting information.

### *Proficient* (249)

**Fourth-grade students performing at the *Proficient* level should consistently apply integrated procedural knowledge and conceptual understanding to problem solving in the five NAEP content areas.**

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-grade students performing at the *Advanced* level should apply integrated procedural knowledge and conceptual understanding to complex and nonroutine real-world problem solving in the five NAEP content areas.**

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.

# What Fourth-Graders Know and Can Do in Mathematics

The item map below is useful for understanding performance at different levels on the NAEP scale. The scale scores on the left represent the scores for students who were likely to get the items correct or complete. The cut score at the lower end of the range for each achievement level is boxed. The descriptions of selected assessment questions indicating what students need to do to answer the question correctly, along with the corresponding mathematics content areas, are listed on the right.

For example, the map on this page shows that fourth-graders performing at the *Basic* level with a score of 216 were likely to be able to determine the measurements needed for computing area. Students performing at the *Proficient* level with a score of 279 were likely to be able to recognize and extend an algebraic pattern. Students performing at the *Advanced* level with a score of 290 were likely to be able to compare two sets of data presented graphically.

## GRADE 4 NAEP MATHEMATICS ITEM MAP

Scale score	Content area	Question description
500		
///		
<b>330</b>	<b>Number properties and operations</b>	Compose numbers using place value to determine winners of a game
317	<b>Geometry</b>	Divide a square into various shapes
293	<b>Measurement</b>	Solve a story problem involving time (calculator available) ( <b>shown on pages 32 and 33</b> )
291	<b>Algebra</b>	<i>Identify the growth relationship from a table</i> (calculator available)
290	<b>Data analysis, statistics, and probability</b>	<i>Compare two sets of data using graphs</i>
<b>282</b>		
279	<b>Algebra</b>	<i>Recognize and extend a growing pattern</i>
278	<b>Number properties and operations</b>	Order fractions with unlike denominators
276	<b>Measurement</b>	Draw a line segment of a given length
275	<b>Number properties and operations</b>	Use place value to determine the total amount
269	<b>Geometry</b>	<i>Compare simple figures to identify a common property</i> ( <b>shown on page 31</b> )
261	<b>Number properties and operations</b>	Identify and use factors to solve a problem in context (calculator available)
259	<b>Number properties and operations</b>	<i>Use place value to find a sum</i>
254	<b>Data analysis, statistics, and probability</b>	Create a pictograph of a set of data (calculator available)
250	<b>Measurement</b>	<i>Find areas of a scale drawing on a grid</i>
<b>249</b>		
243	<b>Algebra</b>	Label sections on a grid from a list of coordinates
240	<b>Number properties and operations</b>	<i>Determine the sum of numbers represented on a number line</i> (calculator available)
239	<b>Number properties and operations</b>	Explain a property of divisibility
232	<b>Number properties and operations</b>	<i>Compute the difference of two 4-digit numbers</i> ( <b>shown on page 30</b> )
230	<b>Number properties and operations</b>	<i>Solve a story problem involving division</i> (calculator available)
226	<b>Data analysis, statistics, and probability</b>	<i>Identify the most likely outcome from a given spinner</i> (calculator available)
221	<b>Geometry</b>	<i>Describe a real-world object in terms of a geometric solid</i>
216	<b>Measurement</b>	<i>Identify measurements needed to determine area</i>
<b>214</b>		
211	<b>Number properties and operations</b>	<i>Compute the difference of fractions with like denominators</i>
195	<b>Algebra</b>	<i>Determine numerical value of an unknown quantity in a whole number sentence</i>
180	<b>Geometry</b>	<i>Identify a figure that is not symmetric</i> (calculator available)
175	<b>Measurement</b>	<i>Identify the appropriate measuring device for a given attribute</i>
///		
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 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), 2011 Mathematics Assessment.

## Mathematics Content Area: Number Properties and Operations

Subtract:

$$\begin{array}{r} 6,090 \\ - 4,843 \\ \hline \end{array}$$

- A 1,147
- B 1,247
- C 2,257
- D 2,853

This multiple-choice question from the 2011 mathematics assessment asks students to answer a subtraction problem involving two 4-digit numbers. The problem requires students to regroup twice to obtain the correct answer of 1,247 (Choice B). Students were not permitted to use a calculator to answer this question.

Seventy-four percent of fourth-grade students answered this question correctly. The most common incorrect answer (Choice D), selected by 13 percent of the students, resulted from not doing any regrouping and just subtracting the smaller number from the corresponding larger number at each place value. Choices A and C, while selected less frequently, represent different regrouping errors.

### Percentage of fourth-grade students in each response category: 2011

Choice A	Choice B	Choice C	Choice D	Omitted
7	74	5	13	1

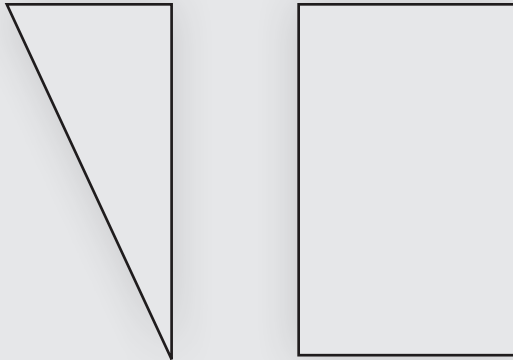
The table below shows the percentage of fourth-grade students performing at each achievement level who answered this question correctly. For example, 73 percent of fourth-graders at the *Basic* level selected the correct answer choice.

### Percentage of fourth-grade students responding correctly at each achievement level: 2011

Overall	Below <i>Basic</i>	<i>At Basic</i>	<i>At Proficient</i>	<i>At Advanced</i>
74	40	73	90	97



## Mathematics Content Area: Geometry



How are the right triangle and the rectangle alike?

- A Each figure has at least one right angle.
- B Each figure has parallel sides.
- C Each figure has at least one line of symmetry.
- D Each figure has at least two sides that are the same length.

This multiple-choice question measures student performance in the geometry content area. The question asks students to compare two geometric figures—a right triangle and a rectangle—and identify a property common to both figures. Students were not permitted to use a calculator on this question.

Forty-nine percent of fourth-grade students were able to correctly recognize that each figure has at least one right angle (Choice A). The most common incorrect answer (Choice D), selected by 29 percent of students, may have been the result of misinterpreting the length of the hypotenuse as being equal in length to the longer leg of the right triangle.

**Percentage of fourth-grade students in each response category: 2011**

Choice A	Choice B	Choice C	Choice D	Omitted
49	9	12	29	1

The table below shows the percentage of fourth-grade students performing at each achievement level who answered this question correctly. For example, 64 percent of fourth-graders at the *Proficient* level selected the correct answer choice.

**Percentage of fourth-grade students responding correctly at each achievement level: 2011**

Overall	Below Basic	At Basic	At Proficient	At Advanced
49	28	39	64	90

## Mathematics Content Area: Measurement

### MOVIE TIMES

Early Show	3:15
Late Show	7:30

The early show and the late show for a movie last the same amount of time. The early show begins at 3:15 P.M. and ends at 4:27 P.M. The late show begins at 7:30 P.M. At what time does the late show end?

Show your work.

This short constructed-response question measures fourth-graders' ability to perform computations using units of time. The first step requires students to determine the length of the movie from the starting and ending times of the early show. The second step requires that they add that length of time to the starting time of the late show. Students were permitted to use a calculator to solve this question. Responses were rated using three scoring levels.

**Correct** responses gave an answer of 8:42 for the ending time of the late show and provided supporting work, which included either showing a computation for determining the length of the movie from the times of the early show ( $4:27 - 3:15 = 1:12$ , "1 hour and 12 minutes"), or showing the addition of 1:12 to 7:30.

**Partial** responses did one of the following:

- Gave an answer of 8:42 with no work or incorrect work,
- Determined the length of the movie (1 hour and 12 minutes) but did not answer 8:42, or
- Incorrectly determined the length of the movie but correctly used that time to determine the ending time of the late show.

**Incorrect** responses gave an incorrect end time for the late show.

The student response shown below was rated as "Correct" because it provided the correct answer with supporting work. Thirty-one percent of fourth-graders' responses to this question received a rating of "Correct."

$$\begin{array}{r} 4:27 \\ - 3:15 \\ \hline 1:12 \end{array}$$

$$\begin{array}{r} 7:30 \\ + 1:12 \\ \hline 8:42 \end{array}$$

The student response shown below was rated as "Partial" because the ending time of the late show was correctly determined based on an incorrect time for the length of the movie. Eighteen percent of fourth-graders' responses to this question received a rating of "Partial" for one of the reasons described on the previous page.

$$3:15 \text{ to } 4:27 = 1:32$$

$$\begin{array}{r} 7:30 \\ + 1:32 \\ \hline 9:02 \end{array}$$

### Explore Additional Sample Questions and Data

Additional sample questions from the NAEP mathematics assessment can be found in the NAEP Questions Tool (NQT) at <http://nces.ed.gov/nationsreportcard/itmrlsx/landing.aspx>.

The NQT makes it possible to search for questions by subject, grade, difficulty, and other characteristics. You can view questions, scoring guides, sample student responses, and performance data, as well as create customized reports.

#### Percentage of fourth-grade students in each response category: 2011

Correct	Partial	Incorrect	Omitted
31	18	47	4

The table below shows the percentage of fourth-graders performing at each achievement level who received a rating of "Correct" on the question. For example, 76 percent of students performing at the *Advanced* level provided a response rated as "Correct."

#### Percentage of fourth-grade students' responses rated as "Correct" at each achievement level: 2011

Overall	Below Basic	At Basic	At Proficient	At Advanced
31	1	19	52	76

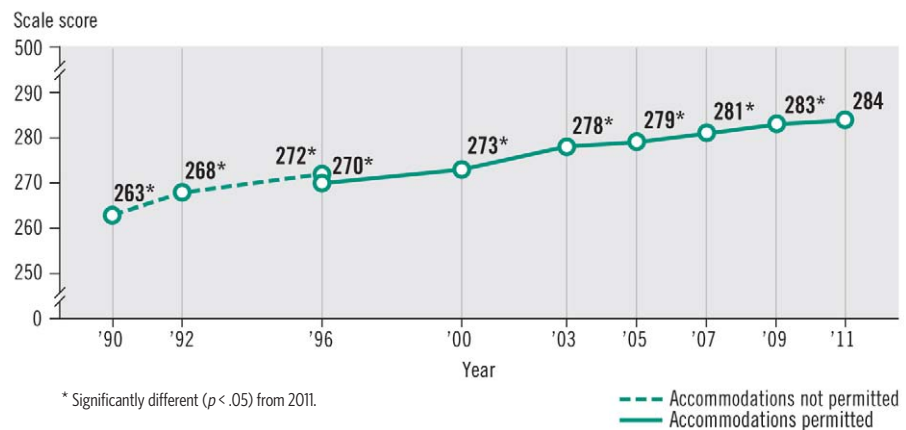
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

## Eighth-graders score higher in 2011 than in previous assessment years

The average mathematics score for the nation's eighth-graders in 2011 was higher than the scores in the eight previous assessment years (**figure 18**). Students scored 1 point higher in 2011 than in 2009 and 21 points higher than in 1990.

Other national results show higher scores in 2011 than 2009 for Hispanic students, female students, and students from both lower- and higher-income families. State results show higher scores in 2011 than in 2009 for 13 of the 52 participating states and jurisdictions, and a lower score in 1 state.

**Figure 18.** Trend in eighth-grade NAEP mathematics average scores

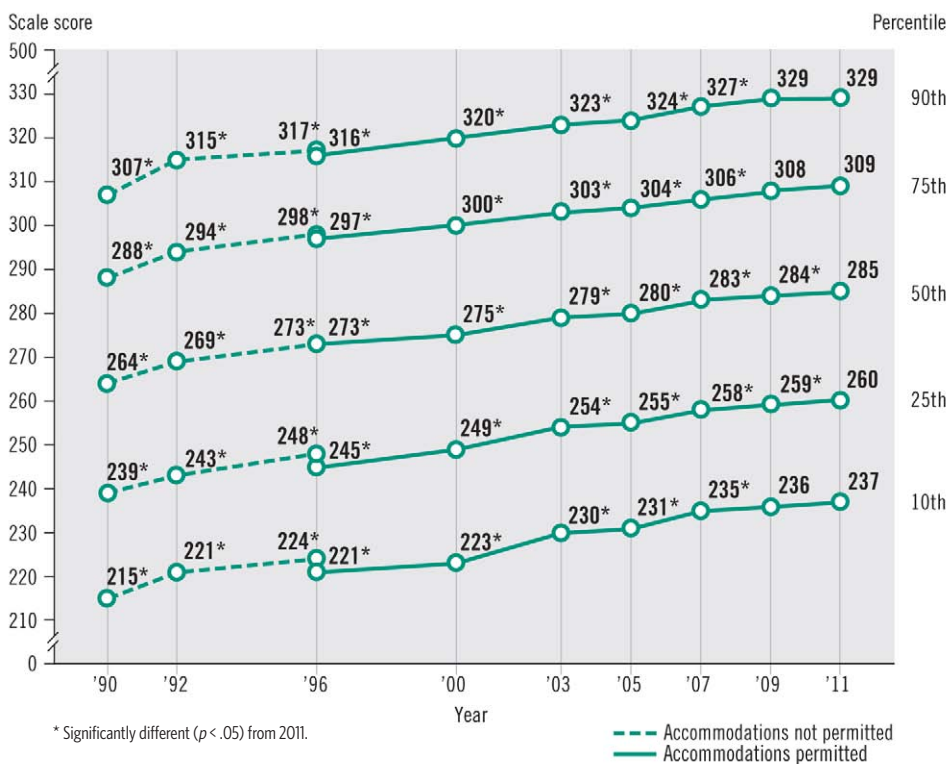


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2011 Mathematics Assessments.

## Improvement from 2009 to 2011 among middle-performing students

Scores were higher in 2011 than in 2009 for students at the 25th and 50th percentiles, but did not change significantly for lower-performing students at the 10th percentile, or higher-performing students at the 75th and 90th percentiles (figure 19). Scores at all five percentiles were higher in 2011 than in 1990.

**Figure 19.** Trend in eighth-grade NAEP mathematics percentile scores



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2011 Mathematics Assessments.

## A closer look at some of the background characteristics of lower- and higher-performing students

Profiles of students scoring at the lower end of the scale (below the 25th percentile) and those scoring at the higher end (above the 75th percentile) show how the two groups differed demographically.

Among eighth-graders who scored **below the 25th percentile** (i.e., below a score of 260) in 2011,

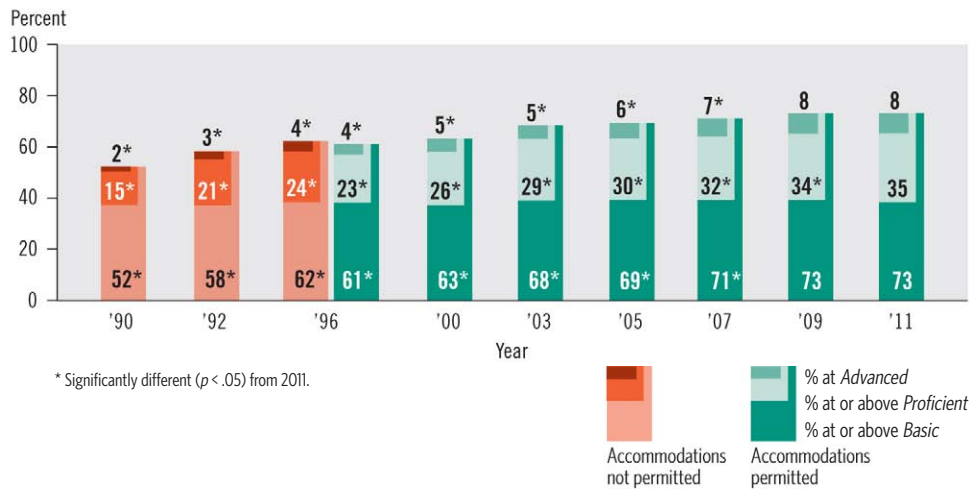
- **33%** were White, **28%** were Black, **32%** were Hispanic, and **2%** were Asian;
- **68%** were eligible for free/reduced-price school lunch;
- **25%** were identified as students with disabilities; and
- **15%** were identified as English language learners.

Among eighth-graders who scored **above the 75th percentile** (i.e., above a score of 309) in 2011,

- **72%** were White, **5%** were Black, **11%** were Hispanic, and **10%** were Asian;
- **20%** were eligible for free/reduced-price school lunch;
- **2%** were identified as students with disabilities; and
- **1%** were identified as English language learners.

Thirty-five percent of eighth-graders performed at or above the *Proficient* level in 2011, which was higher than the percentage in any of the previous assessment years (**figure 20**). The percentages of students performing at or above the *Basic* level and at *Advanced* did not change significantly from 2009 to 2011, but were still higher in 2011 than in the earlier assessments from 1990 to 2007.

**Figure 20. Trend in eighth-grade NAEP mathematics achievement-level results**



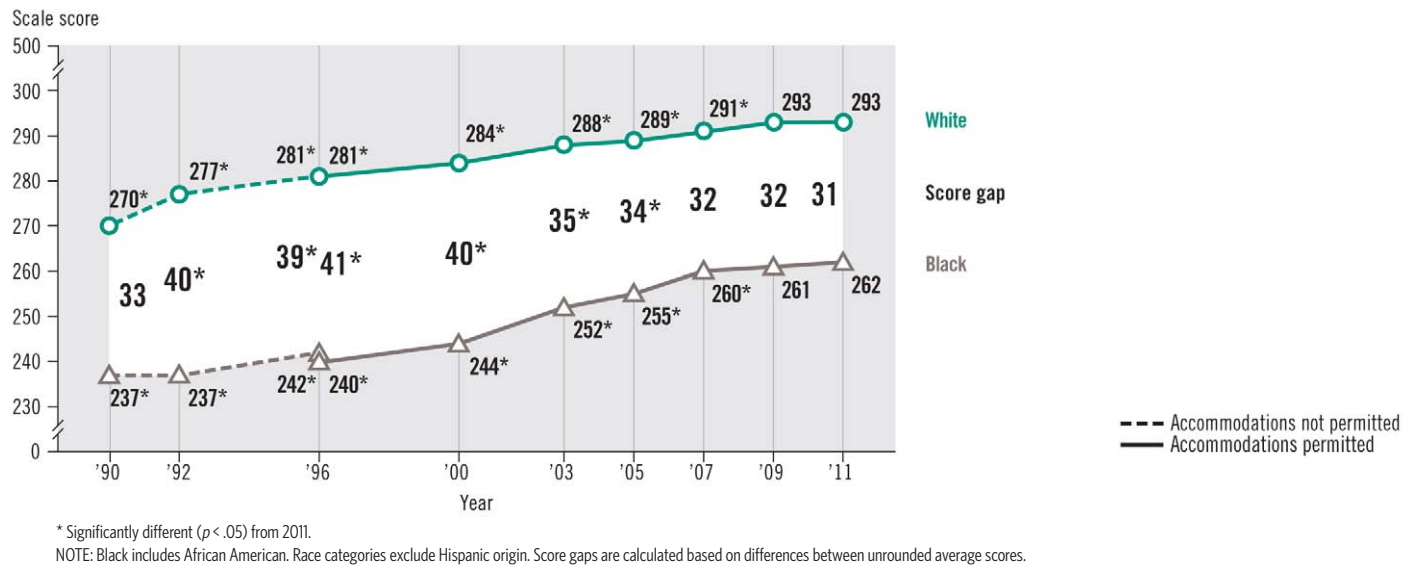
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

## Scores higher than in 2009 for Hispanic students but not significantly different for other racial/ethnic groups

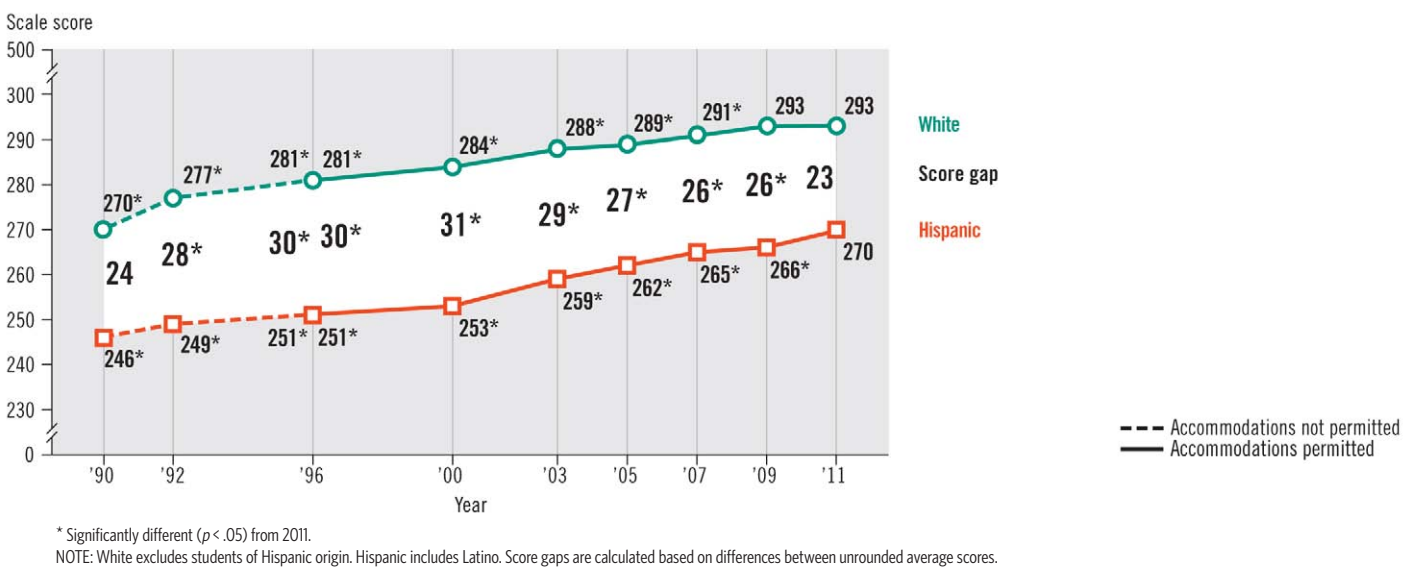
While there were no significant changes from 2009 to 2011 in the average scores for White or Black students (figure 21), the average score for Hispanic students was 4 points higher in 2011 than in 2009 (figure 22). Scores for all three groups were higher in 2011 than in 1990.

The 31-point score gap between White and Black students in 2011 did not differ significantly from the gap in either 2009 or 1990. The 23-point score gap between White and Hispanic students in 2011 was smaller than the gap in 2009 but not significantly different from the gap in 1990.

**Figure 21. Trend in eighth-grade NAEP mathematics average scores and score gaps for White and Black students**



**Figure 22. Trend in eighth-grade NAEP mathematics average scores and score gaps for White and Hispanic students**

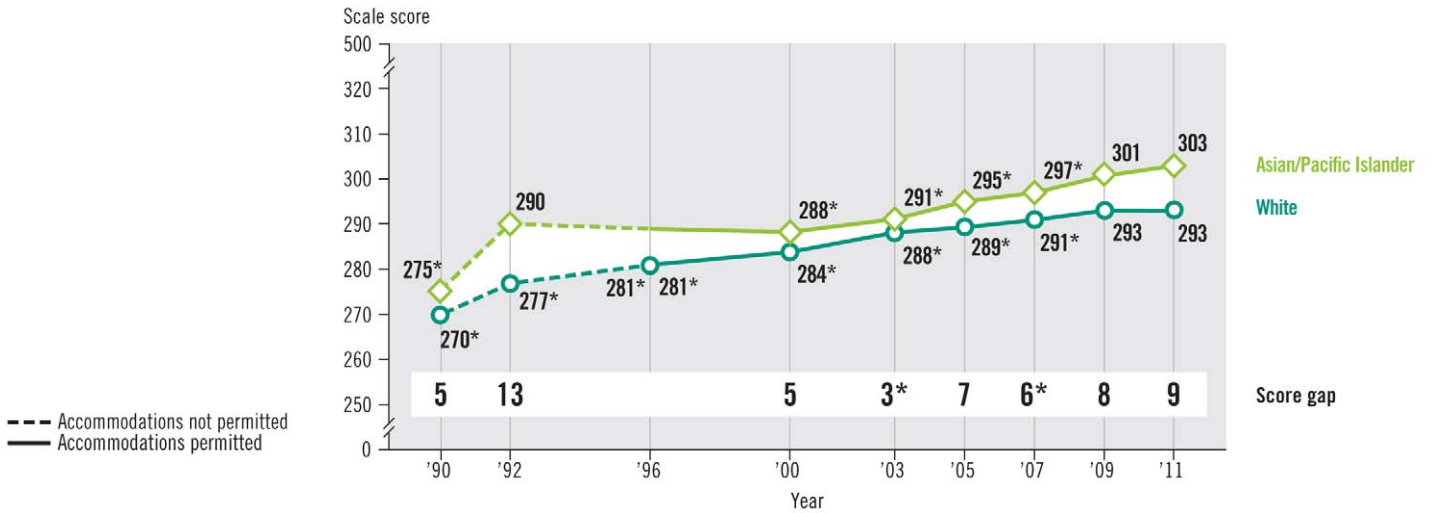


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

The average score for Asian/Pacific Islander students in 2011 did not change significantly from the score in 2009 but was higher than the score in 1990 (figure 23). Asian/Pacific Islander students scored 9 points higher on average than White students in 2011, which was not significantly different from the score gap in 2009.

The average score for American Indian/Alaska Native students in 2011 was not significantly different from any of the earlier assessments in which samples were large enough to report results (figure 24). American Indian/Alaska Native students scored 28 points lower on average than White students in 2011, which was not significantly different from the gap in 2009.

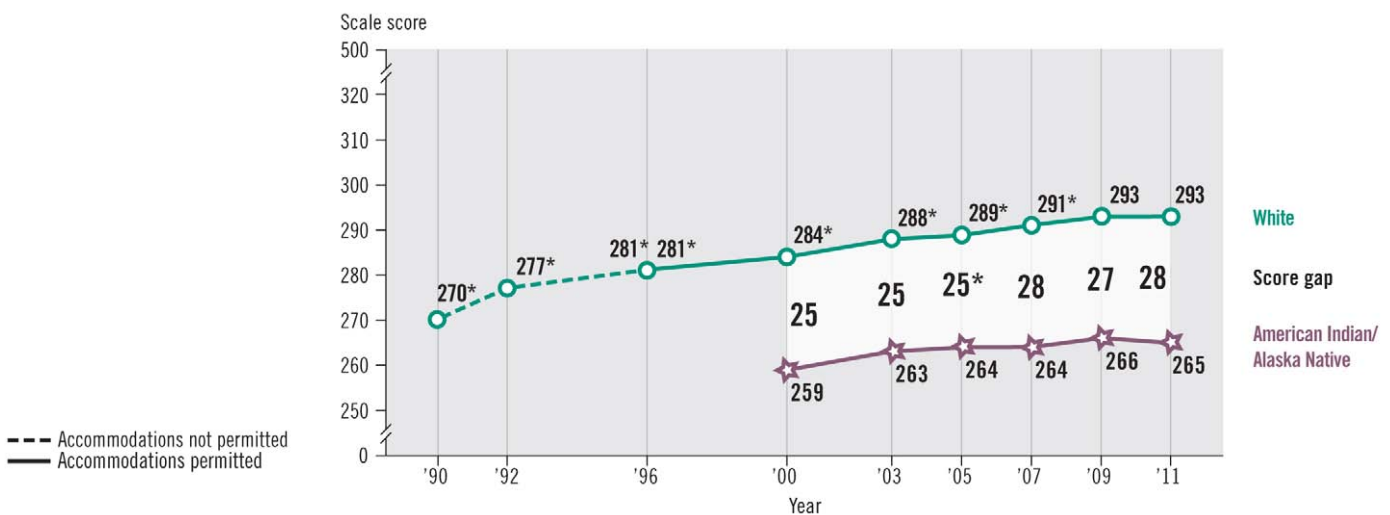
**Figure 23. Trend in eighth-grade NAEP mathematics average scores and score gaps for Asian/Pacific Islander and White students**



\* Significantly different ( $p < .05$ ) from 2011.

NOTE: Special analyses raised concerns about the accuracy and precision of the results for Asian/Pacific Islander students in 1996; therefore, they are omitted from this figure. Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores. Score differences between Asian/Pacific Islander and White students were not found to be statistically significant in 1990, 1992, and 2000.

**Figure 24. Trend in eighth-grade NAEP mathematics average scores and score gaps for White and American Indian/Alaska Native students**



\* Significantly different ( $p < .05$ ) from 2011.

NOTE: Sample sizes were insufficient to permit reliable estimates for American Indian/Alaska Native students in 1990, 1992, and 1996. Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.



The percentage of White eighth-graders was smaller in 2011 than in any of the earlier assessment years, and the percentage of Hispanic students was larger (table 8). The percentage of Asian/Pacific Islander students did not change significantly from 2009 to 2011 but was larger in 2011 than in 1990.

**Table 8. Percentage distribution of students assessed in eighth-grade NAEP mathematics, by race/ethnicity: Various years, 1990–2011**

Race/ethnicity	1990 <sup>1</sup>	1992 <sup>1</sup>	1996	2000	2003	2005	2007	2009	2011
White	73*	73*	69*	65*	63*	61*	59*	58*	55
Black	16	16*	17	16	16*	16*	16	15	15
Hispanic	7*	8*	10*	13*	15*	16*	18*	20*	21
Asian/Pacific Islander	2*	2*	‡	4*	4*	5*	5*	5	6
American Indian/Alaska Native	1	1	1	2	1	1*	1*	1*	1
Two or more races	#*	1	#*	1*	1*	1*	1*	1*	2

# Rounds to zero.

‡ Reporting standards not met. Special analyses raised concerns about the accuracy and precision of the results for Asian/Pacific Islander students in 1996; therefore, they are omitted from this table.

\* Significantly different ( $p < .05$ ) from 2011.

<sup>1</sup> Accommodations not permitted.

NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Prior to 2011, students in the two or more races category were categorized as unclassified. Detail may not sum to totals because of rounding.

## NAEP Results for Newly Reported Racial/Ethnic Groups

In compliance with new standards from the U.S. Office of Management and Budget for collecting and reporting data on race/ethnicity, additional information on students' race/ethnicity was collected in 2011 so that results could be reported separately for Asian students, Native Hawaiian/Other Pacific Islander students, and students categorized as being two or more races (multiracial). See the Technical Notes for more information.

The average score in 2011 for Asian students was higher than the scores for all the other reported racial/ethnic groups (table 9). Native Hawaiian/Other Pacific Islander students scored higher on average than Black students, lower than White and multiracial students, and not significantly different from Hispanic and American Indian/Alaska Native students. The score for multiracial students was higher than the scores for Black, Hispanic, and American Indian/Alaska Native students, but lower than the score for White students.

**Table 9. Percentage of students, average scores, and achievement-level results in eighth-grade NAEP mathematics, by selected racial/ethnic groups: 2011**

Selected racial/ethnic groups	Percentage of students	Average scale score	Percentage of students			
			Below <i>Basic</i>	At <i>Basic</i>	At <i>Proficient</i>	At <i>Advanced</i>
Asian	5	305	12	30	34	24
Native Hawaiian/Other Pacific Islander	#	269	41	37	17	4
Two or more races	2	288	22	38	28	11

# Rounds to zero.

NOTE: Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

## Percentages of Hispanic students at *Proficient* and *Advanced* higher than in 2009

A closer look at achievement-level results shows where improvements were made for different racial/ethnic groups. The percentages of Hispanic students performing at *Proficient* and at *Advanced* were higher in 2011 than in 2009 (figure 25). There were no significant changes from 2009 to 2011 in the percentages of students in other racial/ethnic groups performing at the *Basic*, *Proficient*, and *Advanced* levels.

In comparison to 1990, the percentages of students performing below the *Basic* level were lower in 2011 for all the racial/ethnic groups with samples large enough to report results; however, the percentage of Black students below *Basic* in 2011 (49 percent) was still higher than the percentages of other racial/ethnic groups. White, Hispanic, and Asian/Pacific Islander students all had higher percentages at *Advanced* in 2011 than in 1990. The percentage of Asian/Pacific Islander students at *Advanced* in 2011 (22 percent) was double the percentage for White students (11 percent).

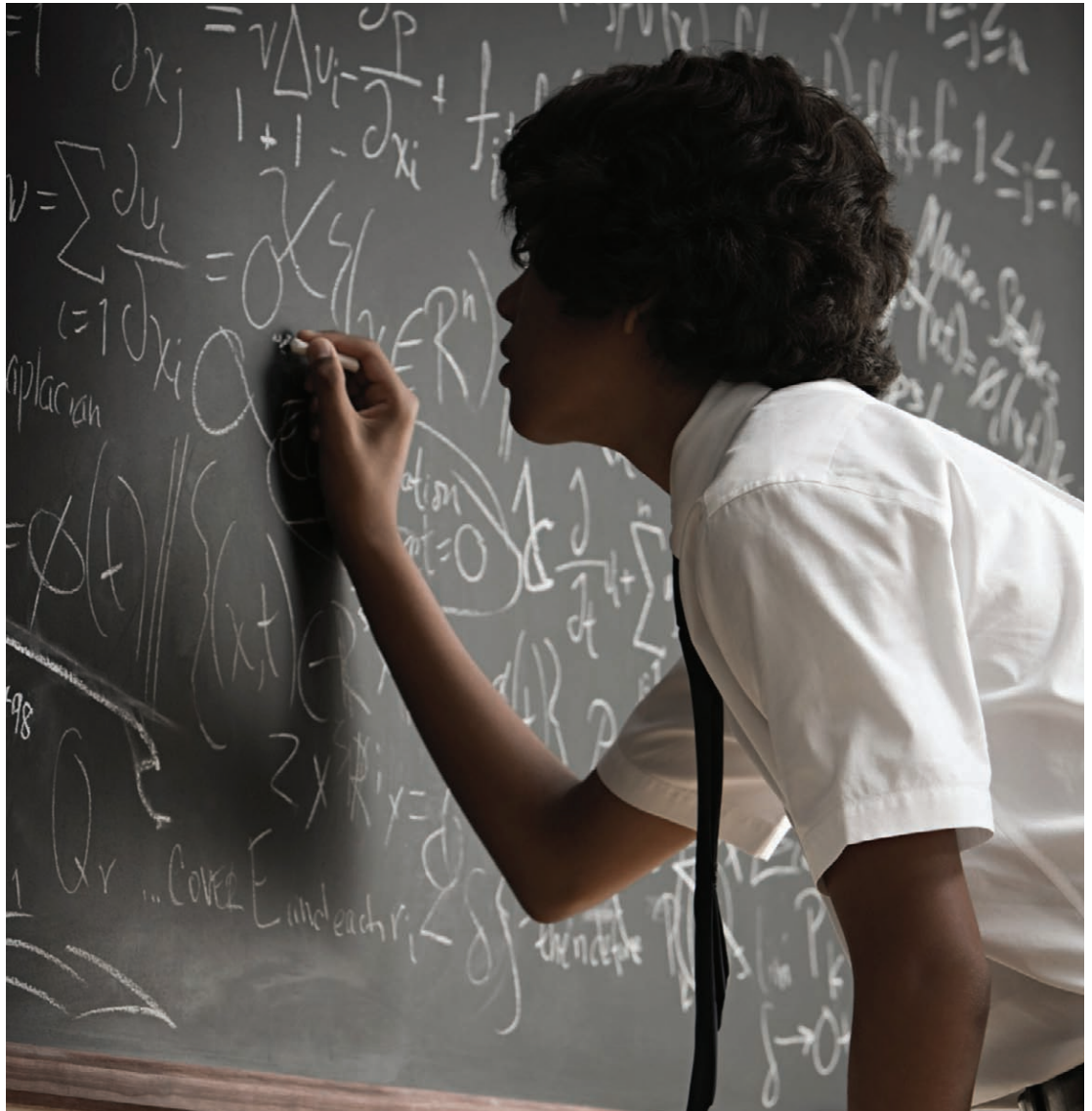
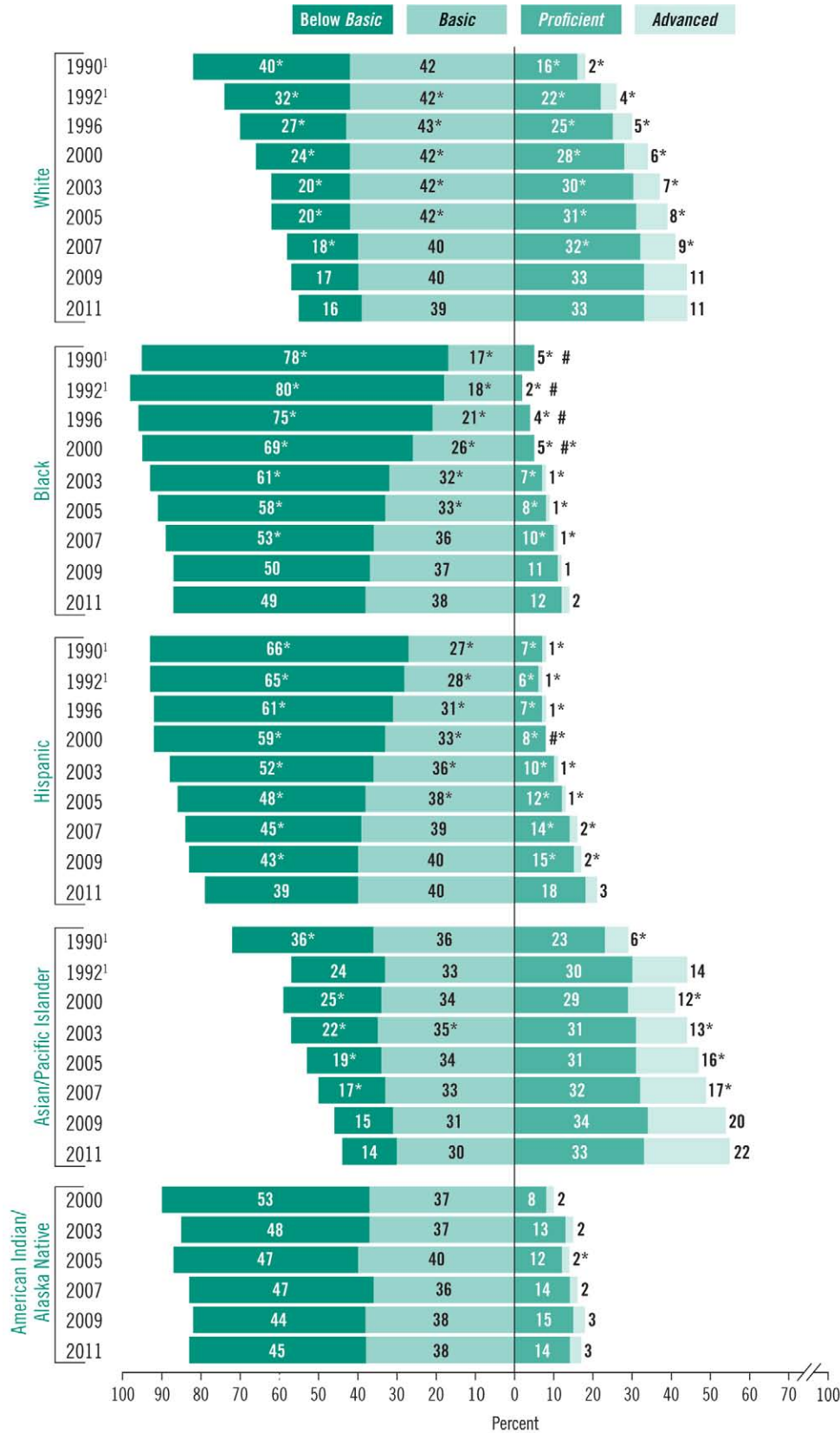


Figure 25. Trend in eighth-grade NAEP mathematics achievement-level results, by race/ethnicity



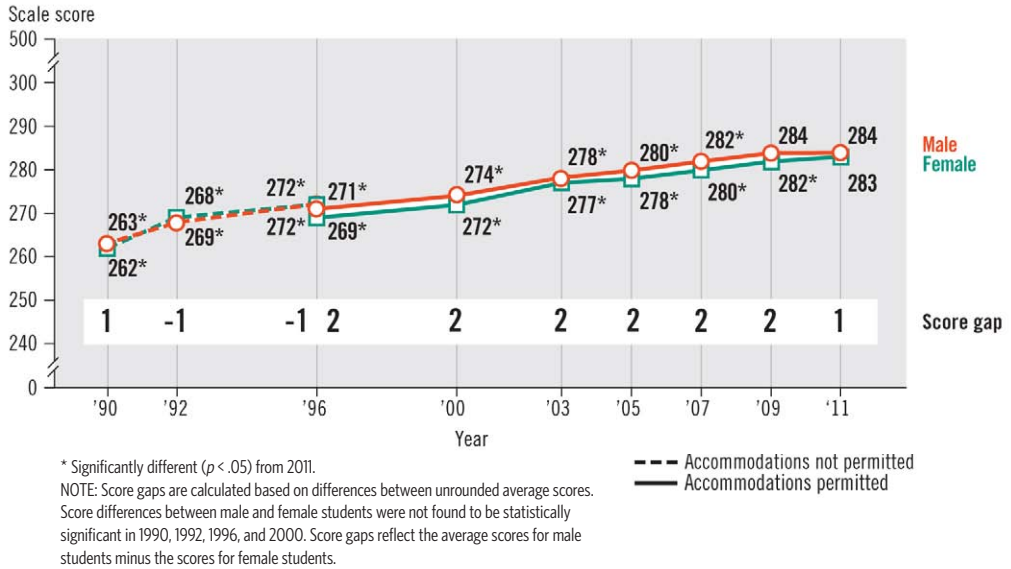
# Rounds to zero.  
 \* Significantly different ( $p < .05$ ) from 2011.  
<sup>1</sup> Accommodations not permitted.  
 NOTE: Special analyses raised concerns about the accuracy and precision of the results for Asian/Pacific Islander students in 1996; therefore, they are omitted from this figure. Sample sizes were insufficient to permit reliable estimates for American Indian/Alaska Native students in 1990, 1992, and 1996. 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 or two or more races. 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, 1990–2011 Mathematics Assessments.

## Female students score higher than in 2009

The average score for female students was higher in 2011 than in 2009, while there was no significant change in the score for male students over the same period (figure 26). Scores for both groups were higher in 2011 than in the earlier assessment years from 1990 to 2007. Male students scored 1 point higher on average than female students in 2011.

**Figure 26.** Trend in eighth-grade NAEP mathematics average scores and score gaps, by gender



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

## No significant change in gap between public and private school students

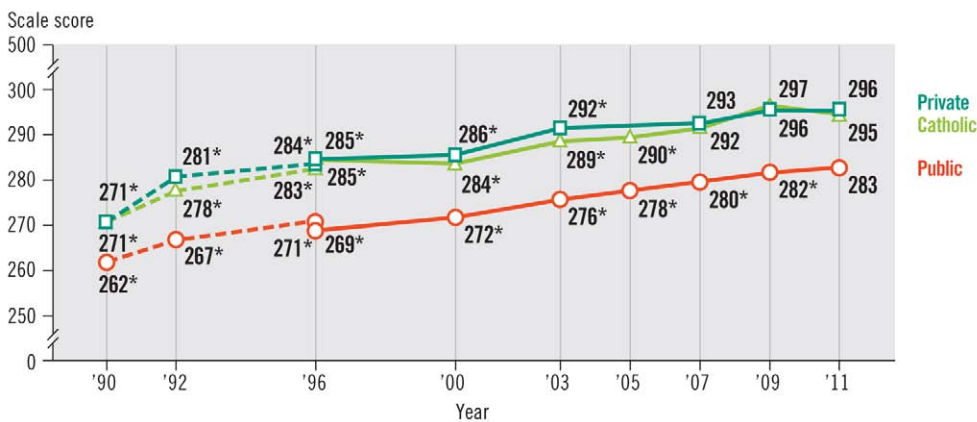
In 2011, the average mathematics score for eighth-graders attending public schools was 13 points lower than the overall score for students attending private schools, and 13 points<sup>2</sup> lower than for students attending Catholic schools specifically (figure 27). The score gap between private and public school students in 2011 was not significantly different from the gaps in previous assessment years.

The average score for public school students was 1 point higher in 2011 than in 2009, while there was no significant change in the scores for private school students overall or for Catholic school students over the same period. Scores for all three groups were higher in 2011 than in 1990.

Ninety-two percent of eighth-graders attended public schools in 2011, and 8 percent attended private schools, including 4 percent in Catholic schools. The proportions of students attending public and private schools have not changed significantly in comparison to 2009 or 1990.

<sup>2</sup> The score-point difference is based on the difference between the unrounded scores as opposed to the rounded scores shown in the figure.

**Figure 27. Trend in eighth-grade NAEP mathematics average scores, by type of school**



\* Significantly different ( $p < .05$ ) from 2011.

NOTE: Private schools include Catholic, other religious, and nonsectarian private schools. Results are not shown for private schools in 2005 because the participation rates fell below the required standards for reporting.

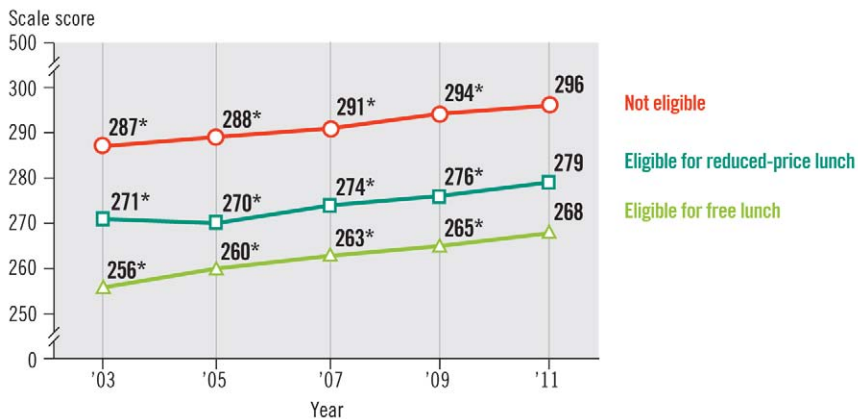
--- Accommodations not permitted  
— Accommodations permitted

## Students across income levels score higher in 2011

Average mathematics scores were higher in 2011 than in earlier assessment years both for students who were eligible for free and reduced-price school lunch, as well as for students who were not eligible (figure 28). In 2011, eighth-graders who were eligible for free lunch scored 28 points lower on average than those not eligible. Students eligible for reduced-price lunch scored 16 points<sup>3</sup> lower than those not eligible.

<sup>3</sup> The score-point difference is based on the difference between the unrounded scores as opposed to the rounded scores shown in the figure.

**Figure 28.** Trend in eighth-grade NAEP mathematics average scores, by eligibility for free or reduced-price school lunch



\* Significantly different ( $p < .05$ ) from 2011.

In comparison to previous assessment years, the percentage of eighth-graders eligible for free school lunch was larger in 2011, and the percentages of students eligible for reduced-price school lunch or not eligible for NSLP were smaller (table 10).

**Table 10.** Percentage distribution of students assessed in eighth-grade NAEP mathematics, by eligibility for free or reduced-price school lunch: Various years, 2003-2011

Eligibility status	2003	2005	2007	2009	2011
Eligible for free lunch	26*	29*	32*	34*	39
Eligible for reduced-price lunch	7*	7*	6*	6*	5
Not eligible	55*	56*	55*	54*	50
Information not available	11*	8*	7*	7*	6

\* Significantly different ( $p < .05$ ) from 2011.

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

## One-third of students taking algebra I in eighth grade

Eighth-graders participating in the 2011 NAEP mathematics assessment were asked what math class they were taking that year. Students selected one course from the following list:

- Geometry
- Algebra II
- Algebra I (one-year course)
- First year of a two-year Algebra I course
- Second year of a two-year Algebra I course
- Introduction to algebra or pre-algebra
- Basic or general eighth-grade math
- Integrated or sequential math
- Other math class

Thirty-four percent of eighth-graders reported taking algebra I (one-year course) in 2011, which was higher than the percentages of students who reported taking each of the other types of mathematics classes listed (table 11). The next highest percentage of students reported taking basic or general mathematics followed by those taking an introductory algebra class.

The percentage of students who reported taking algebra I in 2011 was not significantly different from 2009 but was higher than the percentage who reported taking it in 2005. The percentage of students who reported taking an introductory algebra class was lower in 2011 than in 2009 and 2005. There has been no significant change in the percentage of students taking a basic or general mathematics class.

**Table 11. Percentage of students assessed in eighth-grade NAEP mathematics, by the type of mathematics class taken during the school year: Various years, 2005-11**

Type of class taken	2005	2007	2009	2011
Geometry	4*	4*	4*	5
Algebra II	3*	3*	3*	4
Algebra I (one-year course)	30*	31*	33	34
First year of a two-year Algebra I course	3*	3*	2	2
Second year of a two-year Algebra I course	2	2	2	2
Introduction to algebra or pre-algebra	27*	27*	25*	23
Basic or general eighth-grade math	25	25	25	25
Integrated or sequential math	1*	1	1	1
Other math class	5*	4	4	4

\* Significantly different ( $p < .05$ ) from 2011.

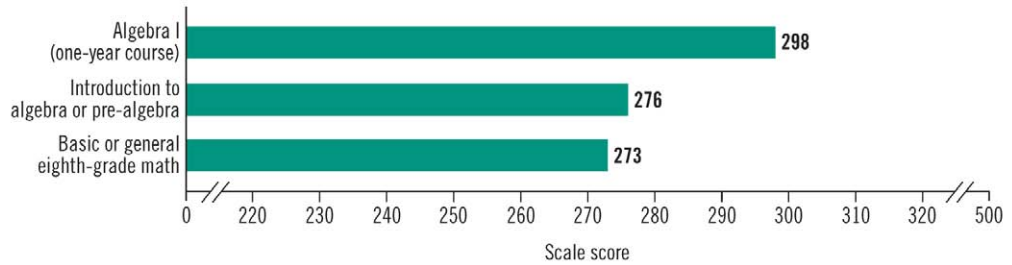
NOTE: Detail may not sum to totals because of rounding.



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005-11 Mathematics Assessments.

Students who reported taking algebra I scored higher on average than students taking an introductory algebra class or a basic or general mathematics class (figure 29). The average score for students who reported taking a basic mathematics class was lower than the score for students taking an introduction to algebra.

**Figure 29. Average scores in eighth-grade NAEP mathematics, by the type of mathematics class students took during the school year: 2011**



NOTE: Results are not shown for the other types of mathematics classes taken by students.

The proportions of students taking certain mathematics courses in 2011 varied by race/ethnicity (table 12). For example, with one exception, the percentage of Asian students taking algebra I was higher than the percentages of other racial/ethnic groups (the percentage of Asian students was not significantly different from the percentage of Native Hawaiian/Other Pacific Islander students taking algebra I). The percentage of American Indian/Alaska Native students taking an introductory algebra class was higher than the percentages of other racial/ethnic groups. The percentages of students taking a basic math course were higher for Black, Hispanic, and American Indian/Alaska Native students than for White, Asian, and multiracial students.

**Table 12. Percentage of students assessed in eighth-grade NAEP mathematics, by race/ethnicity and the type of mathematics class taken during the school year: 2011**

Type of class taken	Race/Ethnicity						
	White	Black	Hispanic	Asian	American Indian/Alaska Native	Native Hawaiian/Other Pacific Islander	Two or more races
Algebra I (one-year course)	36	28	33	45	24	37	34
Introduction to algebra or pre-algebra	25	23	20	13	32	20	24
Basic or general eighth-grade math	23	30	29	13	29	26	23

NOTE: Results are not shown for the other types of mathematics classes taken by students. Black includes African American, and Hispanic includes Latino. 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), 2011 Mathematics Assessment.



# State Performance at Grade 8

All 50 states, the District of Columbia, and Department of Defense schools participated in the 2011 mathematics assessment at grade 8. These 52 states and jurisdictions are all referred to as “states” in the following summary of results. State results for grade 8 are also available for eight earlier assessment years (**table 13**). While all states have participated in the assessments since 2003, not all have participated or met the criteria for reporting in earlier assessment years.

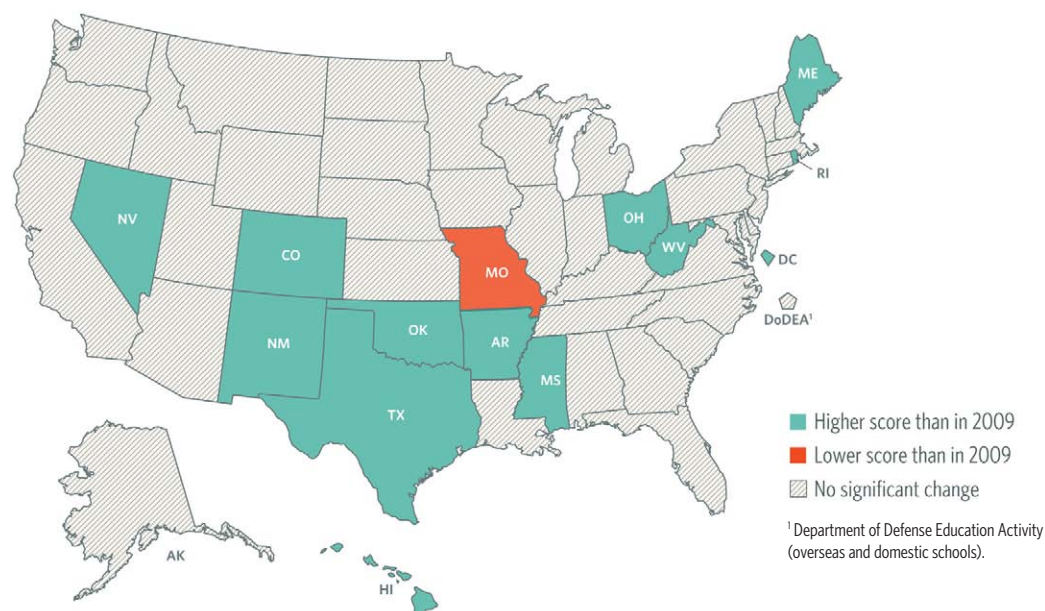
As in the grade 4 section, the results presented in this section for the nation and states are for public school students only and may differ from the national results presented earlier that are based on data for both public and private school students.

## Scores higher than in 2009 for students in 13 states and lower in 1 state

The map below highlights changes in states’ average eighth-grade mathematics scores from 2009 to 2011 (**figure 30**). Scores were higher in 2011 than in 2009 in Arkansas, Colorado, the District of Columbia, Hawaii, Maine, Mississippi, Nevada, New Mexico, Ohio, Oklahoma, Rhode Island, Texas, and West Virginia. The average score in Missouri was lower in 2011 than in 2009.

Thirty-four percent of eighth-grade public school students performed at or above the *Proficient* level in 2011, with percentages ranging from 17 percent in the District of Columbia to 51 percent in Massachusetts (**figure 31**). The percentages of students at or above *Proficient* were higher in 2011 than in 2009 in the District of Columbia, Hawaii, Maine, Mississippi, Nevada, New Mexico, Rhode Island, and Virginia (see appendix **table A-23**). Percentages of students at or above *Proficient* were lower in 2011 than in 2009 in Missouri, New York, and Oregon.

**Figure 30.** Changes in eighth-grade NAEP mathematics average scores between 2009 and 2011



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2011 Mathematics Assessments.

**Table 13. Average scores in NAEP mathematics for eighth-grade public school students, by state/jurisdiction: Various years, 1990-2011**

State/jurisdiction	Accommodations not permitted				Accommodations permitted					
	1990	1992	1996	2000	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>262*</b>	<b>267*</b>	<b>271*</b>	<b>274*</b>	<b>272*</b>	<b>276*</b>	<b>278*</b>	<b>280*</b>	<b>282*</b>	<b>283</b>
Alabama	253*	252*	257*	262*	264*	262*	262*	266	269	269
Alaska	—	—	278*	—	—	279*	279*	283	283	283
Arizona	260*	265*	268*	271*	269*	271*	274*	276*	277	279
Arkansas	256*	256*	262*	261*	257*	266*	272*	274*	276*	279
California	256*	261*	263*	262*	260*	267*	269*	270	270	273
Colorado	267*	272*	276*	—	—	283*	281*	286*	287*	292
Connecticut	270*	274*	280*	282*	281*	284*	281*	282*	289	287
Delaware	261*	263*	267*	—	—	277*	281*	283	284	283
Florida	255*	260*	264*	—	—	271*	274*	277	279	278
Georgia	259*	259*	262*	266*	265*	270*	272*	275*	278	278
Hawaii	251*	257*	262*	263*	262*	266*	266*	269*	274*	278
Idaho	271*	275*	—	278*	277*	280*	281*	284*	287	287
Illinois	261*	—	—	277*	275*	277*	278*	280	282	283
Indiana	267*	270*	276*	283	281*	281*	282*	285	287	285
Iowa	278*	283	284	—	—	284	284	285	284	285
Kansas	—	—	—	284*	283*	284*	284*	290	289	290
Kentucky	257*	262*	267*	272*	270*	274*	274*	279*	279	282
Louisiana	246*	250*	252*	259*	259*	266*	268*	272	272	273
Maine	—	279*	284*	284*	281*	282*	281*	286*	286*	289
Maryland	261*	265*	270*	276*	272*	278*	278*	286	288	288
Massachusetts	—	273*	278*	283*	279*	287*	292*	298	299	299
Michigan	264*	267*	277	278	277	276	277	277	278	280
Minnesota	275*	282*	284*	288*	287*	291*	290*	292*	294	295
Mississippi	—	246*	250*	254*	254*	261*	262*	265*	265*	269
Missouri	—	271*	273*	274*	271*	279*	276*	281	286*	282
Montana	280*	—	283*	287*	285*	286*	286*	287*	292	293
Nebraska	276*	278*	283	281	280*	282	284	284	284	283
Nevada	—	—	—	268*	265*	268*	270*	271*	274*	278
New Hampshire	273*	278*	—	—	—	286*	285*	288*	292	292
New Jersey	270*	272*	—	—	—	281*	284*	289*	293	294
New Mexico	256*	260*	262*	260*	259*	263*	263*	268*	270*	274
New York	261*	266*	270*	276	271*	280	280	280	283	280
North Carolina	250*	258*	268*	280*	276*	281*	282*	284	284	286
North Dakota	281*	283*	284*	283*	282*	287*	287*	292	293	292
Ohio	264*	268*	—	283*	281*	282*	283*	285*	286*	289
Oklahoma	263*	268*	—	272*	270*	272*	271*	275*	276*	279
Oregon	271*	—	276*	281	280	281	282	284	285	283
Pennsylvania	266*	271*	—	—	—	279*	281*	286	288	286
Rhode Island	260*	266*	269*	273*	269*	272*	272*	275*	278*	283
South Carolina	—	261*	261*	266*	265*	277*	281	282	280	281
South Dakota	—	—	—	—	—	285*	287*	288*	291	291
Tennessee	—	259*	263*	263*	262*	268*	271*	274	275	274
Texas	258*	265*	270*	275*	273*	277*	281*	286*	287*	290
Utah	—	274*	277*	275*	274*	281*	279*	281	284	283
Vermont	—	—	279*	283*	281*	286*	287*	291*	293	294
Virginia	264*	268*	270*	277*	275*	282*	284*	288	286	289
Washington	—	—	276*	—	—	281*	285*	285*	289	288
West Virginia	256*	259*	265*	271*	266*	271	269*	270*	270*	273
Wisconsin	274*	278*	283*	—	—	284*	285*	286*	288	289
Wyoming	272*	275*	275*	277*	276*	284*	282*	287	286	288
Other jurisdictions										
District of Columbia	231*	235*	233*	234*	235*	243*	245*	248*	254*	260
DoDEA <sup>1</sup>	—	—	274*	278*	277*	285*	284*	285*	287	288

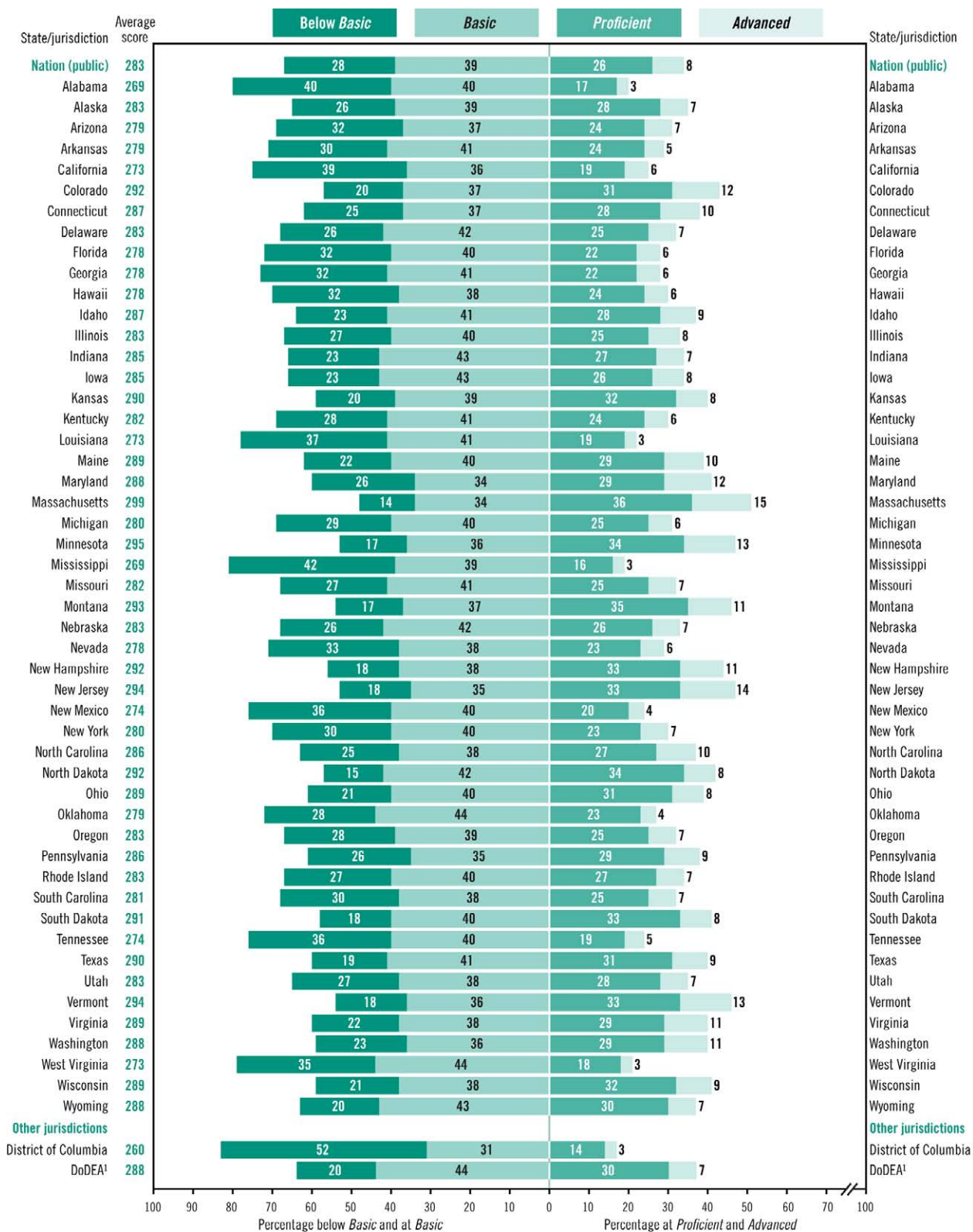
— Not available. The state/jurisdiction did not participate or did not meet the minimum participation guidelines for reporting.

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup> 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), various years, 1990-2011 Mathematics Assessments.

Figure 31. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by state/jurisdiction: 2011



<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

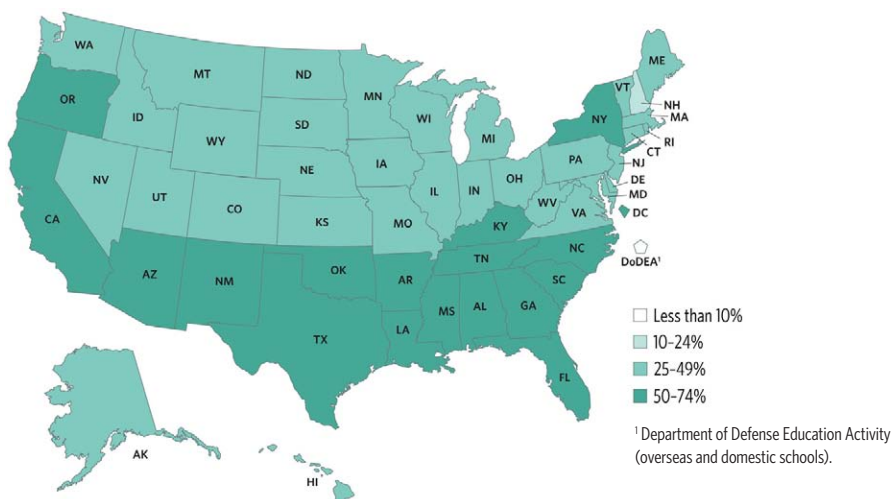
NOTE: The shaded bars are graphed using unrounded numbers. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

## Over one-third of states have 50 percent or more of eighth-graders eligible for school lunch

Information about differences in the demographic makeup of individual states provides a necessary context for interpreting state results. For example, the proportions of eighth-graders from lower-income families who were eligible for the National School Lunch Program (NSLP) varied among states (figure 32). Forty-eight percent of eighth-grade public school students in the nation were eligible for either free or reduced-price school lunch in 2011 (see appendix table A-21). The percentages of eligible students ranged from 23 percent in New Hampshire to 71 percent in the District of Columbia. In comparison to 2003, the percentages of eligible students were larger in 2011 for the nation and all the states except West Virginia where there was no significant change.

**Figure 32.** Percentage range of eighth-grade public school students assessed in NAEP mathematics who were identified as eligible for free/reduced-price school lunch: 2011



## Score gaps between higher- and lower-income students narrow from 2003 in four states and widen in one state

Average mathematics scores were higher in 2011 than in 2003 both for students who were not eligible for free or reduced-price school lunch (those from higher-income families) and students who were eligible (those from lower-income families) in the nation and in 44 states (figure 33). Only five states had a statistically significant change in the score gaps between the two groups over that period.

- Score gaps in Georgia, Illinois, and Massachusetts narrowed, where scores for both groups were higher than in 2003.
- The gap in New York narrowed, where the score for students who were not eligible did not change significantly, and the score for eligible students was higher than in 2003.
- The gap in the District of Columbia widened, where scores for both groups were higher than in 2003.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

**Figure 33.** Changes between 2003 and 2011 NAEP mathematics average scores and score gaps for eighth-grade public school students, by eligibility for free/reduced-price school lunch and state/jurisdiction

State/jurisdiction	Eligibility for free/reduced-price school lunch		Score gap
	Not eligible	Eligible	Not eligible – Eligible
<b>Nation (public)</b>	▲	▲	Narrowed
Alabama	▲	▲	◆
Alaska	▲	▲	◆
Arizona	▲	▲	◆
Arkansas	▲	▲	◆
California	▲	▲	◆
Colorado	▲	▲	◆
Connecticut	▲	◆	◆
Delaware	▲	▲	◆
Florida	▲	▲	◆
Georgia	▲	▲	Narrowed
Hawaii	▲	▲	◆
Idaho	▲	▲	◆
Illinois	▲	▲	Narrowed
Indiana	▲	▲	◆
Iowa	▲	▲	◆
Kansas	▲	▲	◆
Kentucky	▲	▲	◆
Louisiana	▲	▲	◆
Maine	▲	▲	◆
Maryland	▲	▲	◆
Massachusetts	▲	▲	Narrowed
Michigan	▲	▲	◆
Minnesota	▲	◆	◆
Mississippi	▲	▲	◆
Missouri	▲	▲	◆
Montana	▲	▲	◆
Nebraska	◆	◆	◆
Nevada	▲	▲	◆
New Hampshire	▲	▲	◆
New Jersey	▲	▲	◆
New Mexico	▲	▲	◆
New York	◆	▲	Narrowed
North Carolina	▲	▲	◆
North Dakota	▲	◆	◆
Ohio	▲	▲	◆
Oklahoma	▲	▲	◆
Oregon	▲	▲	◆
Pennsylvania	▲	▲	◆
Rhode Island	▲	▲	◆
South Carolina	▲	▲	◆
South Dakota	▲	▲	◆
Tennessee	▲	▲	◆
Texas	▲	▲	◆
Utah	▲	◆	◆
Vermont	▲	▲	◆
Virginia	▲	▲	◆
Washington	▲	▲	◆
West Virginia	◆	◆	◆
Wisconsin	▲	▲	◆
Wyoming	▲	▲	◆
Other jurisdictions			
District of Columbia	▲	▲	Widened
DoDEA <sup>1</sup>	‡	‡	‡

▲ Higher in 2011.      ‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.  
 ◆ Not significantly different from 2011.

<sup>1</sup> 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), 2003 and 2011 Mathematics Assessments.

**Compare Results Among Participating States**

The NAEP State Comparison Tool (<http://nces.ed.gov/nationsreportcard/statecomparisons/>) provides tables and maps showing how the average scores in states overall and for selected student groups compare, or how the change in performance between two assessment years compares across states.

# Assessment Content at Grade 8

Additional insight into students' performance on the NAEP mathematics assessment can be obtained by examining what eighth-graders are expected to know and be able to do and how they performed on some of the assessment questions designed to measure their knowledge and skills.

## Mathematics Achievement-Level Descriptions for Grade 8

NAEP mathematics achievement-level descriptions outline expectations of student performance at each grade. The specific descriptions of what eighth-graders should know and be able to do at the *Basic*, *Proficient*, and *Advanced* mathematics achievement levels are presented below. (Note that the shaded text is a short, general summary to describe performance at each achievement level.)

NAEP achievement levels are cumulative; therefore, students performing at the *Proficient* level also display the competencies associated with the *Basic* level, and students at the *Advanced* level also demonstrate the skills and knowledge associated with both the *Basic* and the *Proficient* levels. The cut score indicating the lower end of the score range for each level is noted in parentheses.

### *Basic* (262)

**Eighth-grade students performing at the *Basic* level should exhibit evidence of conceptual and procedural understanding in the five NAEP content areas. This level of performance signifies an understanding of arithmetic operations—including estimation—on whole numbers, decimals, fractions, and percents.**

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-grade students performing at the *Proficient* level should apply mathematical concepts and procedures consistently to complex problems in the five NAEP content areas.**

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-grade students performing at the *Advanced* level should be able to reach beyond the recognition, identification, and application of mathematical rules in order to generalize and synthesize concepts and principles in the five NAEP content areas.**

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.

## What Eighth-Graders Know and Can Do in Mathematics

The item map below is useful for understanding performance at different levels on the NAEP scale. The scale scores on the left represent the scores for students who were likely to get the items correct or complete. The cut score at the lower end of the range for each achievement level is boxed. The descriptions of selected assessment questions indicating what students need to do to answer the question correctly, along with the corresponding mathematics content areas are listed on the right.

For example, the map on this page shows that eighth-graders performing at the *Basic* level with a score of 290 were likely to be able to solve a story problem that involves computing with money. Students performing at the *Proficient* level with a score of 317 were likely to be able to use an algebraic model to estimate height. Students performing at the *Advanced* level with a score of 346 were likely to be able to use number properties to determine the parity of an unknown number.

### GRADE 8 NAEP MATHEMATICS ITEM MAP

	Scale score	Content area	Question description	
<i>Advanced</i>	500			
	//			
	394	<b>Algebra</b>	Solve problems based on a linear graph (calculator available)	
	355	<b>Data analysis, statistics, and probability</b>	Make a prediction using a line of best fit	
	346	<b>Number properties and operations</b>	Use number properties to determine the parity of an unknown number	
	334	<b>Algebra</b>	<i>Determine equation of a line given a point and the slope (shown on page 55)</i>	
	333	<b>Measurement</b>	<i>Recognize a unit of volume</i>	
	333	<b>Geometry</b>	<i>Compare similar parallelograms (calculator available)</i>	
<i>Proficient</i>	332	<b>Algebra</b>	Set up and solve an algebraic equation	
	331	<b>Algebra</b>	Compute the slope and y-intercept given an equation of a line	
	330	<b>Number properties and operations</b>	<i>Solve a story problem using ratios</i>	
	325	<b>Measurement</b>	Solve a problem involving unit conversions (calculator available)	
	317	<b>Algebra</b>	<i>Use an algebraic model to estimate height</i>	
	315	<b>Geometry</b>	Draw lines of symmetry (calculator available)	
	306	<b>Geometry</b>	<i>Determine radius of a circle inscribed in a square (calculator available)</i>	
	302	<b>Data analysis, statistics, and probability</b>	Label a spinner for a given probability (calculator available) (shown on pages 56 and 57)	
	299			
<i>Basic</i>	294	<b>Algebra</b>	<i>Choose an equation that describes the relationship in a table</i>	
	294	<b>Data analysis, statistics, and probability</b>	<i>Use the average (mean) to solve a problem</i>	
	290	<b>Number properties and operations</b>	Solve a story problem that involves computing with money (calculator available)	
	285	<b>Algebra</b>	<i>Identify a graph that shows how speed changed (calculator available)</i>	
	280	<b>Geometry</b>	<i>Identify congruent angles in a figure (shown on page 54)</i>	
	272	<b>Measurement</b>	<i>Find the angle with a specified degree measure</i>	
	265	<b>Algebra</b>	Read information from the graph of a function	
	264	<b>Number properties and operations</b>	<i>Use measuring cups to describe a fraction (calculator available)</i>	
		262		
		260	<b>Data analysis, statistics, and probability</b>	<i>Recognize misrepresented data</i>
	258	<b>Measurement</b>	<i>Solve a story problem involving rates (calculator available)</i>	
	254	<b>Geometry</b>	<i>Identify a result of combining two shapes</i>	
	250	<b>Number properties and operations</b>	<i>Use order of operations</i>	
	//			
	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 scale score attained by students who had a 65 percent probability of successfully answering a constructed-response 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), 2011 Mathematics Assessment.

## Mathematics Content Area: Geometry

In this figure, line  $\ell$  is parallel to line  $m$ . Which of the following pairs of angles must have the same measure?

- (A) Angles 1 and 2
- (B) Angles 1 and 5
- (C) Angles 2 and 3
- (D) Angles 4 and 5
- (E) Angles 4 and 8

In this multiple-choice question from the grade 8 mathematics assessment, students are presented with a set of parallel lines cut by a nonperpendicular transversal and are asked to identify a pair of angles that must have the same measure. This question requires students to use properties of parallel lines and transversals to recognize pairs of congruent angles. Students were not permitted to use a calculator to answer this question.

Seventy-one percent of eighth-graders were able to correctly identify that angles 4 and 5 must have the same measure (Choice D). The other answer choices represent different pairs of supplementary angles. The most common incorrect answer (Choice C) was selected by 15 percent of students and may have been selected more frequently because it is the only choice where the pair of angles are consecutive interior angles.

### Percentage of eighth-grade students in each response category: 2011

Choice A	Choice B	Choice C	Choice D	Choice E	Omitted
4	5	15	71	4	1

The table below shows the percentage of eighth-grade students performing at each achievement level who answered this question correctly. For example, 72 percent of eighth-graders at the *Basic* level selected the correct answer choice.

### Percentage of eighth-grade students responding correctly at each achievement level: 2011

Overall	Below <i>Basic</i>	At <i>Basic</i>	At <i>Proficient</i>	At <i>Advanced</i>
71	39	72	93	99



## Mathematics Content Area: Algebra

Which of the following is an equation of a line that passes through the point (0, 5) and has a negative slope?

- (A)  $y = 5x$
- (B)  $y = 5x - 5$
- (C)  $y = 5x + 5$
- (D)  $y = -5x - 5$
- (E)  $y = -5x + 5$

This question asks students to identify an equation of a line that satisfies two conditions: the graph of the line passes through a given point, and it has a negative slope. The given point is the  $y$ -intercept of the graph of the line, and all answer choices were presented in slope-intercept form. Students were not permitted to use a calculator to answer this question.

The correct answer (Choice E) was chosen by 31 percent of eighth-grade students. Students who correctly answered this question were able to recognize properties of a line written in slope-intercept form.

The equations in the incorrect answer choices had the following properties:

- Choice A is an equation of a line having a positive slope and  $y$ -intercept at (0, 0),
- Choice B is an equation of a line having a positive slope and  $y$ -intercept at (0, -5),
- Choice C is an equation of a line with the correct  $y$ -intercept at (0, 5), but the slope is positive, and
- Choice D is an equation of a line having a negative slope, but an incorrect  $y$ -intercept at (0, -5).

The most commonly selected incorrect answer (Choice B) may have been the result of reversing the signs of the values in the equation that represents the slope and the  $y$ -intercept.

### Percentage of eighth-grade students in each response category: 2011

Choice A	Choice B	Choice C	Choice D	Choice E	Omitted
12	27	9	20	31	1

The table below shows the percentage of eighth-grade students performing at each achievement level who answered this question correctly. For example, 84 percent of eighth-graders at the *Advanced* level selected the correct answer choice.

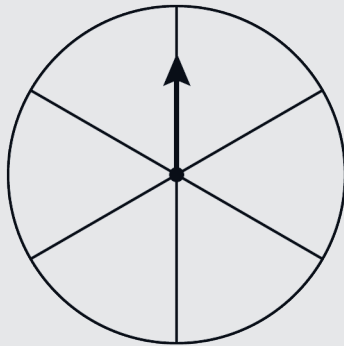
### Percentage of eighth-grade students responding correctly at each achievement level: 2011

Overall	Below <i>Basic</i>	<i>At Basic</i>	<i>At Proficient</i>	<i>At Advanced</i>
31	14	21	47	84

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

## Mathematics Content Area: Data Analysis, Statistics, and Probability

The circular spinner shown below is divided into 6 congruent sectors. The sectors are yellow or blue.



Label each of the sectors either yellow (Y) or blue (B) so that the probability of spinning the arrow once and landing on yellow is  $\frac{1}{3}$ .

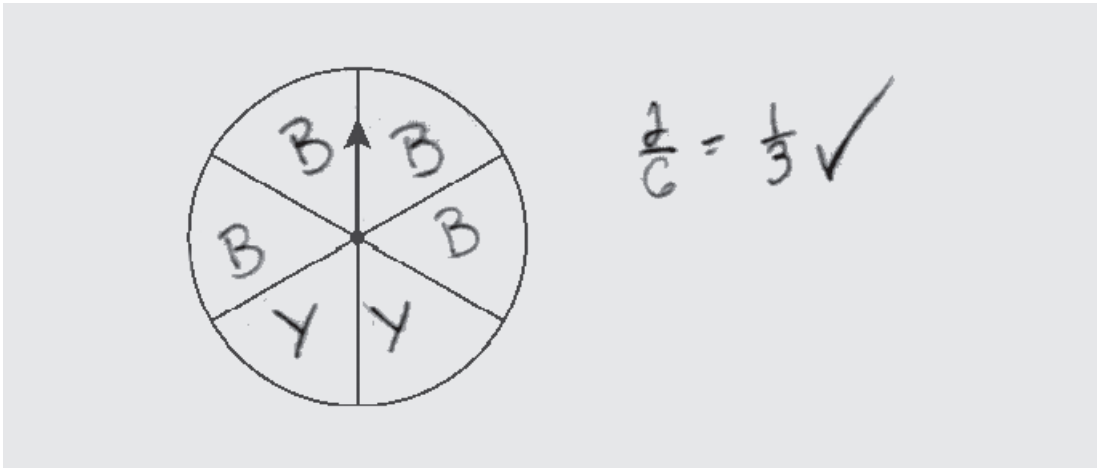
This short constructed-response question asks students to label (either yellow or blue) the sectors of a spinner that has been divided into 6 congruent sectors to match a given probability. To answer this question correctly, students must determine how many of the sectors need to be labeled yellow and how many sectors need to be labeled blue, so that the probability of spinning the arrow one time and landing on a sector labeled yellow is  $\frac{1}{3}$ . Students who correctly answered this question recognized that the given probability,  $\frac{1}{3}$ , needed to be converted to sixths to correspond to the 6 sectors on the spinner. Since  $\frac{1}{3}$  is equivalent to  $\frac{2}{6}$ , a total of 2 sectors need to be labeled yellow, and the remaining 4 sectors need to be labeled blue. Students were permitted to use a calculator to solve this question.

Responses were rated using two scoring levels.

**Correct** responses labeled the spinner so that 2 sectors were labeled yellow and 4 sectors were labeled blue. (Part of the requirement for a rating of "Correct" was to label each sector of the spinner, including the correct number of blue sectors.)

**Incorrect** responses did not have the correct number of sectors labeled yellow or blue.

The student response shown below was rated as "Correct" because 2 sectors are labeled "Y" for yellow and 4 sectors are labeled "B" for blue. Fifty-two percent of eighth-graders' responses to this question received a rating of "Correct."



### Explore More NAEP Mathematics Questions

See how well you perform on NAEP sample questions and how your answers relate to student performance in our Test Yourself tool at: [http://nationsreportcard.gov/math\\_2011/sample\\_quest.asp](http://nationsreportcard.gov/math_2011/sample_quest.asp).

#### Percentage of eighth-grade students in each response category: 2011

Correct	Incorrect	Omitted
52	46	2

The table below shows the percentage of eighth-graders performing at each achievement level who received a rating of "Correct" on the question. For example, 81 percent of students performing at the *Proficient* level provided responses that were rated "Correct."

#### Percentage of eighth-grade students' responses rated as "Correct" at each achievement level: 2011

Overall	Below <i>Basic</i>	<i>At Basic</i>	<i>At Proficient</i>	<i>At Advanced</i>
52	14	48	81	96

# NAEP Inclusion

It is important for NAEP to assess as many students selected to participate as possible. Assessing representative samples of students, including students with disabilities (SD) and English language learners (ELL), helps to ensure that NAEP results accurately reflect the educational performance of all students in the target population, and can continue to serve as a meaningful measure of U.S. students' academic achievement over time.

The National Assessment Governing Board, which sets policy for NAEP, has been exploring ways to ensure that NAEP continues to appropriately include as many students as possible and to do so in a consistent manner for all jurisdictions assessed and reported. In March 2010, the Governing Board adopted a new policy, *NAEP Testing and Reporting on Students with Disabilities and English Language Learners*. This policy was the culmination of work with experts in testing and curriculum, and those who work with exceptional children and students learning to speak English. The policy aims to

- maximize participation of sampled students in NAEP,
- reduce variation in exclusion rates for SD and ELL students across states and districts,
- develop uniform national rules for including students in NAEP, and
- ensure that NAEP is fully representative of SD and ELL students.

The policy defines specific inclusion goals for NAEP samples. At the national, state, and district levels, the goal is to include 95 percent of all students selected for the NAEP samples, and 85 percent of those in the NAEP sample who are identified as SD or ELL.

Students are selected to participate in NAEP based on a sampling procedure designed to yield a sample of students that is representative of students in all schools nationwide and in public schools within each state. First, schools are selected, and then students are sampled from within those schools without regard to disability or English language proficiency. Once students are selected, those previously identified as SD or ELL may be offered accommodations or excluded.

States and jurisdictions vary in their proportions of special-needs students and in their policies on inclusion and the use of accommodations. Despite the increasing identification of SD and ELL students in some states, in particular of ELL students at grade 4, NAEP inclusion rates have generally remained steady or increased since 2003. Only a small number of states included a smaller percentage of students in the 2011 NAEP mathematics assessments than in 2009. Inclusion rates decreased by more than 1 percentage point for 3 of 52 jurisdictions at each grade. This reflects efforts on the part of states and jurisdictions to include all students who can meaningfully participate in the NAEP assessments. The new NAEP inclusion policy is an effort to ensure that this trend continues.

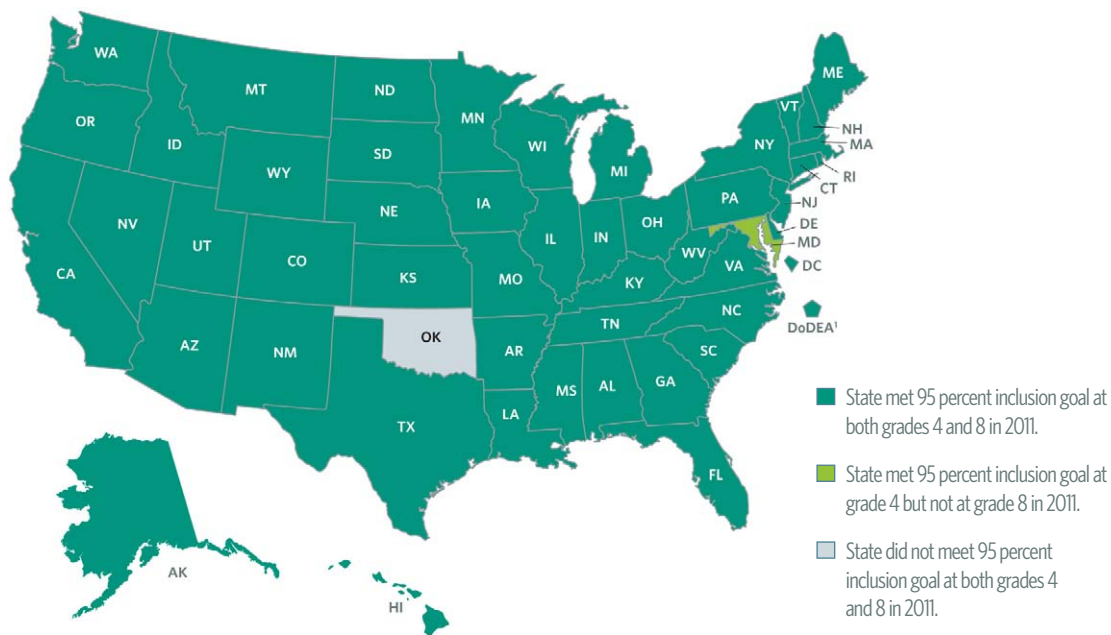
Determining whether each jurisdiction has met the NAEP inclusion goals involves looking at three different inclusion rates—an overall inclusion rate, an inclusion rate for SD students, and an inclusion rate for ELL students. Each inclusion rate is calculated as the percentage of sampled students who were included in the assessment (i.e., were not excluded).

Inclusion rate percentages are estimates because they are based on representative samples of students rather than on the entire population of students. As such, the inclusion rates are associated with a margin of error. The margin of error for each jurisdiction's inclusion rate was

taken into account when comparing it to the corresponding inclusion goal. For example, if the point estimate of a state’s overall inclusion rate was 93 percent and had a margin of error of plus or minus 3 percentage points, the state was considered to have met the 95 percent inclusion goal because the 95 percent goal falls within the margin of error, which ranges from 90 percent to 96 percent. Refer to the Technical Notes for more details about how the margin of error was used in these calculations.

Most of the states/jurisdictions participating in the 2011 mathematics assessment met the 95 percent inclusion goal (figure 34). The goal was not met at grade 8 in Maryland, and at grades 4 and 8 in Oklahoma. See appendix table A-4 for the inclusion rates as a percentage of all students selected in each state/jurisdiction, and table A-5 for the rates as a percentage of the SD or ELL students.

**Figure 34. States and jurisdictions meeting the 95 percent inclusion rate goal in NAEP mathematics at grades 4 and 8: 2011**



<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

## Inclusion Policy

See the National Assessment Governing Board’s policy on *NAEP Testing and Reporting on Students with Disabilities and English Language Learners* at [http://www.nagb.org/policies/PoliciesPDFs/Reporting%20and%20Dissemination/naep\\_testandreport\\_studentswithdisabilities.pdf](http://www.nagb.org/policies/PoliciesPDFs/Reporting%20and%20Dissemination/naep_testandreport_studentswithdisabilities.pdf).

# Technical Notes

## Sampling and Weighting

The schools and students participating in NAEP assessments are selected to be representative of all schools nationally and of 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 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>.

Because each school that participated in the assessment, and each student assessed, represents a portion of the population of interest, the results are weighted to account for the disproportionate representation of the selected sample. This includes oversampling of schools with high concentrations of students from certain racial/ethnic groups and the lower sampling rates of students who attend very small schools.

## School and Student Participation

### National participation

To ensure unbiased samples, NAEP statistical standards require that participation rates for original school samples be 70 percent or higher to report national results separately for public and private schools. In instances where participation rates meet the 70 percent criterion but fall below 85 percent, a nonresponse bias analysis is conducted to determine if the responding school sample is not representative of the population, thereby introducing the potential for nonresponse bias.

The weighted national school participation rates for the 2011 mathematics assessment were 97 percent for grade 4 (100 percent for public schools and 74 percent for private schools), and 98 percent for grade 8 (100 percent for public schools and 74 percent for private schools). Weighted student participation rates were 95 percent at grade 4, and 93 percent at grade 8.

Nonresponse bias analyses were conducted for the private school samples at both grades. The results of the nonresponse bias analyses showed that, while the original responding school samples may have been somewhat different from the entire sample of eligible schools, including substitute schools and adjusting the sampling weights to account for school nonresponse were partially effective in reducing the potential for nonresponse bias. However, some variables examined in the analyses still indicated potential bias after nonresponse adjustments. For instance, smaller schools were somewhat overrepresented in the final private school samples at both grades, and the responding sample of private schools at grade 8 contained a higher percentage of Black students and a lower percentage of White students than the original sample of eligible private schools.

## State participation

Standards established by the National Assessment Governing Board require that school participation rates for the original state samples need to be at least 85 percent for results to be reported. In 2011, all 52 states and jurisdictions participating in the mathematics assessment at grades 4 and 8 met this participation rate requirement with participation rates of 99 or 100 percent.

## Confidence intervals for state inclusion rates

NAEP endeavors to include as many sampled students as possible in the assessment, including students with disabilities (SD) and English language learners (ELL), and has established specific inclusion goals: 95 percent of all sampled students and 85 percent of sampled students identified as SD or ELL. Inclusion rates were computed for each state/jurisdiction participating in the 2011 assessment and compared to NAEP inclusion goals. Specifically, Wilson confidence intervals were used in order to avoid having an upper bound greater than 1.

Three inclusion percentages were computed for each state/jurisdiction. An overall inclusion percentage represents included students as a percentage of all students sampled within the state/jurisdiction. In addition, separate percentages were computed to report included students as a percentage of the state/jurisdiction sample that was identified as SD or ELL.

Inclusion percentages are estimates based on a sample, and each estimate has a measure of uncertainty or margin of error. Confidence intervals quantify this uncertainty due to sampling, resulting in interval estimates of the inclusion percentages. Therefore, confidence intervals for inclusion percentages were used to determine upper and lower confidence bounds around the inclusion point estimates.

When determining whether each state/jurisdiction met the NAEP inclusion goals, the confidence intervals were used, rather than just the point estimates. This means that if the inclusion goal of either 95 percent or 85 percent fell within the corresponding confidence interval, the state/jurisdiction was considered as having met the goal. States/jurisdictions for which the upper bound of the confidence interval was less than 95 percent (or 85 percent) did not meet the inclusion goal.

## 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 assessed students 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 change in the average score for fourth-grade public school students may be statistically significant, while a 1-point change for private school students is not. Standard errors for the estimates presented in this report are available at <http://nces.ed.gov/nationsreportcard/naepdata/>.

To ensure that significant differences in NAEP data reflect actual differences and not mere chance, error rates need to be controlled when making multiple simultaneous comparisons. The more comparisons that are made (e.g., comparing the performance of White, Black, Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native students), the higher the probability of finding significant differences by chance. In NAEP, the Benjamini-Hochberg False Discovery Rate (FDR) procedure is used to control the expected proportion of falsely rejected hypotheses relative to the number of comparisons that are conducted. A detailed explanation of this procedure can be found at <http://nces.ed.gov/nationsreportcard/tdw/analysis/infer.asp>. NAEP employs a number of rules to determine the number of comparisons conducted, which in most cases is simply the number of possible statistical tests. However, when comparing multiple years, the number of years does not count toward the number of comparisons.

## Race/Ethnicity

Prior to 2011, student race/ethnicity was obtained from school records and reported for the six mutually exclusive categories shown on the left side of the chart below. Students identified with more than one of the other five categories were classified as “other” and were included as part of the “unclassified” category, along with students who had a background other than the ones listed or whose race/ethnicity could not be determined.

Racial/ethnic categories	
Prior to 2011	In 2011
1. White	1. White
2. Black	2. Black
3. Hispanic	3. Hispanic
4. Asian/Pacific Islander	4. Asian
	5. Native Hawaiian/Other Pacific Islander
5. American Indian/Alaska Native	6. American Indian/Alaska Native
6. Other or unclassified	7. Two or more races

NOTE: Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin.

In compliance with new standards from the U.S. Office of Management and Budget for collecting and reporting data on race/ethnicity, additional information was collected in 2011 so that results could be reported separately for Asian students, Native Hawaiian/Other Pacific Islander students, and students identifying with two or more races. Beginning in 2011, all of the students participating in NAEP were identified as one of the seven racial/ethnic categories listed on the right side of the chart.

As in earlier years, students identified as Hispanic were classified as Hispanic in 2011 even if they were also identified with another racial/ethnic group. Students identified with two or more of the other racial/ethnic groups (e.g., White and Black) would have been classified as “other” and reported as part of the “unclassified” category prior to 2011, and were classified as “two or more races” in 2011.

When comparing the results for racial/ethnic groups from 2011 to earlier assessment years in this report, the 2011 data for Asian and Native Hawaiian/Other Pacific Islander students were combined into a single Asian/Pacific Islander category.



## National School Lunch Program

NAEP collects data on student eligibility for the National School Lunch Program (NSLP) as an indicator of low family income. 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, 2010 through June 30, 2011, for a family of four, 130 percent of the poverty level was \$28,665, and 185 percent was \$40,793 in most states.)

Some schools provide free meals to all students irrespective of individual eligibility, using their own funds to cover the costs of noneligible students. Under special provisions of the National School Lunch Act intended to reduce the administrative burden of determining student eligibility every year, schools can be reimbursed based on eligibility data for a single base year. Participating schools might have high percentages of eligible students and report all students as eligible for free lunch. Because of the improved quality of the data on students' eligibility for NSLP, the percentage of students for whom information was not available has decreased compared 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. Percentage of 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 grade and SD/ELL category: Various years, 1992-2011**

Grade and SD/ELL category	Accommodations not permitted		Accommodations permitted						
	1992	1996	1996	2000	2003	2005	2007	2009	2011
<b>Grade 4</b>									
<b>SD and/or ELL</b>									
Identified	9	14	15	18	21	21	21	21	22
Excluded	6	6	4	4	4	3	3	2	2
Assessed	3	8	11	14	17	18	19	19	20
Without accommodations	3	8	7	9	9	9	9	8	8
With accommodations	†	†	5	5	8	9	10	10	12
<b>SD</b>									
Identified	7	11	10	12	13	13	13	13	13
Excluded	4	5	3	3	3	2	2	2	2
Assessed	3	6	7	9	10	10	10	11	11
Without accommodations	3	6	4	5	4	3	3	3	2
With accommodations	†	†	4	4	6	7	7	8	8
<b>ELL</b>									
Identified	3	3	6	7	10	10	10	10	11
Excluded	2	1	1	1	1	1	1	1	#
Assessed	1	2	5	6	8	8	9	9	10
Without accommodations	1	2	3	4	6	6	6	6	6
With accommodations	†	†	2	1	2	2	3	3	4
<b>Grade 8</b>									
<b>SD and/or ELL</b>									
Identified	9	11	12	13	17	17	17	17	17
Excluded	6	4	3	4	3	3	4	3	2
Assessed	4	6	8	10	14	14	13	14	14
Without accommodations	4	6	6	7	7	6	6	5	4
With accommodations	†	†	3	3	6	8	7	9	10
<b>SD</b>									
Identified	7	9	9	10	13	12	12	12	12
Excluded	4	4	3	3	3	3	3	3	2
Assessed	3	5	6	7	10	10	8	9	10
Without accommodations	3	5	4	5	4	3	2	2	2
With accommodations	†	†	2	2	6	7	6	8	8
<b>ELL</b>									
Identified	2	3	3	4	6	6	6	5	6
Excluded	2	1	1	1	1	1	1	#	#
Assessed	1	2	2	3	5	5	5	5	5
Without accommodations	1	2	2	2	4	4	4	3	3
With accommodations	†	†	#	1	1	1	2	2	2

† Not applicable. Accommodations were not permitted in this assessment year.

# 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. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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, 1992-2011 Mathematics Assessments.

**Table A-2. Percentage of 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 students within their racial/ethnic group, by grade and SD/ELL category: 2011**

Grade and SD/ELL category	Race/ethnicity		
	White	Black	Hispanic
<b>Grade 4</b>			
<b>SD and/or ELL</b>			
Identified	14	17	45
Excluded	2	3	3
Assessed	12	14	43
Without accommodations	3	3	24
With accommodations	9	12	19
<b>SD</b>			
Identified	13	15	12
Excluded	2	3	2
Assessed	11	12	10
Without accommodations	3	2	2
With accommodations	8	10	8
<b>ELL</b>			
Identified	1	2	38
Excluded	#	#	1
Assessed	1	2	37
Without accommodations	#	1	23
With accommodations	#	1	14
<b>Grade 8</b>			
<b>SD and/or ELL</b>			
Identified	12	17	28
Excluded	2	4	3
Assessed	10	13	26
Without accommodations	2	2	13
With accommodations	8	11	13
<b>SD</b>			
Identified	12	15	12
Excluded	2	4	2
Assessed	10	12	10
Without accommodations	2	2	2
With accommodations	8	10	8
<b>ELL</b>			
Identified	1	1	20
Excluded	#	#	1
Assessed	#	1	19
Without accommodations	#	#	12
With accommodations	#	1	7

# Rounds to zero.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Results are not shown for all racial/ethnic groups. 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. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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), 2011 Mathematics Assessment.

**Table A-3.** Percentage of fourth- and eighth-grade public and nonpublic school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP mathematics, as a percentage of identified SD and/or ELL students, by grade and SD/ELL category: 2011

Grade and SD/ELL category	Percentage of identified SD and/or ELL students			
	Excluded	Total	Assessed	
			Without accommodations	With accommodations
<b>Grade 4</b>				
SD and/or ELL	9	91	38	52
SD	15	85	20	66
ELL	4	96	57	39
<b>Grade 8</b>				
SD and/or ELL	15	85	27	58
SD	19	81	13	68
ELL	7	93	55	38

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. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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), 2011 Mathematics Assessment.

**Table A-4. Inclusion rate and confidence interval in NAEP mathematics for fourth- and eighth-grade public school students, as a percentage of all students, by state/jurisdiction: 2011**

State/jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
<b>Nation (public)</b>	<b>98<sup>1</sup></b>	<b>97.6</b>	<b>97.9</b>	<b>97<sup>1</sup></b>	<b>97.2</b>	<b>97.5</b>
Alabama	99 <sup>1</sup>	98.0	99.3	99 <sup>1</sup>	98.1	99.2
Alaska	97 <sup>1</sup>	96.4	97.8	97 <sup>1</sup>	96.2	97.4
Arizona	99 <sup>1</sup>	98.5	99.3	99 <sup>1</sup>	98.3	99.2
Arkansas	99 <sup>1</sup>	98.4	99.4	99 <sup>1</sup>	98.2	99.0
California	98 <sup>1</sup>	97.7	99.0	99 <sup>1</sup>	98.6	99.2
Colorado	99 <sup>1</sup>	98.3	99.2	99 <sup>1</sup>	98.7	99.5
Connecticut	99 <sup>1</sup>	98.1	99.1	99 <sup>1</sup>	98.2	99.0
Delaware	96 <sup>1</sup>	95.8	96.9	97 <sup>1</sup>	96.2	97.5
Florida	98 <sup>1</sup>	97.9	98.8	98 <sup>1</sup>	97.6	98.6
Georgia	98 <sup>1</sup>	97.7	98.8	97 <sup>1</sup>	96.0	98.2
Hawaii	98 <sup>1</sup>	97.7	98.7	98 <sup>1</sup>	97.5	98.6
Idaho	99 <sup>1</sup>	98.3	99.1	99 <sup>1</sup>	98.3	99.1
Illinois	98 <sup>1</sup>	96.8	98.4	98 <sup>1</sup>	96.9	98.2
Indiana	98 <sup>1</sup>	97.1	98.4	97 <sup>1</sup>	96.5	98.1
Iowa	99 <sup>1</sup>	97.8	99.1	99 <sup>1</sup>	97.8	99.0
Kansas	98 <sup>1</sup>	97.8	98.7	99 <sup>1</sup>	98.1	99.1
Kentucky	97 <sup>1</sup>	96.1	97.6	97 <sup>1</sup>	96.1	97.2
Louisiana	98 <sup>1</sup>	97.3	98.9	99 <sup>1</sup>	98.0	99.0
Maine	98 <sup>1</sup>	97.8	98.9	98 <sup>1</sup>	98.0	98.8
Maryland	94 <sup>1</sup>	93.5	95.2	94	92.7	94.5
Massachusetts	97 <sup>1</sup>	95.9	97.6	96 <sup>1</sup>	95.0	96.8
Michigan	98 <sup>1</sup>	97.1	98.4	96 <sup>1</sup>	95.6	97.0
Minnesota	99 <sup>1</sup>	98.0	98.9	98 <sup>1</sup>	97.1	98.5
Mississippi	99 <sup>1</sup>	98.7	99.5	99 <sup>1</sup>	98.4	99.3
Missouri	98 <sup>1</sup>	97.8	98.8	99 <sup>1</sup>	98.0	99.1
Montana	98 <sup>1</sup>	98.0	98.9	98 <sup>1</sup>	97.9	98.8
Nebraska	98 <sup>1</sup>	97.8	99.0	96 <sup>1</sup>	95.6	97.1
Nevada	98 <sup>1</sup>	97.1	98.2	97 <sup>1</sup>	96.4	97.4
New Hampshire	98 <sup>1</sup>	97.7	98.7	98 <sup>1</sup>	97.7	98.6
New Jersey	97 <sup>1</sup>	95.3	97.7	96 <sup>1</sup>	94.7	96.7
New Mexico	97 <sup>1</sup>	96.7	97.9	98 <sup>1</sup>	97.5	98.5
New York	99 <sup>1</sup>	98.1	99.1	99 <sup>1</sup>	98.1	99.0
North Carolina	98 <sup>1</sup>	97.6	98.7	98 <sup>1</sup>	97.6	98.6
North Dakota	96 <sup>1</sup>	95.7	97.0	96 <sup>1</sup>	94.9	96.4
Ohio	98 <sup>1</sup>	96.9	98.3	95 <sup>1</sup>	93.8	96.0
Oklahoma	92	90.2	93.0	90	88.8	91.4
Oregon	97 <sup>1</sup>	96.5	98.0	99 <sup>1</sup>	98.0	99.0
Pennsylvania	99 <sup>1</sup>	98.0	99.1	98 <sup>1</sup>	96.8	98.2
Rhode Island	99 <sup>1</sup>	98.7	99.3	99 <sup>1</sup>	98.3	99.1
South Carolina	99 <sup>1</sup>	98.1	99.2	96 <sup>1</sup>	95.4	96.9
South Dakota	98 <sup>1</sup>	97.7	98.6	98 <sup>1</sup>	97.8	98.6
Tennessee	97 <sup>1</sup>	95.6	97.4	96 <sup>1</sup>	95.2	97.1
Texas	96 <sup>1</sup>	94.9	96.6	95 <sup>1</sup>	93.9	95.6
Utah	98 <sup>1</sup>	97.1	98.6	97 <sup>1</sup>	96.7	97.8
Vermont	98 <sup>1</sup>	97.9	98.8	99 <sup>1</sup>	98.3	99.2
Virginia	98 <sup>1</sup>	97.3	98.4	97 <sup>1</sup>	96.2	97.8
Washington	98 <sup>1</sup>	97.3	98.7	98 <sup>1</sup>	97.7	98.8
West Virginia	98 <sup>1</sup>	97.9	98.9	98 <sup>1</sup>	98.0	98.9
Wisconsin	98 <sup>1</sup>	97.6	98.9	98 <sup>1</sup>	97.3	98.5
Wyoming	98 <sup>1</sup>	97.9	98.8	99 <sup>1</sup>	98.2	99.1
Other jurisdictions						
District of Columbia	95 <sup>1</sup>	93.9	95.5	96 <sup>1</sup>	94.9	96.3
DoDEA <sup>2</sup>	97 <sup>1</sup>	96.7	97.7	97 <sup>1</sup>	96.5	97.9

<sup>1</sup> The state/jurisdiction's inclusion rate is higher than or not significantly different from the National Assessment Governing Board goal of 95 percent.

<sup>2</sup> 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), 2011 Mathematics Assessment

**Table A-5. Inclusion rate and standard error in NAEP mathematics for fourth- and eighth-grade public school students with disabilities (SD) and English language learners (ELL), as a percentage of identified SD or ELL students, by state/jurisdiction: 2011**

State/jurisdiction	Percentage of identified SD or ELL students							
	Grade 4				Grade 8			
	SD		ELL		SD		ELL	
	Inclusion rate	SE	Inclusion rate	SE	Inclusion rate	SE	Inclusion rate	SE
<b>Nation (public)</b>	<b>84<sup>1</sup></b>	<b>0.5</b>	<b>96<sup>1</sup></b>	<b>0.3</b>	<b>80</b>	<b>0.6</b>	<b>93<sup>1</sup></b>	<b>0.6</b>
Alabama	88 <sup>1</sup>	2.5	‡	†	89 <sup>1</sup>	2.4	‡	†
Alaska	86 <sup>1</sup>	2.1	92 <sup>1</sup>	1.5	77	2.4	95 <sup>1</sup>	1.4
Arizona	91 <sup>1</sup>	1.6	99 <sup>1</sup>	0.5	89 <sup>1</sup>	2.1	‡	†
Arkansas	92 <sup>1</sup>	1.8	98 <sup>1</sup>	0.9	88 <sup>1</sup>	1.7	96 <sup>1</sup>	1.9
California	85 <sup>1</sup>	2.7	98 <sup>1</sup>	0.8	90 <sup>1</sup>	1.4	97 <sup>1</sup>	0.8
Colorado	90 <sup>1</sup>	1.9	99 <sup>1</sup>	0.4	91 <sup>1</sup>	1.9	97 <sup>1</sup>	1.3
Connecticut	90 <sup>1</sup>	1.8	97 <sup>1</sup>	1.1	89 <sup>1</sup>	1.8	93 <sup>1</sup>	2.2
Delaware	78	1.6	88 <sup>1</sup>	2.3	78	2.3	90 <sup>1</sup>	4.4
Florida	91 <sup>1</sup>	1.3	96 <sup>1</sup>	1.1	88 <sup>1</sup>	1.7	95 <sup>1</sup>	1.3
Georgia	87 <sup>1</sup>	2.1	95 <sup>1</sup>	1.9	74	4.7	92 <sup>1</sup>	4.0
Hawaii	83 <sup>1</sup>	2.4	97 <sup>1</sup>	0.9	91 <sup>1</sup>	1.9	90 <sup>1</sup>	1.7
Idaho	91 <sup>1</sup>	1.7	93 <sup>1</sup>	2.4	85 <sup>1</sup>	2.5	95 <sup>1</sup>	2.3
Illinois	86 <sup>1</sup>	2.5	93 <sup>1</sup>	1.8	84 <sup>1</sup>	2.3	90 <sup>1</sup>	2.3
Indiana	86 <sup>1</sup>	1.9	98 <sup>1</sup>	0.8	83 <sup>1</sup>	2.5	94 <sup>1</sup>	2.7
Iowa	92 <sup>1</sup>	1.8	94 <sup>1</sup>	2.4	90 <sup>1</sup>	2.1	97 <sup>1</sup>	1.9
Kansas	89 <sup>1</sup>	1.5	98 <sup>1</sup>	0.7	89 <sup>1</sup>	1.9	99 <sup>1</sup>	1.0
Kentucky	81	2.4	73 <sup>1</sup>	7.2	72	2.4	85 <sup>1</sup>	4.4
Louisiana	88 <sup>1</sup>	2.2	99 <sup>1</sup>	1.3	86 <sup>1</sup>	2.4	‡	†
Maine	91 <sup>1</sup>	1.6	98 <sup>1</sup>	1.1	91 <sup>1</sup>	1.2	97 <sup>1</sup>	1.7
Maryland	57	3.1	86 <sup>1</sup>	2.3	43	3.1	74	5.5
Massachusetts	84 <sup>1</sup>	2.3	89 <sup>1</sup>	2.1	80	2.4	78 <sup>1</sup>	5.1
Michigan	85 <sup>1</sup>	2.0	94 <sup>1</sup>	3.3	73	2.5	83 <sup>1</sup>	4.7
Minnesota	91 <sup>1</sup>	1.6	98 <sup>1</sup>	0.6	85 <sup>1</sup>	2.2	91 <sup>1</sup>	3.0
Mississippi	92 <sup>1</sup>	2.0	‡	†	86 <sup>1</sup>	3.0	‡	†
Missouri	87 <sup>1</sup>	1.9	99 <sup>1</sup>	0.5	89 <sup>1</sup>	2.2	‡	†
Montana	87 <sup>1</sup>	1.8	‡	†	87 <sup>1</sup>	1.8	‡	†
Nebraska	92 <sup>1</sup>	1.5	97 <sup>1</sup>	1.1	76	2.4	90 <sup>1</sup>	3.7
Nevada	79	2.4	98 <sup>1</sup>	0.5	71	2.6	90 <sup>1</sup>	1.3
New Hampshire	89 <sup>1</sup>	1.5	93 <sup>1</sup>	3.1	90 <sup>1</sup>	1.3	‡	†
New Jersey	81 <sup>1</sup>	3.3	89 <sup>1</sup>	3.1	75	3.1	96 <sup>1</sup>	2.3
New Mexico	84 <sup>1</sup>	1.9	93 <sup>1</sup>	1.1	86 <sup>1</sup>	1.9	94 <sup>1</sup>	1.0
New York	94 <sup>1</sup>	1.4	94 <sup>1</sup>	1.4	93 <sup>1</sup>	1.3	94 <sup>1</sup>	1.9
North Carolina	87 <sup>1</sup>	1.7	95 <sup>1</sup>	1.8	86 <sup>1</sup>	2.0	96 <sup>1</sup>	1.6
North Dakota	77	1.9	85 <sup>1</sup>	3.7	68	2.4	‡	†
Ohio	84 <sup>1</sup>	2.2	94 <sup>1</sup>	2.3	65	3.5	96 <sup>1</sup>	2.7
Oklahoma	49	3.9	86 <sup>1</sup>	3.8	40	3.4	78 <sup>1</sup>	5.1
Oregon	85 <sup>1</sup>	2.1	94 <sup>1</sup>	1.4	89 <sup>1</sup>	1.7	98 <sup>1</sup>	1.0
Pennsylvania	91 <sup>1</sup>	1.5	95 <sup>1</sup>	2.0	85 <sup>1</sup>	2.2	92 <sup>1</sup>	2.7
Rhode Island	94 <sup>1</sup>	1.1	98 <sup>1</sup>	1.0	94 <sup>1</sup>	1.2	91 <sup>1</sup>	3.0
South Carolina	91 <sup>1</sup>	1.9	99 <sup>1</sup>	0.9	67	3.1	93 <sup>1</sup>	1.8
South Dakota	89 <sup>1</sup>	1.4	97 <sup>1</sup>	1.4	87 <sup>1</sup>	1.7	80 <sup>1</sup>	4.7
Tennessee	75	3.1	92 <sup>1</sup>	2.8	68	3.7	‡	†
Texas	60	3.8	95 <sup>1</sup>	0.7	53	3.4	86 <sup>1</sup>	2.9
Utah	86 <sup>1</sup>	2.5	94 <sup>1</sup>	1.4	75	2.6	84 <sup>1</sup>	2.9
Vermont	90 <sup>1</sup>	1.4	‡	†	93 <sup>1</sup>	1.5	‡	†
Virginia	84 <sup>1</sup>	2.0	95 <sup>1</sup>	1.5	81 <sup>1</sup>	2.6	87 <sup>1</sup>	3.5
Washington	88 <sup>1</sup>	2.3	96 <sup>1</sup>	0.9	87 <sup>1</sup>	2.1	95 <sup>1</sup>	1.6
West Virginia	91 <sup>1</sup>	1.3	‡	†	89 <sup>1</sup>	1.7	‡	†
Wisconsin	88 <sup>1</sup>	2.0	97 <sup>1</sup>	1.4	86 <sup>1</sup>	2.0	96 <sup>1</sup>	1.3
Wyoming	90 <sup>1</sup>	1.4	96 <sup>1</sup>	1.8	90 <sup>1</sup>	1.6	‡	†
Other jurisdictions								
District of Columbia	69	2.3	88 <sup>1</sup>	1.6	78	1.8	85 <sup>1</sup>	2.4
DoDEA <sup>2</sup>	87 <sup>1</sup>	1.5	78	2.8	82 <sup>1</sup>	3.3	71	4.7

† Not applicable. Standard error estimate cannot be accurately determined.

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

<sup>1</sup> The state/jurisdiction's inclusion rate is higher than or not significantly different from the National Assessment Governing Board goal of 85 percent.

<sup>2</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: SD includes students identified as having an Individualized Education Program but excludes other students protected under Section 504 of the Rehabilitation Act of 1973. SE = Standard error.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

**Table A-6. Percentage of 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/jurisdiction: 2011**

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
<b>Nation (public)</b>	<b>2</b>	<b>13</b>	<b>2</b>	<b>9</b>	<b>11</b>	<b>#</b>	<b>4</b>	<b>3</b>	<b>13</b>	<b>2</b>	<b>9</b>	<b>6</b>	<b>#</b>	<b>2</b>
Alabama	1	10	1	4	2	#	1	1	10	1	3	2	#	#
Alaska	3	16	2	11	14	1	9	3	13	3	9	11	1	7
Arizona	1	12	1	8	12	#	9	1	11	1	8	2	#	1
Arkansas	1	13	1	10	8	#	5	1	11	1	9	5	#	3
California	2	10	1	6	32	1	4	1	10	1	6	17	1	4
Colorado	1	11	1	9	16	#	7	1	10	1	8	7	#	3
Connecticut	1	14	1	11	6	#	5	1	12	1	10	4	#	3
Delaware	4	16	3	10	4	#	2	3	14	3	10	2	#	1
Florida	2	16	1	12	9	#	8	2	14	2	12	5	#	4
Georgia	2	12	1	8	5	#	3	3	10	3	6	2	#	1
Hawaii	2	10	2	7	11	#	5	2	11	1	8	9	1	3
Idaho	1	11	1	7	5	#	2	1	8	1	6	4	#	2
Illinois	2	14	2	8	8	1	6	2	14	2	10	4	#	2
Indiana	2	16	2	9	7	#	5	3	14	2	11	3	#	2
Iowa	1	15	1	12	6	#	4	1	15	1	12	3	#	2
Kansas	2	14	2	9	11	#	5	1	12	1	8	7	#	2
Kentucky	3	15	3	8	2	1	1	3	12	3	7	1	#	1
Louisiana	2	20	2	16	2	#	1	1	14	1	12	1	#	1
Maine	2	17	2	14	3	#	2	2	18	1	14	3	#	1
Maryland	6	14	5	7	6	1	5	6	11	6	5	3	1	2
Massachusetts	3	18	3	14	8	1	2	4	19	3	14	4	1	2
Michigan	2	13	2	8	4	#	1	4	12	3	7	2	#	1
Minnesota	1	15	1	9	10	#	4	2	13	2	8	5	#	2
Mississippi	1	9	1	5	2	#	1	1	8	1	6	1	#	#
Missouri	2	13	2	8	3	#	2	1	13	1	10	1	#	1
Montana	2	12	1	7	2	#	#	2	12	2	9	2	#	1
Nebraska	2	17	1	10	8	#	5	4	14	3	8	3	#	1
Nevada	2	11	2	6	27	#	18	3	10	3	5	10	1	4
New Hampshire	2	17	2	14	3	#	2	2	18	2	13	2	#	1
New Jersey	3	17	3	12	3	#	3	4	17	4	12	2	#	2
New Mexico	3	13	2	9	17	1	8	2	12	2	8	12	1	4
New York	1	16	1	14	9	1	8	1	16	1	14	6	#	5
North Carolina	2	15	2	10	7	#	3	2	14	2	10	5	#	3
North Dakota	4	15	3	8	3	#	1	4	14	4	8	2	#	1
Ohio	2	14	2	10	3	#	3	5	15	5	9	1	#	1
Oklahoma	8	15	8	5	6	1	3	10	16	9	3	3	1	1
Oregon	3	15	2	9	14	1	7	1	13	1	9	6	#	3
Pennsylvania	1	15	1	11	3	#	2	2	16	2	11	2	#	2
Rhode Island	1	14	1	12	6	#	2	1	16	1	12	3	#	2
South Carolina	1	14	1	8	6	#	2	4	11	4	6	4	#	3
South Dakota	2	16	2	7	5	#	2	2	11	1	7	2	#	1
Tennessee	3	14	3	7	4	#	3	4	12	4	7	2	#	1
Texas	4	10	4	5	22	1	4	5	11	5	4	9	1	1
Utah	2	13	2	7	7	#	4	3	10	3	7	5	1	2
Vermont	2	17	1	14	2	#	1	1	18	1	14	1	#	1
Virginia	2	13	2	8	7	#	5	3	13	2	8	6	1	2
Washington	2	14	2	9	11	#	7	2	12	1	9	5	#	2
West Virginia	2	18	1	9	1	#	#	2	13	2	9	1	#	#
Wisconsin	2	14	2	10	8	#	6	2	14	2	11	5	#	4
Wyoming	2	16	2	11	4	#	2	1	13	1	10	2	#	1
Other jurisdictions														
District of Columbia	5	15	5	10	7	1	5	4	17	4	12	6	1	4
DoDEA <sup>1</sup>	3	13	2	8	7	1	2	3	10	2	7	5	1	1

# Rounds to zero.

<sup>1</sup> 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. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

**Table A-7. Percentage of fourth- and eighth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded in NAEP mathematics, as a percentage of all students, by state/jurisdiction: Various years, 1990–2011**

State/jurisdiction	Grade 4								Grade 8								
	1992 <sup>1</sup>	1996 <sup>1</sup>	2000	2003	2005	2007	2009	2011	1990 <sup>1</sup>	1992 <sup>1</sup>	1996 <sup>1</sup>	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	—	<b>6</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>
Alabama	5	6	3	2	1	2	1	1	5	5	7	6	2	1	3	2	1
Alaska	—	4	—	1	2	2	1	3	—	—	5	—	1	2	4	3	3
Arizona	5	12	4	5	4	3	1	1	5	6	9	3	4	5	3	2	1
Arkansas	5	7	4	2	3	3	1	1	7	6	7	2	2	3	2	1	1
California	12	16	6	3	4	2	2	2	7	8	10	4	3	2	2	2	1
Colorado	5	8	—	2	3	2	2	1	4	4	4	—	2	3	2	2	1
Connecticut	7	8	5	4	2	1	2	1	6	7	8	6	4	3	2	2	1
Delaware	5	7	—	7	8	5	3	4	4	4	9	—	9	11	7	3	3
Florida	8	10	—	3	3	3	2	2	6	6	10	—	3	3	3	2	2
Georgia	5	7	3	2	2	2	1	2	3	5	7	5	2	2	5	3	3
Hawaii	6	6	9	3	3	1	1	2	4	5	5	5	4	3	2	2	2
Idaho	3	—	2	2	1	2	1	1	2	3	—	2	1	2	2	1	1
Illinois	—	—	3	4	3	5	3	2	5	—	—	5	4	3	6	3	2
Indiana	3	5	2	2	2	3	2	2	5	5	6	3	2	4	6	4	3
Iowa	3	6	2	3	2	1	2	1	4	4	5	—	2	3	2	3	1
Kansas	—	—	3	2	3	3	3	2	—	—	—	3	3	4	4	3	1
Kentucky	3	6	3	3	3	3	3	3	5	5	5	4	4	3	7	5	3
Louisiana	4	8	3	3	4	2	2	2	4	4	6	3	5	4	3	2	1
Maine	6	8	5	3	4	3	2	2	—	4	5	3	4	5	5	2	2
Maryland	4	8	2	4	4	4	5	6	4	5	7	3	4	4	7	7	6
Massachusetts	7	9	3	3	4	5	5	3	—	8	8	3	3	6	9	6	4
Michigan	5	6	3	4	4	3	3	2	4	6	5	4	5	4	5	3	4
Minnesota	3	6	2	3	2	2	2	1	3	3	3	2	2	2	3	2	2
Mississippi	5	6	3	5	2	1	1	1	—	7	7	5	5	3	2	2	1
Missouri	4	5	3	4	2	4	3	2	—	4	7	3	4	4	5	3	1
Montana	—	5	2	2	2	2	2	2	2	—	3	2	2	2	3	3	2
Nebraska	4	5	3	3	2	3	3	2	3	4	4	4	4	1	3	3	4
Nevada	—	9	7	4	3	3	3	2	—	—	8	4	2	2	4	2	3
New Hampshire	4	—	—	3	2	2	2	2	4	5	4	—	3	2	3	3	2
New Jersey	6	6	—	2	3	2	3	3	7	7	7	—	2	4	3	2	4
New Mexico	7	12	6	4	3	4	2	3	6	5	8	7	2	3	3	3	2
New York	5	8	5	5	4	2	1	1	6	8	8	4	5	4	3	3	1
North Carolina	4	7	5	4	2	2	2	2	3	3	4	5	4	3	2	2	2
North Dakota	2	4	1	2	3	4	4	4	3	2	3	2	1	4	6	5	4
Ohio	6	—	5	4	3	5	3	2	5	6	—	4	5	6	7	5	5
Oklahoma	7	—	5	4	4	5	4	8	5	6	—	4	2	4	8	6	10
Oregon	—	9	3	4	4	3	3	3	3	—	4	3	3	3	3	3	1
Pennsylvania	4	5	—	3	3	2	3	1	5	4	—	—	2	3	4	3	2
Rhode Island	6	6	3	3	3	2	2	1	6	5	7	3	4	3	3	2	1
South Carolina	5	6	5	6	4	2	2	1	—	6	6	4	7	6	5	4	4
South Dakota	—	—	—	1	2	1	2	2	—	—	—	—	2	2	2	2	2
Tennessee	4	6	3	3	3	6	3	3	—	5	4	2	3	5	6	4	4
Texas	8	10	7	7	6	5	3	4	6	7	9	8	7	6	6	5	5
Utah	4	6	3	3	2	2	2	2	—	4	6	3	3	2	3	3	3
Vermont	—	6	3	4	3	2	2	2	—	—	4	3	3	4	4	2	1
Virginia	5	7	4	6	5	5	2	2	5	5	7	6	7	5	7	4	3
Washington	—	5	—	3	3	3	2	2	—	—	6	—	2	2	4	2	2
West Virginia	4	8	3	3	2	1	2	2	5	6	8	3	3	3	2	2	2
Wisconsin	5	8	5	4	2	3	2	2	4	4	7	4	3	4	5	3	2
Wyoming	4	4	2	1	2	2	1	2	3	4	2	1	1	2	2	2	1
Other jurisdictions																	
District of Columbia	9	11	5	4	6	6	4	5	5	10	10	6	6	6	10	6	4
DoDEA <sup>2</sup>	—	4	3	1	2	2	2	3	—	—	3	1	1	2	2	2	3

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

<sup>1</sup>Accommodations not permitted.

<sup>2</sup>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), various years, 1990–2011 Mathematics Assessments.



**Table A-8. Percentage of fourth- and eighth-grade public school students with disabilities (SD) excluded in NAEP mathematics, as a percentage of identified SD students, by state/jurisdiction: Various years, 1990-2011**

State/jurisdiction	Percentage of identified SD students																	
	Grade 4								Grade 8									
	1992 <sup>1</sup>	1996 <sup>1</sup>	2000	2003	2005	2007	2009	2011	1990 <sup>1</sup>	1992 <sup>1</sup>	1996 <sup>1</sup>	2000	2003	2005	2007	2009	2011	
<b>Nation (public)</b>	<b>63</b>	<b>42</b>	<b>26</b>	<b>22</b>	<b>19</b>	<b>20</b>	<b>16</b>	<b>15</b>	—	<b>61</b>	<b>47</b>	<b>32</b>	<b>22</b>	<b>24</b>	<b>30</b>	<b>22</b>	<b>19</b>	
Alabama	44	54	25	14	11	12	9	11	56	53	53	46	15	8	24	13	11	
Alaska	—	27	—	6	7	9	7	14	—	—	45	—	6	15	31	25	23	
Arizona	47	68	24	28	23	19	10	9	51	62	55	19	23	29	27	16	11	
Arkansas	48	69	31	10	16	20	11	7	70	57	64	14	10	20	18	9	11	
California	43	60	39	20	22	17	21	14	47	49	55	28	13	17	17	15	9	
Colorado	50	56	—	13	15	13	13	10	42	44	37	—	11	18	15	16	8	
Connecticut	42	50	31	25	14	10	14	9	59	45	52	35	23	18	10	14	10	
Delaware	44	49	—	38	43	29	20	20	41	42	68	—	51	66	43	15	21	
Florida	51	52	—	12	12	13	10	8	55	52	59	—	13	15	17	13	11	
Georgia	53	52	27	13	13	17	11	13	49	61	66	39	15	19	50	23	26	
Hawaii	46	47	46	15	15	10	11	16	49	40	47	27	17	16	10	11	9	
Idaho	36	—	9	8	8	14	10	10	35	43	—	14	6	15	14	15	14	
Illinois	—	—	18	17	15	23	12	14	54	—	—	30	24	17	35	20	15	
Indiana	50	46	19	14	8	15	15	13	67	53	46	25	17	23	36	31	17	
Iowa	36	44	11	16	12	10	12	8	38	40	41	—	14	16	15	16	9	
Kansas	—	—	26	10	16	21	20	11	—	—	—	26	18	24	30	24	11	
Kentucky	39	56	24	21	16	16	19	18	63	52	49	32	31	28	49	37	27	
Louisiana	53	55	16	13	16	12	9	9	63	62	64	20	28	30	26	11	10	
Maine	41	51	28	19	18	17	8	9	—	41	43	18	23	25	29	12	8	
Maryland	33	52	15	23	23	29	32	38	42	43	52	16	25	33	62	56	51	
Massachusetts	38	49	5	12	18	27	25	14	—	44	44	11	14	33	51	28	18	
Michigan	69	57	26	32	26	24	18	14	51	64	61	34	33	31	32	24	26	
Minnesota	43	45	16	16	15	14	11	9	31	47	27	9	14	16	17	17	14	
Mississippi	73	72	46	52	19	8	8	8	—	73	60	52	53	32	22	17	14	
Missouri	37	35	15	21	13	23	18	12	—	40	59	19	23	28	35	26	10	
Montana	—	49	13	13	17	19	14	13	37	—	35	20	14	17	22	22	13	
Nebraska	32	31	15	15	12	14	13	8	33	38	35	28	19	9	17	23	24	
Nevada	—	56	34	20	21	17	19	20	—	—	55	22	16	19	28	22	28	
New Hampshire	31	—	—	14	11	11	11	10	36	43	25	—	17	12	17	14	9	
New Jersey	41	57	—	11	13	13	15	18	55	49	51	—	7	17	18	11	24	
New Mexico	51	60	33	12	12	21	15	16	68	42	36	39	10	14	18	22	14	
New York	48	54	21	21	18	10	6	6	53	62	55	24	25	19	22	14	7	
North Carolina	30	52	31	21	14	11	13	11	34	26	45	30	21	15	14	12	12	
North Dakota	20	33	13	11	14	25	23	22	34	33	34	15	11	26	43	34	30	
Ohio	60	—	38	34	27	30	20	15	67	63	—	39	38	40	48	33	34	
Oklahoma	61	—	28	19	22	33	26	51	66	65	—	28	13	25	56	41	60	
Oregon	—	47	14	20	23	15	14	15	32	—	33	16	18	19	24	20	10	
Pennsylvania	38	49	—	17	15	15	16	9	50	49	—	—	9	20	24	19	15	
Rhode Island	35	36	11	9	12	10	9	6	42	35	41	16	13	15	13	10	6	
South Carolina	48	45	30	36	27	12	12	9	—	60	57	30	47	41	40	32	32	
South Dakota	—	—	—	9	9	8	13	11	—	—	—	—	16	17	22	17	12	
Tennessee	34	47	23	18	24	41	24	24	—	48	38	17	18	32	53	36	31	
Texas	50	57	41	47	39	39	28	36	57	54	57	50	41	41	44	39	42	
Utah	40	43	29	17	13	16	16	14	—	46	49	23	20	19	24	27	25	
Vermont	—	43	18	23	20	14	11	8	—	—	35	16	17	21	22	11	6	
Virginia	47	51	23	34	28	27	14	15	53	47	56	43	39	30	43	24	19	
Washington	—	44	—	16	15	15	13	12	—	—	45	—	13	17	28	19	12	
West Virginia	51	62	21	19	11	8	9	8	58	59	67	18	17	17	11	10	11	
Wisconsin	50	71	30	21	13	15	14	12	54	47	61	24	17	22	28	16	14	
Wyoming	37	33	13	7	8	11	7	10	42	45	18	9	7	11	14	13	10	
Other jurisdictions																		
District of Columbia	84	83	25	28	32	35	27	30	86	85	80	41	32	30	56	34	22	
DoDEA <sup>2</sup>	—	46	23	10	11	8	12	13	—	—	33	16	10	13	9	13	16	

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

<sup>1</sup> Accommodations not permitted.

<sup>2</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990-2011 Mathematics Assessments.

**Table A-9. Percentage of fourth- and eighth-grade public school English language learners (ELL) excluded in NAEP mathematics, as a percentage of identified ELL students, by state/jurisdiction: Various years, 1990–2011**

State/jurisdiction	Percentage of identified ELL students																	
	Grade 4								Grade 8									
	1992 <sup>1</sup>	1996 <sup>1</sup>	2000	2003	2005	2007	2009	2011	1990 <sup>1</sup>	1992 <sup>1</sup>	1996 <sup>1</sup>	2000	2003	2005	2007	2009	2011	
<b>Nation (public)</b>	<b>67</b>	<b>39</b>	<b>18</b>	<b>14</b>	<b>12</b>	<b>8</b>	<b>6</b>	<b>4</b>	—	<b>72</b>	<b>41</b>	<b>22</b>	<b>18</b>	<b>13</b>	<b>11</b>	<b>8</b>	<b>7</b>	
Alabama	‡	‡	‡	‡	‡	11	3	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	
Alaska	—	18	—	1	4	3	3	8	—	—	‡	—	2	3	3	6	5	
Arizona	25	54	16	12	11	10	2	1	26	31	48	14	13	15	12	9	‡	
Arkansas	‡	‡	‡	27	35	8	3	2	‡	‡	‡	‡	21	‡	8	3	4	
California	45	47	11	7	8	3	4	2	50	36	49	10	9	5	4	4	3	
Colorado	‡	‡	—	8	8	3	4	1	‡	‡	‡	—	16	16	7	6	3	
Connecticut	65	‡	‡	29	11	3	13	3	‡	53	‡	‡	23	14	9	11	7	
Delaware	‡	‡	—	36	28	23	7	12	‡	‡	‡	—	45	38	26	24	10	
Florida	49	54	—	17	17	20	5	4	70	43	‡	—	22	20	21	9	5	
Georgia	‡	‡	‡	14	19	9	3	5	‡	‡	‡	‡	26	13	7	9	8	
Hawaii	37	29	44	26	14	5	4	3	40	35	‡	‡	25	23	11	10	15	
Idaho	‡	—	‡	12	6	3	3	7	‡	‡	—	‡	6	9	5	2	5	
Illinois	—	—	24	26	10	16	15	7	‡	—	—	‡	31	25	24	19	10	
Indiana	‡	‡	‡	12	17	8	4	2	‡	‡	‡	‡	13	13	13	10	6	
Iowa	‡	‡	‡	24	7	4	6	6	‡	‡	‡	—	10	‡	3	15	3	
Kansas	—	—	‡	16	16	6	5	2	—	—	—	‡	26	15	4	5	1	
Kentucky	‡	‡	‡	31	‡	11	13	27	‡	‡	‡	‡	‡	‡	‡	‡	36	15
Louisiana	‡	‡	‡	‡	‡	‡	#	1	‡	‡	‡	‡	‡	‡	‡	‡	‡	
Maine	‡	‡	‡	‡	‡	‡	‡	2	—	‡	‡	‡	‡	‡	‡	‡	‡	
Maryland	‡	‡	‡	38	22	13	15	14	‡	‡	‡	‡	34	‡	22	16	26	
Massachusetts	45	‡	‡	22	20	16	13	11	—	60	‡	‡	41	39	21	25	22	
Michigan	‡	‡	‡	16	17	9	8	6	‡	‡	‡	‡	28	11	‡	7	17	
Minnesota	‡	‡	‡	10	9	8	6	2	‡	‡	‡	‡	16	8	9	10	9	
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	—	‡	‡	‡	‡	‡	‡	‡	‡	
Missouri	‡	‡	‡	24	17	‡	‡	1	—	‡	‡	‡	‡	‡	‡	‡	‡	
Montana	—	‡	‡	4	4	6	6	‡	‡	—	‡	‡	‡	9	7	4	‡	
Nebraska	‡	‡	‡	21	8	7	5	3	‡	‡	‡	‡	34	4	21	8	10	
Nevada	—	54	38	15	9	9	5	2	—	—	‡	27	14	8	11	6	10	
New Hampshire	‡	—	—	24	13	13	11	7	‡	‡	‡	—	‡	‡	‡	‡	‡	
New Jersey	67	‡	—	22	24	11	20	11	76	50	‡	—	41	43	18	13	4	
New Mexico	39	52	11	9	6	9	4	7	‡	37	65	21	7	11	12	6	6	
New York	44	52	47	44	20	12	8	6	56	79	‡	38	33	21	15	14	6	
North Carolina	‡	‡	‡	16	11	8	4	5	‡	‡	‡	‡	26	16	8	8	4	
North Dakota	‡	‡	‡	8	‡	22	‡	15	‡	‡	‡	‡	‡	‡	‡	‡	‡	
Ohio	‡	—	‡	35	26	27	14	6	‡	‡	—	‡	29	‡	33	43	4	
Oklahoma	‡	—	‡	15	13	8	6	14	‡	‡	—	‡	11	14	14	9	22	
Oregon	—	50	22	12	10	7	6	6	‡	—	‡	‡	15	10	10	6	2	
Pennsylvania	‡	‡	—	39	20	10	11	5	‡	‡	—	—	‡	‡	‡	17	8	
Rhode Island	47	31	18	23	13	11	9	2	50	44	‡	28	28	13	34	21	9	
South Carolina	‡	‡	‡	22	‡	5	5	1	—	‡	‡	‡	‡	‡	‡	5	7	
South Dakota	—	—	—	7	12	5	‡	3	—	—	—	—	7	‡	‡	‡	20	
Tennessee	‡	‡	‡	‡	25	15	6	8	—	‡	‡	‡	‡	‡	‡	‡	‡	
Texas	41	34	13	13	14	10	5	5	36	37	45	26	28	21	22	11	14	
Utah	‡	‡	11	12	9	5	6	6	—	‡	‡	‡	9	10	12	5	16	
Vermont	—	‡	‡	23	‡	8	‡	‡	—	—	‡	‡	‡	‡	‡	‡	‡	
Virginia	‡	‡	43	29	9	14	5	5	‡	35	‡	‡	43	22	29	12	13	
Washington	—	‡	—	16	13	9	4	4	—	—	‡	—	12	11	14	12	5	
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	
Wisconsin	‡	‡	14	15	13	11	10	3	‡	‡	‡	‡	22	31	30	15	4	
Wyoming	‡	‡	‡	2	8	5	‡	4	‡	‡	‡	‡	15	6	‡	‡	‡	
<b>Other jurisdictions</b>																		
District of Columbia	70	76	30	20	22	25	14	12	‡	‡	‡	‡	28	28	23	27	15	
DoDEA <sup>2</sup>	—	‡	‡	13	12	21	14	22	—	—	‡	‡	17	14	31	16	29	

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

# Rounds to zero.

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

<sup>1</sup> Accommodations not permitted.

<sup>2</sup> 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), various years, 1990–2011 Mathematics Assessments.

**Table A-10. Percentage of fourth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP mathematics, as a percentage of identified SD and/or ELL students, by state/jurisdiction: 2011**

State/jurisdiction	Percentage of identified SD and/or ELL students											
	SD and/or ELL				SD				ELL			
	Assessed				Assessed				Assessed			
	Excluded	Total	Without accom- modations	With accom- modations	Excluded	Total	Without accom- modations	With accom- modations	Excluded	Total	Without accom- modations	With accom- modations
<b>Nation (public)</b>	<b>10</b>	<b>90</b>	<b>39</b>	<b>52</b>	<b>15</b>	<b>85</b>	<b>20</b>	<b>65</b>	<b>4</b>	<b>96</b>	<b>57</b>	<b>39</b>
Alabama	10	90	55	35	11	89	51	38	‡	‡	‡	‡
Alaska	10	90	25	65	14	86	19	66	8	92	27	65
Arizona	5	95	24	71	9	91	20	71	1	99	25	74
Arkansas	5	95	23	71	7	93	17	76	2	98	33	66
California	4	96	77	19	14	86	26	60	2	98	85	13
Colorado	5	95	38	58	10	90	9	81	1	99	53	46
Connecticut	7	93	10	83	9	91	10	81	3	97	9	87
Delaware	19	81	18	63	20	80	16	63	12	88	22	66
Florida	7	93	12	81	8	92	17	75	4	96	1	94
Georgia	10	90	26	64	13	87	23	65	5	95	32	63
Hawaii	9	91	34	57	16	84	14	70	3	97	50	47
Idaho	8	92	33	59	10	90	23	67	7	93	51	42
Illinois	11	89	27	62	14	86	28	58	7	93	21	72
Indiana	10	90	27	63	13	87	28	59	2	98	23	75
Iowa	7	93	16	77	8	92	13	79	6	94	22	72
Kansas	7	93	42	52	11	89	28	61	2	98	56	42
Kentucky	19	81	29	53	18	82	29	53	27	73	23	50
Louisiana	8	92	13	79	9	91	10	81	1	99	36	63
Maine	8	92	18	74	9	91	12	79	2	98	47	52
Maryland	30	70	12	59	38	62	12	49	14	86	8	78
Massachusetts	13	87	25	62	14	86	7	78	11	89	60	28
Michigan	13	87	34	53	14	86	23	63	6	94	73	20
Minnesota	6	94	40	54	9	91	29	62	2	98	52	46
Mississippi	7	93	41	52	8	92	40	52	‡	‡	‡	‡
Missouri	10	90	28	62	12	88	26	62	1	99	33	66
Montana	11	89	33	56	13	87	24	63	‡	‡	‡	‡
Nebraska	6	94	32	61	8	92	29	62	3	97	35	63
Nevada	7	93	30	64	20	80	26	53	2	98	30	69
New Hampshire	9	91	11	80	10	90	9	82	7	93	23	70
New Jersey	17	83	11	72	18	82	11	71	11	89	8	81
New Mexico	10	90	35	55	16	84	15	69	7	93	46	48
New York	6	94	4	90	6	94	5	89	6	94	3	91
North Carolina	8	92	33	59	11	89	19	70	5	95	56	39
North Dakota	21	79	24	55	22	78	20	58	15	85	43	41
Ohio	13	87	10	77	15	85	11	74	6	94	4	89
Oklahoma	40	60	27	33	51	49	19	31	14	86	45	41
Oregon	10	90	37	53	15	85	28	57	6	94	45	49
Pennsylvania	8	92	22	71	9	91	22	69	5	95	17	78
Rhode Island	5	95	25	70	6	94	7	87	2	98	63	36
South Carolina	7	93	38	56	9	91	30	61	1	99	54	45
South Dakota	9	91	44	46	11	89	43	46	3	97	43	54
Tennessee	20	80	18	62	24	76	21	55	8	92	4	88
Texas	14	86	59	27	36	64	17	47	5	95	75	20
Utah	11	89	34	55	14	86	30	56	6	94	37	57
Vermont	8	92	15	76	8	92	12	80	‡	‡	‡	‡
Virginia	11	89	28	61	15	85	25	60	5	95	30	65
Washington	9	91	30	61	12	88	25	64	4	96	35	61
West Virginia	8	92	43	49	8	92	42	49	‡	‡	‡	‡
Wisconsin	8	92	18	74	12	88	17	72	3	97	17	80
Wyoming	9	91	28	63	10	90	24	66	4	96	43	53
Other jurisdictions												
District of Columbia	25	75	8	67	30	70	3	67	12	88	18	70
DoDEA <sup>1</sup>	15	85	29	56	13	87	22	65	22	78	41	37

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

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

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. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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), 2011 Mathematics Assessment.

**Table A-11. Percentage of eighth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP mathematics, as a percentage of identified SD and/or ELL students, by state/jurisdiction: 2011**

State/jurisdiction	Percentage of identified SD and/or ELL students											
	SD and/or ELL				SD				ELL			
	Assessed				Assessed				Assessed			
	Excluded	Total	Without accom- modations	With accom- modations	Excluded	Total	Without accom- modations	With accom- modations	Excluded	Total	Without accom- modations	With accom- modations
<b>Nation (public)</b>	<b>15</b>	<b>85</b>	<b>27</b>	<b>58</b>	<b>19</b>	<b>81</b>	<b>13</b>	<b>68</b>	<b>7</b>	<b>93</b>	<b>55</b>	<b>38</b>
Alabama	10	90	59	30	11	89	57	32	‡	‡	‡	‡
Alaska	15	85	18	67	23	77	7	70	5	95	29	66
Arizona	10	90	16	75	11	89	13	76	‡	‡	‡	‡
Arkansas	9	91	18	73	11	89	12	77	4	96	31	65
California	5	95	63	32	9	91	26	65	3	97	76	21
Colorado	5	95	32	63	8	92	12	80	3	97	53	44
Connecticut	8	92	14	77	10	90	12	78	7	93	17	76
Delaware	19	81	13	67	21	79	11	68	10	90	28	62
Florida	10	90	4	87	11	89	4	85	5	95	3	92
Georgia	23	77	15	62	26	74	13	61	8	92	22	70
Hawaii	9	91	37	54	9	91	19	72	10	90	56	34
Idaho	11	89	27	62	14	86	15	71	5	95	51	44
Illinois	14	86	18	68	15	85	10	74	10	90	42	47
Indiana	15	85	13	72	17	83	7	76	6	94	40	55
Iowa	8	92	10	82	9	91	5	85	3	97	27	70
Kansas	8	92	41	52	11	89	18	71	1	99	76	23
Kentucky	26	74	12	62	27	73	9	64	15	85	33	51
Louisiana	9	91	8	83	10	90	7	83	‡	‡	‡	‡
Maine	8	92	19	73	8	92	17	75	3	97	69	28
Maryland	46	54	7	47	51	49	7	42	26	74	9	66
Massachusetts	18	82	13	68	18	82	7	75	22	78	41	37
Michigan	25	75	21	54	26	74	14	59	17	83	53	30
Minnesota	12	88	37	51	14	86	26	60	9	91	60	31
Mississippi	13	87	12	75	14	86	9	77	‡	‡	‡	‡
Missouri	10	90	15	75	10	90	14	76	‡	‡	‡	‡
Montana	12	88	18	70	13	87	15	73	‡	‡	‡	‡
Nebraska	22	78	23	56	24	76	17	60	10	90	50	40
Nevada	17	83	35	48	28	72	17	55	10	90	46	43
New Hampshire	9	91	21	70	9	91	19	72	‡	‡	‡	‡
New Jersey	22	78	6	72	24	76	6	71	4	96	13	83
New Mexico	9	91	46	45	14	86	23	63	6	94	62	32
New York	7	93	2	91	7	93	2	91	6	94	1	92
North Carolina	10	90	19	70	12	88	11	77	4	96	42	54
North Dakota	27	73	16	57	30	70	13	57	‡	‡	‡	‡
Ohio	31	69	8	60	34	66	7	60	4	96	26	70
Oklahoma	54	46	23	23	60	40	19	21	22	78	41	37
Oregon	8	92	32	60	10	90	20	69	2	98	56	42
Pennsylvania	14	86	11	75	15	85	11	74	8	92	9	83
Rhode Island	7	93	23	70	6	94	20	74	9	91	37	54
South Carolina	25	75	23	52	32	68	18	50	7	93	37	56
South Dakota	14	86	28	58	12	88	23	64	20	80	54	26
Tennessee	29	71	10	61	31	69	10	58	‡	‡	‡	‡
Texas	28	72	44	28	42	58	17	40	14	86	73	13
Utah	19	81	21	60	25	75	11	64	16	84	35	49
Vermont	6	94	18	76	6	94	16	77	‡	‡	‡	‡
Virginia	16	84	31	52	19	81	23	58	13	87	47	40
Washington	10	90	27	63	12	88	13	75	5	95	54	40
West Virginia	11	89	23	66	11	89	22	67	‡	‡	‡	‡
Wisconsin	11	89	12	78	14	86	8	78	4	96	19	78
Wyoming	9	91	16	75	10	90	10	80	‡	‡	‡	‡
Other jurisdictions												
District of Columbia	20	80	8	72	22	78	4	74	15	85	18	67
DoDEA <sup>1</sup>	19	81	25	56	16	84	13	70	29	71	42	28

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

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

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. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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), 2011 Mathematics Assessment.

**Table A-12. Percentage distribution of fourth-grade public school students assessed in NAEP mathematics, by race/ethnicity, eligibility for free/reduced-price school lunch, and state/jurisdiction: 1992, 2003, and 2011**

State/jurisdiction	Race/ethnicity										Eligibility for free/reduced-price school lunch			
	White		Black		Hispanic		Asian/ Pacific Islander		American Indian/ Alaska Native		Eligible		Not eligible	
	1992 <sup>1</sup>	2011	1992 <sup>1</sup>	2011	1992 <sup>1</sup>	2011	1992 <sup>1</sup>	2011	1992 <sup>1</sup>	2011	2003	2011	2003	2011
<b>Nation (public)</b>	<b>72*</b>	<b>52</b>	<b>18*</b>	<b>16</b>	<b>7*</b>	<b>24</b>	<b>3*</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>44*</b>	<b>52</b>	<b>52*</b>	<b>47</b>
Alabama	65	60	34	32	#*	5	#*	1	1	1	57	58	43	42
Alaska	—	50	—	4	—	6	—	8	—	23	33*	46	59*	53
Arizona	62*	43	4	5	23*	43	1*	3	10	5	47*	58	42	40
Arkansas	75*	65	24	21	#*	10	1*	2	#	#	54*	64	43*	36
California	50*	25	7	7	30*	54	12	13	1	#	52	58	44	41
Colorado	73*	56	6	4	17*	33	2	3	1	1	31*	46	68*	54
Connecticut	76*	59	11	13	10*	21	2*	5	#	#	30*	38	66	62
Delaware	70*	48	25*	33	2*	13	1*	4	#	#	38*	50	53*	50
Florida	63*	40	24	25	12*	29	1*	3	#	#	49*	62	48*	38
Georgia	60*	45	38	36	1*	13	1*	4	#	#	48*	56	46	44
Hawaii	23*	15	3	3	2*	5	62*	69	#	#	49	48	51	51
Idaho	92*	78	#*	1	6*	16	1*	2	1	2	43*	50	50	49
Illinois	—	53	—	19	—	20	—	4	—	#	41*	49	55	51
Indiana	87*	72	11	11	2*	10	1	1	#*	#	34*	51	65*	49
Iowa	95*	80	2*	6	1*	9	2	2	#	#	33*	41	66*	59
Kansas	—	68	—	7	—	16	—	3	—	1	40*	51	59*	49
Kentucky	90*	84	9	9	#*	4	#*	1	#	#	51	55	47	45
Louisiana	53	47	45	46	1*	4	2	2	#	#	65	69	31	31
Maine	98*	92	#*	3	#*	2	1*	2	#	#	34*	46	64*	54
Maryland	62*	43	32	35	2*	11	3*	6	#	#	36*	42	60	58
Massachusetts	83*	68	8	9	4*	15	4*	6	#	#	29	34	63	66
Michigan	79*	71	16	16	3*	6	1*	3	1	1	36*	45	63*	55
Minnesota	91*	73	3*	9	2*	9	3*	5	1*	2	27*	38	73*	62
Mississippi	42*	50	58*	45	#*	3	#*	1	#	#	69	72	26	28
Missouri	83*	75	15	17	1*	5	1*	2	#	#	42*	51	53	49
Montana	—	82	—	1	—	4	—	1	—	11	38*	43	57	57
Nebraska	90*	70	6*	8	3*	16	#*	2	1	1	36*	43	59	57
Nevada	—	36	—	10	—	42	—	7	—	1	42*	57	52*	43
New Hampshire	96*	91	1*	2	1*	4	1*	3	#	#	17*	27	73	72
New Jersey	69*	54	16	14	11*	23	5*	8	#	#	29*	36	63	63
New Mexico	45*	27	4*	2	45*	60	1	1	4*	9	65*	71	25	29
New York	63*	48	15	20	17	21	4*	10	#	1	50	55	46	43
North Carolina	65*	54	31*	27	1*	12	1*	3	2	1	42*	53	52	47
North Dakota	95*	84	#*	2	1*	3	1*	1	3*	9	31*	36	67	64
Ohio	86*	72	12*	17	1*	4	1	2	#	#	35*	47	56	53
Oklahoma	77*	55	9	11	3*	12	#*	3	9*	18	57	61	41	39
Oregon	—	66	—	2	—	21	—	4	—	2	36*	53	61*	46
Pennsylvania	81*	73	14	13	3*	9	2*	3	#	#	37	40	60	59
Rhode Island	82*	64	7	8	7*	22	4	3	#	1	40*	46	52	54
South Carolina	58	54	41	36	#*	6	1*	2	#	#	53	57	46	43
South Dakota	—	77	—	3	—	3	—	1	—	14	37*	43	62*	57
Tennessee	73	68	25	22	#*	7	1	2	#	#	40*	58	55*	42
Texas	49*	30	14	13	34*	53	2	3	#	#	54*	64	44*	35
Utah	93*	79	1*	2	4*	14	2*	3	1	1	34	38	65	62
Vermont	—	92	—	2	—	1	—	2	—	#	29*	41	69*	58
Virginia	71*	56	25	21	2*	11	3*	7	#	#	32	36	66	64
Washington	—	58	—	5	—	21	—	8	—	2	38*	46	52	53
West Virginia	96*	92	2*	5	#*	1	#	#	#	#	53	52	45	48
Wisconsin	87*	75	6	9	2*	10	2	4	2	2	32*	42	65*	58
Wyoming	90*	80	1	1	6*	14	1	1	2	3	35*	41	63*	59
Other jurisdictions														
District of Columbia	5*	8	91*	77	3*	12	1*	2	#	#	71*	74	24*	26
DoDEA <sup>2</sup>	—	48	—	16	—	18	—	7	—	1	‡	#	‡	#

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

# Rounds to zero.

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

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup> Accommodations not permitted.

<sup>2</sup> 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 or two or more races, and for students whose eligibility status 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), 1992, 2003, and 2011 Mathematics Assessments.

**Table A-13. Percentage of fourth-grade public school students at or above *Basic* in NAEP mathematics, by state/jurisdiction: Various years, 1992-2011**

State/jurisdiction	Accommodations not permitted			Accommodations permitted					
	1992	1996	2000	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>57*</b>	<b>62*</b>	<b>67*</b>	<b>64*</b>	<b>76*</b>	<b>79*</b>	<b>81</b>	<b>81*</b>	<b>82</b>
Alabama	43*	48*	57*	55*	65*	66*	70	70*	75
Alaska	—	65*	—	—	75	77	79	78	78
Arizona	53*	57*	58*	57*	70*	70*	74*	71*	77
Arkansas	47*	54*	56*	55*	71*	78	81	80	81
California	46*	46*	52*	50*	67*	71	70*	72	74
Colorado	61*	67*	—	—	77*	81*	82	84	84
Connecticut	67*	75*	77*	76*	82	84	84	86	82
Delaware	55*	54*	—	—	81*	84	87*	84	84
Florida	52*	55*	—	—	76*	82	86	86	84
Georgia	53*	53*	58*	57*	72*	76*	79	78	80
Hawaii	52*	53*	55*	55*	68*	73*	77*	77	80
Idaho	63*	—	71*	68*	80*	86*	85	85	83
Illinois	—	—	66*	63*	73*	74*	79	80	80
Indiana	60*	72*	78*	77*	82*	84	89	87	87
Iowa	72*	74*	78*	75*	83	85	87	87	86
Kansas	—	—	75*	76*	85*	88	89	89	90
Kentucky	51*	60*	60*	59*	72*	75*	79*	81*	85
Louisiana	39*	44*	57*	57*	67*	74	73	72	73
Maine	75*	75*	74*	73*	83*	84	85	87	87
Maryland	55*	59*	61*	60*	73*	79*	80*	85	86
Massachusetts	68*	71*	79*	77*	84*	91*	93	92	93
Michigan	61*	68*	72*	71*	77	79	80	78	78
Minnesota	71*	76*	78*	76*	84*	88	87	89	88
Mississippi	36*	42*	45*	45*	62*	69	70	69	72
Missouri	62*	66*	72*	71*	79*	79*	82	83	83
Montana	—	71*	73*	72*	81*	85	88	88	87
Nebraska	67*	70*	67*	65*	80	80	80	82	83
Nevada	—	57*	61*	60*	69*	72*	74*	79	79
New Hampshire	72*	—	—	—	87*	89*	91	92	92
New Jersey	68*	68*	—	—	80*	86*	90	88	89
New Mexico	50*	51*	51*	50*	63*	65*	70*	72	75
New York	57*	64*	67*	66*	79	81	85*	83*	80
North Carolina	50*	64*	76*	73*	85*	83*	85*	87	88
North Dakota	72*	75*	75*	73*	83*	89	91	91	90
Ohio	57*	—	73*	73*	81*	84	87	85	86
Oklahoma	60*	—	69*	67*	74*	79*	82	82	83
Oregon	—	65*	67*	65*	79	80*	79	80	77
Pennsylvania	65*	68*	—	—	78*	82*	85	84	87
Rhode Island	54*	61*	67*	65*	72*	76*	80*	81*	84
South Carolina	48*	48*	60*	59*	79	81	80	78	79
South Dakota	—	—	—	—	82*	86	86	86	86
Tennessee	47*	58*	60*	59*	70*	74	76	74	75
Texas	56*	69*	77*	76*	82	87	87	85	85
Utah	66*	69*	70*	69*	79*	83	83	81*	85
Vermont	—	67*	73*	73*	85*	87	89	89	89
Virginia	59*	62*	73*	71*	83*	83*	87	85	87
Washington	—	67*	—	—	81	84	84	84	83
West Virginia	52*	63*	68*	65*	75	75	81*	77	78
Wisconsin	71*	74*	—	—	79*	84	85	85	86
Wyoming	69*	64*	73*	71*	87	87	88	87	88
Other jurisdictions									
District of Columbia	23*	20*	24*	24*	36*	45*	49*	56*	60
DoDEA <sup>1</sup>	—	64*	70*	69*	84	85	86	86	86

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

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup>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), various years, 1992-2011 Mathematics Assessments.

**Table A-14. Percentage of fourth-grade public school students at or above *Proficient* in NAEP mathematics, by state/jurisdiction: Various years, 1992-2011**

State/jurisdiction	Accommodations not permitted			Accommodations permitted					
	1992	1996	2000	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>17*</b>	<b>20*</b>	<b>25*</b>	<b>22*</b>	<b>31*</b>	<b>35*</b>	<b>39*</b>	<b>38*</b>	<b>40</b>
Alabama	10*	11*	14*	13*	19*	21*	26	24	27
Alaska	—	21*	—	—	30*	34	38	38	37
Arizona	13*	15*	17*	16*	25*	28*	31	28*	34
Arkansas	10*	13*	13*	14*	26*	34	37	36	37
California	12*	11*	15*	13*	25*	28*	30	30	34
Colorado	17*	22*	—	—	34*	39*	41*	45	47
Connecticut	24*	31*	32*	31*	41*	42	45	46	45
Delaware	17*	16*	—	—	31*	36	40	36	39
Florida	13*	15*	—	—	31*	37	40	40	37
Georgia	15*	13*	18*	17*	27*	30*	32*	34	37
Hawaii	15*	16*	14*	14*	23*	27*	33*	37	40
Idaho	16*	—	21*	20*	31*	40	40	41	39
Illinois	—	—	21*	20*	32*	32*	36	38	38
Indiana	16*	24*	31*	30*	35*	38*	46	42	44
Iowa	26*	22*	28*	26*	36*	37*	43	41	43
Kansas	—	—	30*	29*	41*	47	51	46	48
Kentucky	13*	16*	17*	17*	22*	26*	31*	37	39
Louisiana	8*	8*	14*	14*	21*	24	24	23	26
Maine	27*	27*	25*	23*	34*	39*	42	45	45
Maryland	18*	22*	22*	21*	31*	38*	40*	44	48
Massachusetts	23*	24*	33*	31*	41*	49*	58	57	58
Michigan	18*	23*	29*	28*	34	38	37	35	35
Minnesota	26*	29*	34*	33*	42*	47*	51	54	53
Mississippi	6*	8*	9*	9*	17*	19*	21*	22	25
Missouri	19*	20*	23*	23*	30*	31*	38	41	41
Montana	—	22*	25*	24*	31*	38*	44	45	45
Nebraska	22*	24*	24*	24*	34*	36	38	38	39
Nevada	—	14*	16*	16*	23*	26*	30*	32	36
New Hampshire	25*	—	—	—	43*	47*	52*	56	57
New Jersey	25*	25*	—	—	39*	45*	52	49	51
New Mexico	11*	13*	12*	12*	17*	19*	24*	26	30
New York	17*	20*	22*	21*	33	36	43*	40*	36
North Carolina	13*	21*	28*	25*	41	40*	41	43	44
North Dakota	22*	24*	25*	25*	34*	40*	46	45	46
Ohio	16*	—	26*	25*	36*	43	46	45	45
Oklahoma	14*	—	16*	16*	23*	29*	33	33	33
Oregon	—	21*	23*	23*	33	37	35	37	37
Pennsylvania	22*	20*	—	—	36*	41*	47	46	48
Rhode Island	13*	17*	23*	22*	28*	31*	34*	39	43
South Carolina	13*	12*	18*	18*	32	36	36	34	36
South Dakota	—	—	—	—	34*	41	41	42	40
Tennessee	10*	17*	18*	18*	24*	28	29	28	30
Texas	15*	25*	27*	25*	33*	40	40	38	39
Utah	19*	23*	24*	23*	31*	37*	39	41	43
Vermont	—	23*	29*	29*	42*	44*	49	51	49
Virginia	19*	19*	25*	24*	36*	39*	42	43	46
Washington	—	21*	—	—	36*	42	44	43	45
West Virginia	12*	19*	18*	17*	24*	25*	33	28	31
Wisconsin	24*	27*	—	—	35*	40*	47	45	47
Wyoming	19*	19*	25*	25*	39*	43	44	40	44
Other jurisdictions									
District of Columbia	5*	5*	6*	5*	7*	10*	14*	17*	22
DoDEA <sup>1</sup>	—	19*	23*	21*	31*	35*	37	38	39

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

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup> 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), various years, 1992-2011 Mathematics Assessments.

**Table A-15. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by race/ethnicity and state/jurisdiction: 2011**

State/jurisdiction	White					Black					Hispanic				
	Average scale score	Percentage of students				Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>249</b>	<b>9</b>	<b>91</b>	<b>52</b>	<b>9</b>	<b>224</b>	<b>34</b>	<b>66</b>	<b>17</b>	<b>1</b>	<b>229</b>	<b>28</b>	<b>72</b>	<b>24</b>	<b>2</b>
Alabama	240	14	86	37	4	215	46	54	9	#	227	29	71	21	#
Alaska	248	10	90	50	9	225	32	68	15	2	239	18	82	36	5
Arizona	246	11	89	49	8	224	38	62	22	3	227	30	70	21	1
Arkansas	244	12	88	45	6	219	42	58	16	1	233	24	76	28	3
California	252	8	92	57	12	225	32	68	19	1	222	38	62	17	1
Colorado	254	7	93	60	14	225	34	66	21	1	230	28	72	26	3
Connecticut	253	7	93	60	11	220	41	59	15	1	222	38	62	19	2
Delaware	250	7	93	53	7	227	29	71	19	1	231	24	76	25	1
Florida	250	8	92	52	9	226	30	70	18	1	236	19	81	31	3
Georgia	249	9	91	51	10	224	35	65	18	1	233	24	76	29	3
Hawaii	248	11	89	53	10	233	25	75	32	4	237	22	78	39	4
Idaho	244	12	88	44	6	‡	‡	‡	‡	‡	223	36	64	17	1
Illinois	249	10	90	51	10	219	42	58	14	2	226	30	70	20	1
Indiana	249	9	91	51	9	223	35	65	15	#	234	21	79	29	3
Iowa	246	11	89	47	6	224	37	63	18	2	229	27	73	24	1
Kansas	251	7	93	56	9	227	28	72	18	1	235	17	83	26	1
Kentucky	243	13	87	41	6	225	31	69	17	1	236	18	82	30	3
Louisiana	241	13	87	40	4	219	41	59	12	1	230	25	75	20	#
Maine	246	11	89	47	8	212	55	45	10	1	‡	‡	‡	‡	‡
Maryland	258	6	94	64	18	230	27	73	23	2	245	13	87	43	9
Massachusetts	258	4	96	67	15	235	19	81	27	3	236	20	80	32	4
Michigan	242	14	86	41	5	211	53	47	8	#	228	31	69	21	2
Minnesota	255	6	94	60	14	225	37	63	23	3	230	27	73	28	2
Mississippi	241	14	86	38	3	217	44	56	10	#	229	25	75	22	2
Missouri	246	11	89	48	7	216	47	53	14	1	231	23	77	24	1
Montana	247	9	91	50	6	‡	‡	‡	‡	‡	237	18	82	31	3
Nebraska	247	10	90	48	7	213	49	51	7	1	226	32	68	20	1
Nevada	247	11	89	48	8	226	33	67	23	1	229	29	71	24	1
New Hampshire	252	7	93	59	10	235	19	81	27	3	235	23	77	30	2
New Jersey	256	5	95	64	12	231	23	77	24	2	234	21	79	28	2
New Mexico	247	11	89	48	8	226	32	68	19	3	228	29	71	23	2
New York	245	11	89	46	7	224	35	65	17	1	226	31	69	20	1
North Carolina	253	5	95	58	10	229	25	75	18	#	238	14	86	33	2
North Dakota	249	6	94	52	6	‡	‡	‡	‡	‡	233	20	80	24	2
Ohio	249	9	91	53	8	226	32	68	20	2	233	24	76	27	4
Oklahoma	243	11	89	41	3	224	34	66	14	#	227	28	72	19	2
Oregon	243	16	84	43	7	215	50	50	14	2	220	42	58	15	1
Pennsylvania	251	8	92	56	11	224	33	67	17	1	226	31	69	20	2
Rhode Island	249	9	91	53	10	225	31	69	20	2	224	33	67	21	1
South Carolina	248	10	90	52	9	220	39	61	13	#	234	20	80	28	2
South Dakota	246	9	91	46	5	227	32	68	21	1	226	29	71	18	2
Tennessee	239	18	82	36	5	216	45	55	12	1	228	28	72	19	1
Texas	253	6	94	60	9	232	23	77	25	1	235	19	81	29	2
Utah	247	10	90	49	8	‡	‡	‡	‡	‡	223	36	64	17	1
Vermont	248	10	90	50	8	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	251	8	92	56	11	229	27	73	20	1	237	17	83	31	4
Washington	249	11	89	53	10	227	29	71	20	2	226	32	68	22	2
West Virginia	235	21	79	32	3	227	30	70	20	2	‡	‡	‡	‡	‡
Wisconsin	251	8	92	55	10	217	45	55	12	1	228	29	71	22	1
Wyoming	246	9	91	47	6	‡	‡	‡	‡	‡	235	20	80	31	2
Other jurisdictions															
District of Columbia	272	1	99	84	33	215	46	54	13	1	223	36	64	21	2
DoDEA <sup>1</sup>	246	9	91	47	5	228	27	73	19	#	236	18	82	30	2

See notes at end of table.



**Table A-15. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by race/ethnicity and state/jurisdiction: 2011—Continued**

State/jurisdiction	Asian/Pacific Islander					American Indian/Alaska Native				
	Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>256</b>	<b>9</b>	<b>91</b>	<b>62</b>	<b>20</b>	<b>227</b>	<b>32</b>	<b>68</b>	<b>24</b>	<b>2</b>
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	234	23	77	29	3	213	50	50	14	1
Arizona	249	13	87	53	14	216	45	55	14	1
Arkansas	247	17	83	53	13	‡	‡	‡	‡	‡
California	256	9	91	63	19	‡	‡	‡	‡	‡
Colorado	246	21	79	55	15	‡	‡	‡	‡	‡
Connecticut	255	10	90	62	18	‡	‡	‡	‡	‡
Delaware	262	4	96	69	24	‡	‡	‡	‡	‡
Florida	257	4	96	64	17	‡	‡	‡	‡	‡
Georgia	263	6	94	70	29	‡	‡	‡	‡	‡
Hawaii	237	21	79	37	6	‡	‡	‡	‡	‡
Idaho	247	16	84	52	12	‡	‡	‡	‡	‡
Illinois	257	7	93	63	19	‡	‡	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	248	15	85	52	14	‡	‡	‡	‡	‡
Kansas	253	5	95	59	11	‡	‡	‡	‡	‡
Kentucky	261	6	94	66	27	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	246	15	85	48	11	‡	‡	‡	‡	‡
Maryland	267	5	95	74	33	‡	‡	‡	‡	‡
Massachusetts	267	2	98	76	30	‡	‡	‡	‡	‡
Michigan	263	7	93	71	25	‡	‡	‡	‡	‡
Minnesota	253	12	88	57	16	233	26	74	30	4
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	252	10	90	57	17	‡	‡	‡	‡	‡
Montana	‡	‡	‡	‡	‡	220	43	57	16	1
Nebraska	241	15	85	40	10	‡	‡	‡	‡	‡
Nevada	252	11	89	58	12	‡	‡	‡	‡	‡
New Hampshire	264	5	95	70	29	‡	‡	‡	‡	‡
New Jersey	265	4	96	75	29	‡	‡	‡	‡	‡
New Mexico	254	11	89	63	18	219	42	58	15	2
New York	252	12	88	58	17	‡	‡	‡	‡	‡
North Carolina	263	3	97	71	26	225	36	64	20	3
North Dakota	‡	‡	‡	‡	‡	221	39	61	15	1
Ohio	254	8	92	58	11	‡	‡	‡	‡	‡
Oklahoma	252	4	96	55	10	234	22	78	29	3
Oregon	249	16	84	51	17	220	41	59	21	3
Pennsylvania	264	4	96	75	25	‡	‡	‡	‡	‡
Rhode Island	251	8	92	49	13	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	‡	‡	‡	‡	‡	220	40	60	15	#
Tennessee	249	13	87	51	13	‡	‡	‡	‡	‡
Texas	263	3	97	69	27	‡	‡	‡	‡	‡
Utah	236	22	78	31	8	214	46	54	14	1
Vermont	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	262	4	96	70	24	‡	‡	‡	‡	‡
Washington	256	10	90	62	20	223	37	63	20	1
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	242	20	80	42	12	231	29	71	34	5
Wyoming	‡	‡	‡	‡	‡	223	38	62	23	2
Other jurisdictions										
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DoDEA <sup>1</sup>	244	13	87	45	6	‡	‡	‡	‡	‡

# Rounds to zero.

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

<sup>1</sup>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 of two or more races. 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), 2011 Mathematics Assessment.

**Table A-16. Percentage of students, average scores, and achievement-level results in fourth-grade NAEP mathematics, by selected racial/ethnic groups and state/jurisdiction: 2011**

State/jurisdiction	Asian					Native Hawaiian/Other Pacific Islander					Two or more races				
	Percentage of students	Percentage of students				Percentage of students	Percentage of students				Percentage of students	Percentage of students			
		Average scale score	At or above Basic	At or above Proficient	At or above Advanced		Average scale score	At or above Basic	At or above Proficient	At or above Advanced		Average scale score	At or above Basic	At or above Proficient	At or above Advanced
<b>Nation</b>	<b>5</b>	<b>257</b>	<b>93</b>	<b>64</b>	<b>20</b>	<b>#</b>	<b>236</b>	<b>77</b>	<b>34</b>	<b>7</b>	<b>2</b>	<b>245</b>	<b>87</b>	<b>45</b>	<b>10</b>
<b>Nation (public)</b>	<b>5</b>	<b>257</b>	<b>92</b>	<b>64</b>	<b>21</b>	<b>#</b>	<b>235</b>	<b>76</b>	<b>33</b>	<b>7</b>	<b>2</b>	<b>244</b>	<b>85</b>	<b>43</b>	<b>9</b>
Alabama	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Alaska	6	238	84	34	3	2	‡	‡	‡	‡	8	240	83	38	7
Arizona	3	252	89	57	15	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Arkansas	1	‡	‡	‡	‡	1	‡	‡	‡	‡	1	‡	‡	‡	‡
California	12	256	92	64	19	1	‡	‡	‡	‡	1	252	91	56	16
Colorado	3	246	79	56	16	#	‡	‡	‡	‡	3	250	89	52	15
Connecticut	5	255	90	62	18	#	‡	‡	‡	‡	2	241	74	49	10
Delaware	3	263	97	70	25	#	‡	‡	‡	‡	2	249	94	47	9
Florida	3	258	96	66	17	#	‡	‡	‡	‡	3	242	88	38	8
Georgia	4	263	93	70	29	#	‡	‡	‡	‡	2	241	79	41	6
Hawaii	36	246	86	48	9	33	228	70	26	3	7	241	84	41	7
Idaho	2	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Illinois	4	258	94	65	20	#	‡	‡	‡	‡	3	244	85	45	8
Indiana	1	‡	‡	‡	‡	#	‡	‡	‡	‡	5	238	80	35	4
Iowa	2	‡	‡	‡	‡	#	‡	‡	‡	‡	2	240	84	39	3
Kansas	3	253	95	60	11	#	‡	‡	‡	‡	4	243	90	42	6
Kentucky	1	262	94	67	27	#	‡	‡	‡	‡	2	237	83	35	2
Louisiana	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Maine	2	246	85	48	11	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Maryland	6	268	96	76	34	#	‡	‡	‡	‡	4	256	91	58	20
Massachusetts	6	267	98	76	29	#	‡	‡	‡	‡	2	257	92	60	22
Michigan	3	263	93	71	26	#	‡	‡	‡	‡	2	234	77	27	6
Minnesota	5	253	87	57	16	#	‡	‡	‡	‡	2	237	77	39	6
Mississippi	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Missouri	2	253	91	56	19	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Montana	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Nebraska	2	242	85	42	11	#	‡	‡	‡	‡	3	235	79	29	5
Nevada	6	253	90	61	13	1	‡	‡	‡	‡	3	239	80	39	5
New Hampshire	3	264	94	70	29	#	‡	‡	‡	‡	1	‡	‡	‡	‡
New Jersey	8	266	96	75	29	#	‡	‡	‡	‡	1	‡	‡	‡	‡
New Mexico	1	254	89	63	19	#	‡	‡	‡	‡	1	‡	‡	‡	‡
New York	10	252	88	58	17	#	‡	‡	‡	‡	#	‡	‡	‡	‡
North Carolina	3	265	98	72	27	#	‡	‡	‡	‡	3	247	93	48	7
North Dakota	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Ohio	2	254	92	58	11	#	‡	‡	‡	‡	4	240	81	35	8
Oklahoma	2	254	97	58	12	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Oregon	3	257	91	62	22	1	‡	‡	‡	‡	5	242	82	46	8
Pennsylvania	3	265	96	75	26	#	‡	‡	‡	‡	1	234	81	27	5
Rhode Island	3	251	92	50	13	#	‡	‡	‡	‡	3	238	80	43	6
South Carolina	2	‡	‡	‡	‡	#	‡	‡	‡	‡	2	236	82	33	3
South Dakota	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Tennessee	2	247	85	52	12	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Texas	3	264	97	72	28	#	‡	‡	‡	‡	1	249	93	49	14
Utah	2	241	82	39	14	2	230	72	23	2	1	‡	‡	‡	‡
Vermont	2	‡	‡	‡	‡	#	‡	‡	‡	‡	3	245	86	44	11
Virginia	7	262	96	70	24	#	‡	‡	‡	‡	5	249	90	50	11
Washington	7	261	94	70	23	1	‡	‡	‡	‡	5	249	89	51	13
West Virginia	#	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Wisconsin	4	242	81	43	13	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Wyoming	1	‡	‡	‡	‡	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Other jurisdictions															
District of Columbia	2	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
DoDEA <sup>1</sup>	5	247	89	49	8	2	‡	‡	‡	‡	11	243	88	42	6

# Rounds to zero

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

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: 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), 2011 Mathematics Assessment.

**Table A-17. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by gender and state/jurisdiction: 2011**

State/jurisdiction	Male					Female				
	Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>241</b>	<b>18</b>	<b>82</b>	<b>41</b>	<b>7</b>	<b>239</b>	<b>18</b>	<b>82</b>	<b>39</b>	<b>6</b>
Alabama	231	26	74	28	3	232	25	75	27	2
Alaska	237	22	78	38	6	235	22	78	35	5
Arizona	237	21	79	36	5	234	24	76	31	3
Arkansas	238	20	80	37	5	238	19	81	37	4
California	235	25	75	35	7	234	27	73	33	6
Colorado	246	16	84	49	11	243	16	84	45	8
Connecticut	243	17	83	46	9	241	19	81	44	7
Delaware	241	16	84	40	6	239	16	84	37	4
Florida	240	17	83	38	6	240	16	84	36	5
Georgia	238	22	78	37	7	239	19	81	37	6
Hawaii	238	21	79	39	6	240	18	82	40	6
Idaho	241	16	84	41	6	239	18	82	38	5
Illinois	240	19	81	39	8	238	21	79	37	6
Indiana	245	12	88	46	8	242	15	85	42	6
Iowa	244	14	86	44	6	242	15	85	42	5
Kansas	247	10	90	48	7	246	10	90	47	7
Kentucky	242	14	86	39	6	240	16	84	38	5
Louisiana	231	28	72	26	2	231	26	74	26	2
Maine	246	12	88	48	8	243	14	86	42	6
Maryland	248	14	86	50	14	246	14	86	45	11
Massachusetts	255	8	92	60	16	252	7	93	57	11
Michigan	238	21	79	37	6	235	22	78	33	4
Minnesota	250	12	88	54	13	248	12	88	52	11
Mississippi	229	29	71	25	2	231	26	74	25	2
Missouri	240	18	82	42	6	241	16	84	41	5
Montana	245	12	88	48	6	242	14	86	43	4
Nebraska	241	17	83	41	6	239	18	82	37	4
Nevada	238	20	80	38	5	236	22	78	33	4
New Hampshire	252	8	92	58	11	251	7	93	56	10
New Jersey	249	11	89	53	11	247	11	89	49	9
New Mexico	234	24	76	31	4	232	26	74	28	4
New York	238	20	80	37	6	237	20	80	34	4
North Carolina	245	12	88	44	8	244	12	88	44	6
North Dakota	246	10	90	49	7	244	10	90	44	4
Ohio	245	14	86	47	9	243	13	87	44	5
Oklahoma	237	18	82	34	3	238	16	84	33	3
Oregon	237	23	77	37	7	237	22	78	36	6
Pennsylvania	247	14	86	49	10	245	13	87	46	8
Rhode Island	242	17	83	43	8	242	15	85	42	6
South Carolina	237	23	77	36	6	238	19	81	36	5
South Dakota	242	14	86	42	5	240	15	85	37	3
Tennessee	233	24	76	30	4	232	25	75	29	3
Texas	241	15	85	39	5	241	15	85	39	4
Utah	244	14	86	46	9	241	16	84	40	5
Vermont	248	11	89	52	9	245	12	88	46	6
Virginia	247	12	88	48	10	244	13	87	44	8
Washington	244	17	83	46	10	242	17	83	43	8
West Virginia	235	21	79	33	4	234	22	78	29	3
Wisconsin	245	14	86	49	9	244	14	86	45	7
Wyoming	245	12	88	46	6	243	13	87	42	5
Other jurisdictions										
District of Columbia	220	42	58	21	4	223	38	62	22	4
DoDEA <sup>1</sup>	242	14	86	40	4	240	14	86	37	3

<sup>1</sup> 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), 2011 Mathematics Assessment.

**Table A-18. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by eligibility for free/reduced-price school lunch and state/jurisdiction: 2011**

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
<b>Nation (public)</b>	<b>229</b>	<b>27</b>	<b>73</b>	<b>24</b>	<b>2</b>	<b>252</b>	<b>8</b>	<b>92</b>	<b>57</b>	<b>12</b>	<b>247</b>	<b>12</b>	<b>88</b>	<b>49</b>	<b>10</b>
Alabama	222	35	65	15	1	244	12	88	44	5	‡	‡	‡	‡	‡
Alaska	224	35	65	22	2	247	11	89	49	9	‡	‡	‡	‡	‡
Arizona	227	31	69	22	2	247	12	88	49	8	‡	‡	‡	‡	‡
Arkansas	230	27	73	26	2	252	6	94	57	9	‡	‡	‡	‡	‡
California	222	37	63	18	1	251	11	89	56	14	231	19	81	19	3
Colorado	231	27	73	28	3	256	6	94	63	16	‡	‡	‡	‡	‡
Connecticut	223	37	63	19	1	254	7	93	62	13	‡	‡	‡	‡	‡
Delaware	231	24	76	24	1	250	8	92	53	9	‡	‡	‡	‡	‡
Florida	232	22	78	26	2	252	7	93	56	11	‡	‡	‡	‡	‡
Georgia	227	30	70	21	1	252	8	92	58	13	‡	‡	‡	‡	‡
Hawaii	228	29	71	26	3	248	11	89	52	10	‡	‡	‡	‡	‡
Idaho	232	25	75	27	3	248	9	91	51	8	‡	‡	‡	‡	‡
Illinois	225	33	67	20	1	252	8	92	56	12	‡	‡	‡	‡	‡
Indiana	235	20	80	31	2	253	6	94	58	12	‡	‡	‡	‡	‡
Iowa	233	23	77	28	2	250	8	92	54	8	‡	‡	‡	‡	‡
Kansas	238	15	85	33	3	255	5	95	63	11	‡	‡	‡	‡	‡
Kentucky	232	23	77	26	2	251	6	94	55	10	‡	‡	‡	‡	‡
Louisiana	224	34	66	17	1	246	10	90	46	5	‡	‡	‡	‡	‡
Maine	235	21	79	31	3	252	6	94	57	11	‡	‡	‡	‡	‡
Maryland	233	24	76	26	3	258	6	94	63	19	‡	‡	‡	‡	‡
Massachusetts	239	17	83	36	4	261	3	97	70	19	‡	‡	‡	‡	‡
Michigan	224	35	65	18	1	247	11	89	49	8	‡	‡	‡	‡	‡
Minnesota	235	22	78	33	3	258	6	94	65	17	‡	‡	‡	‡	‡
Mississippi	224	35	65	17	1	246	9	91	47	5	‡	‡	‡	‡	‡
Missouri	230	27	73	27	2	252	7	93	57	9	‡	‡	‡	‡	‡
Montana	234	22	78	31	2	251	7	93	56	8	‡	‡	‡	‡	‡
Nebraska	227	30	70	21	1	250	8	92	53	8	‡	‡	‡	‡	‡
Nevada	229	29	71	25	2	248	10	90	50	8	‡	‡	‡	‡	‡
New Hampshire	241	15	85	39	4	256	5	95	64	13	‡	‡	‡	‡	‡
New Jersey	233	22	78	27	2	257	5	95	64	14	‡	‡	‡	‡	‡
New Mexico	226	31	69	21	2	248	9	91	50	9	‡	‡	‡	‡	‡
New York	229	29	71	25	3	248	10	90	49	8	249	11	89	50	14
North Carolina	235	18	82	28	2	256	4	96	62	13	‡	‡	‡	‡	‡
North Dakota	235	19	81	29	2	251	5	95	56	7	‡	‡	‡	‡	‡
Ohio	234	23	77	30	3	253	6	94	59	11	‡	‡	‡	‡	‡
Oklahoma	232	23	77	25	1	246	9	91	47	5	‡	‡	‡	‡	‡
Oregon	226	33	67	22	2	250	10	90	54	11	‡	‡	‡	‡	‡
Pennsylvania	231	26	74	26	3	256	5	95	62	13	‡	‡	‡	‡	‡
Rhode Island	229	26	74	26	2	252	8	92	57	11	‡	‡	‡	‡	‡
South Carolina	227	30	70	21	2	251	9	91	56	10	‡	‡	‡	‡	‡
South Dakota	231	25	75	25	2	249	7	93	51	6	‡	‡	‡	‡	‡
Tennessee	225	34	66	19	1	245	12	88	44	7	‡	‡	‡	‡	‡
Texas	234	20	80	28	2	253	6	94	59	11	‡	‡	‡	‡	‡
Utah	232	26	74	28	3	249	9	91	52	9	‡	‡	‡	‡	‡
Vermont	238	18	82	35	4	253	7	93	59	11	‡	‡	‡	‡	‡
Virginia	231	23	77	24	2	253	7	93	58	12	‡	‡	‡	‡	‡
Washington	230	27	73	27	2	255	7	93	61	15	‡	‡	‡	‡	‡
West Virginia	227	30	70	21	1	243	13	87	43	6	‡	‡	‡	‡	‡
Wisconsin	231	25	75	27	2	254	6	94	61	12	‡	‡	‡	‡	‡
Wyoming	236	19	81	32	3	249	7	93	52	7	‡	‡	‡	‡	‡
Other jurisdictions															
District of Columbia	213	49	51	12	1	246	16	84	48	13	‡	‡	‡	‡	‡
DoDEA <sup>1</sup>	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	241	14	86	39	4

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

<sup>1</sup> 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), 2011 Mathematics Assessment.

**Table A-19. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by status as students with disabilities (SD) and state/jurisdiction: 2011**

State/jurisdiction	SD					Not SD				
	Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>218</b>	<b>45</b>	<b>55</b>	<b>17</b>	<b>2</b>	<b>243</b>	<b>15</b>	<b>85</b>	<b>43</b>	<b>7</b>
Alabama	198	66	34	5	#	234	21	79	29	3
Alaska	218	45	55	19	2	239	18	82	40	6
Arizona	210	54	46	15	1	238	19	81	36	5
Arkansas	212	51	49	14	1	241	15	85	40	5
California	202	65	35	9	1	237	23	77	36	7
Colorado	217	46	54	18	3	247	12	88	50	10
Connecticut	216	49	51	18	2	246	14	86	49	9
Delaware	217	47	53	14	1	244	12	88	42	6
Florida	223	36	64	18	2	243	13	87	41	6
Georgia	214	51	49	14	2	241	17	83	40	7
Hawaii	194	72	28	5	1	243	15	85	43	7
Idaho	217	48	52	15	1	243	14	86	42	6
Illinois	218	43	57	19	2	242	17	83	41	8
Indiana	227	32	68	26	2	247	10	90	47	8
Iowa	216	48	52	13	1	247	9	91	48	6
Kansas	225	34	66	19	2	249	7	93	52	7
Kentucky	224	37	63	21	3	243	12	88	41	6
Louisiana	212	52	48	9	1	235	21	79	30	3
Maine	219	43	57	13	1	249	8	92	51	9
Maryland	235	27	73	33	8	248	12	88	49	13
Massachusetts	233	24	76	26	3	257	4	96	65	15
Michigan	214	50	50	14	1	239	18	82	38	5
Minnesota	227	35	65	25	4	253	8	92	57	13
Mississippi	213	50	50	14	1	231	25	75	26	2
Missouri	221	40	60	21	2	243	14	86	44	6
Montana	219	44	56	17	2	247	10	90	49	6
Nebraska	220	42	58	19	2	243	13	87	43	6
Nevada	217	47	53	21	3	239	18	82	37	5
New Hampshire	230	27	73	25	3	256	4	96	63	12
New Jersey	226	35	65	25	3	252	7	93	55	11
New Mexico	210	56	44	11	1	236	21	79	32	4
New York	215	49	51	12	1	242	15	85	40	6
North Carolina	225	32	68	19	1	248	9	91	48	8
North Dakota	227	31	69	24	1	248	8	92	49	6
Ohio	221	41	59	20	1	247	10	90	49	8
Oklahoma	217	46	54	12	#	239	15	85	35	3
Oregon	214	50	50	14	2	240	19	81	40	7
Pennsylvania	223	39	61	21	3	249	9	91	52	10
Rhode Island	212	51	49	13	1	246	11	89	47	8
South Carolina	211	53	47	11	1	241	16	84	40	6
South Dakota	223	36	64	17	1	244	11	89	44	5
Tennessee	211	52	48	12	2	235	21	79	32	4
Texas	220	44	56	19	1	243	13	87	41	5
Utah	222	38	62	20	4	245	12	88	46	7
Vermont	222	39	61	17	2	251	6	94	55	9
Virginia	225	37	63	23	4	248	10	90	49	9
Washington	216	47	53	18	2	247	12	88	49	10
West Virginia	217	45	55	17	1	238	17	83	34	4
Wisconsin	222	42	58	21	3	248	10	90	51	9
Wyoming	226	32	68	20	1	247	9	91	48	6
Other jurisdictions										
District of Columbia	191	75	25	5	2	226	36	64	24	4
DoDEA <sup>1</sup>	220	44	56	15	2	244	10	90	42	4

# Rounds to zero.

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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), 2011 Mathematics Assessment.

**Table A-20. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by status as English language learners (ELL) and state/jurisdiction: 2011**

State/jurisdiction	ELL					Not ELL				
	Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>219</b>	<b>42</b>	<b>58</b>	<b>14</b>	<b>1</b>	<b>243</b>	<b>15</b>	<b>85</b>	<b>43</b>	<b>7</b>
Alabama	‡	‡	‡	‡	‡	232	25	75	28	3
Alaska	201	64	36	3	#	242	16	84	42	7
Arizona	208	58	42	7	#	239	18	82	37	5
Arkansas	227	29	71	23	1	239	19	81	38	5
California	214	49	51	11	1	243	16	84	44	9
Colorado	218	42	58	12	#	249	11	89	53	11
Connecticut	205	61	39	6	1	245	15	85	48	9
Delaware	211	54	46	8	#	241	15	85	40	5
Florida	219	42	58	13	#	242	14	86	40	6
Georgia	219	44	56	13	1	239	19	81	38	7
Hawaii	213	49	51	12	#	242	16	84	43	7
Idaho	204	63	37	2	#	242	15	85	41	6
Illinois	215	46	54	12	1	241	18	82	40	7
Indiana	231	25	75	24	3	245	13	87	46	7
Iowa	220	37	63	12	#	244	13	87	45	6
Kansas	233	17	83	23	1	248	9	91	51	8
Kentucky	225	28	72	11	1	241	15	85	39	5
Louisiana	227	31	69	19	#	231	27	73	26	2
Maine	213	53	47	12	2	245	12	88	46	7
Maryland	231	24	76	24	2	248	13	87	49	13
Massachusetts	228	28	72	20	2	255	6	94	61	14
Michigan	217	47	53	12	1	237	21	79	36	5
Minnesota	226	33	67	25	2	252	10	90	56	13
Mississippi	‡	‡	‡	‡	‡	230	28	72	25	2
Missouri	217	42	58	14	#	241	16	84	42	6
Montana	‡	‡	‡	‡	‡	245	12	88	46	6
Nebraska	216	44	56	7	#	242	15	85	42	6
Nevada	224	34	66	18	1	242	16	84	42	6
New Hampshire	228	32	68	19	3	252	7	93	58	11
New Jersey	216	45	55	8	#	249	10	90	52	10
New Mexico	209	56	44	5	#	237	19	81	34	5
New York	211	53	47	8	#	240	17	83	39	6
North Carolina	229	21	79	16	#	246	11	89	46	7
North Dakota	212	49	51	6	#	246	9	91	48	6
Ohio	230	28	72	26	1	245	13	87	46	7
Oklahoma	216	45	55	8	#	239	16	84	35	3
Oregon	209	57	43	5	#	241	17	83	42	7
Pennsylvania	214	50	50	11	1	247	12	88	49	9
Rhode Island	207	57	43	8	#	244	13	87	45	8
South Carolina	234	21	79	29	3	237	21	79	36	6
South Dakota	208	56	44	6	#	242	12	88	42	5
Tennessee	216	46	54	10	#	233	24	76	30	4
Texas	228	27	73	20	1	245	11	89	44	6
Utah	206	63	37	5	#	245	12	88	46	8
Vermont	‡	‡	‡	‡	‡	247	11	89	50	8
Virginia	228	26	74	19	2	247	12	88	48	9
Washington	211	56	44	9	1	247	12	88	49	10
West Virginia	‡	‡	‡	‡	‡	235	22	78	31	3
Wisconsin	223	35	65	17	1	247	12	88	49	9
Wyoming	219	41	59	13	#	245	11	89	45	6
Other jurisdictions										
District of Columbia	211	50	50	12	#	223	39	61	22	4
DoDEA <sup>1</sup>	223	38	62	17	1	242	13	87	40	4

# Rounds to zero.

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

<sup>1</sup> 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), 2011 Mathematics Assessment.

**Table A-21. Percentage distribution of eighth-grade public school students assessed in NAEP mathematics, by race/ethnicity, eligibility for free/reduced-price school lunch, and state/jurisdiction: 1990, 2003, and 2011**

State/jurisdiction	Race/ethnicity										Eligibility for free/reduced-price school lunch			
	White		Black		Hispanic		Asian/Pacific Islander		American Indian/Alaska Native		Eligible		Not eligible	
	1990 <sup>1</sup>	2011	1990 <sup>1</sup>	2011	1990 <sup>1</sup>	2011	1990 <sup>1</sup>	2011	1990 <sup>1</sup>	2011	2003	2011	2003	2011
<b>Nation (public)</b>	<b>73*</b>	<b>54</b>	<b>16</b>	<b>16</b>	<b>7*</b>	<b>23</b>	<b>2*</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>36*</b>	<b>48</b>	<b>58*</b>	<b>52</b>
Alabama	67*	59	32	33	#*	5	1*	1	#	1	47*	53	53*	47
Alaska	—	52	—	4	—	6	—	10	—	22	24*	41	67*	58
Arizona	62*	45	3*	6	26*	41	2*	3	7	5	41*	51	47	46
Arkansas	75*	66	24	21	1*	9	1*	2	#*	1	46*	56	49	43
California	49*	26	7	7	30*	52	12	15	1	1	41*	54	46	45
Colorado	77*	59	5	5	15*	28	2*	4	1	1	26*	37	72*	63
Connecticut	79*	66	11	13	8*	17	2*	4	#*	#	26*	33	71	67
Delaware	70*	52	26*	33	2*	10	1*	3	#*	#	33*	43	58	57
Florida	64*	45	22	22	12*	27	2	3	#	#	43*	55	52*	45
Georgia	62*	46	36	39	1*	9	1*	4	#	#	43*	56	52*	44
Hawaii	20*	13	2	3	2*	4	67*	72	#	1	43*	46	56*	53
Idaho	93*	79	#	1	4*	16	1	2	1	1	35*	46	56	53
Illinois	70*	51	19	18	8*	24	2*	5	#	#	37*	48	60*	52
Indiana	87*	73	9*	14	2*	8	1	1	#	#	29*	44	67*	56
Iowa	95*	82	2*	5	1*	8	1*	3	#	#	25*	37	72*	62
Kansas	—	70	—	7	—	14	—	3	—	2	32*	44	66*	56
Kentucky	90*	84	9	10	#*	3	1	1	#	#	42*	52	55*	48
Louisiana	57	54	40	40	1*	4	1	2	#	1	50*	62	38	38
Maine	—	93	—	3	—	1	—	1	—	1	28*	41	70*	59
Maryland	62*	45	31	34	2*	11	4*	7	#	#	26*	33	67	67
Massachusetts	—	73	—	8	—	13	—	4	—	#	23*	33	65	67
Michigan	82*	74	14	16	2*	4	2	3	1	1	26*	42	66*	58
Minnesota	93*	78	2*	8	#*	6	3*	6	2	2	22*	32	77*	68
Mississippi	—	48	—	49	—	3	—	1	—	#	57*	67	39*	32
Missouri	—	78	—	16	—	3	—	2	—	#	31*	43	66*	56
Montana	91*	84	#*	1	1*	3	1	1	7	10	30*	38	65	62
Nebraska	92*	74	5*	6	2*	15	1*	2	#*	1	28*	39	68*	61
Nevada	—	39	—	9	—	38	—	8	—	1	32*	47	64*	53
New Hampshire	98*	91	#*	2	1*	3	1*	3	#	#	13*	23	79*	74
New Jersey	69*	56	17	16	9*	20	4*	8	#	#	24*	30	68	70
New Mexico	42*	28	2	2	42*	61	2*	1	11*	8	51*	64	40	36
New York	61*	51	19	19	13*	22	4*	8	1	#	44*	51	51	49
North Carolina	63*	55	32*	26	1*	11	1*	3	2	1	37*	50	51	50
North Dakota	93*	85	#*	3	1*	2	1	1	5	9	27*	31	73*	69
Ohio	84*	74	12*	17	1*	3	1	2	#	#	23*	43	65*	57
Oklahoma	77*	55	11	11	2*	11	1	2	9*	19	44*	52	54*	48
Oregon	91*	66	2	3	3*	20	3*	5	2	2	26*	50	68*	49
Pennsylvania	82*	70	14	19	2*	7	1*	3	#	#	28*	40	69*	59
Rhode Island	86*	68	5*	7	5*	19	2*	3	#*	1	29*	41	63*	58
South Carolina	—	56	—	35	—	5	—	2	—	#	45*	52	53	48
South Dakota	—	82	—	2	—	3	—	1	—	11	32*	35	68*	65
Tennessee	—	71	—	22	—	5	—	2	—	#	37*	53	60*	47
Texas	50*	32	14	13	33*	51	2	4	#	#	45*	59	53*	41
Utah	—	78	—	1	—	15	—	4	—	1	27*	35	70*	65
Vermont	—	93	—	2	—	2	—	2	—	#	25*	34	75*	66
Virginia	70*	56	25	22	2*	11	3*	6	#	#	25*	32	71	68
Washington	—	62	—	5	—	17	—	9	—	2	27*	40	59	60
West Virginia	96*	92	3*	6	#*	1	1	1	#	#	47	46	53	54
Wisconsin	88*	77	9	9	1*	8	2*	4	1	1	22*	34	68	64
Wyoming	86*	82	1	1	6*	12	1	1	2	3	27*	35	72*	65
Other jurisdictions														
District of Columbia	3*	5	93*	82	3*	11	1*	1	#	#	57*	71	31	29
DoDEA <sup>2</sup>	—	46	—	16	—	17	—	9	—	1	‡	#	‡	#

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

# Rounds to zero.

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

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup> Accommodations not permitted.

<sup>2</sup> 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 or two or more races, and for students whose eligibility status 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), 1990, 2003, and 2011 Mathematics Assessments.

**Table A-22. Percentage of eighth-grade public school students at or above *Basic* in NAEP mathematics, by state/jurisdiction: Various years, 1990-2011**

State/jurisdiction	Accommodations not permitted				Accommodations permitted					
	1990	1992	1996	2000	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>51*</b>	<b>56*</b>	<b>61*</b>	<b>65*</b>	<b>62*</b>	<b>67*</b>	<b>68*</b>	<b>70*</b>	<b>71*</b>	<b>72</b>
Alabama	40*	39*	45*	52*	53*	53*	53*	55	58	60
Alaska	—	—	68*	—	—	70*	69*	73	75	74
Arizona	48*	55*	57*	62*	60*	61*	64*	66	67	68
Arkansas	44*	44*	52*	52*	49*	58*	64*	65*	67	70
California	45*	50*	51*	52*	50*	56*	57*	59	59	61
Colorado	57*	64*	67*	—	—	74*	70*	75*	76*	80
Connecticut	60*	64*	70*	72	70*	73	70*	73	78	75
Delaware	48*	52*	55*	—	—	68*	72	74	75	74
Florida	43*	49*	54*	—	—	62*	65	68	70	68
Georgia	47*	48*	51*	55*	54*	59*	62*	64*	67	68
Hawaii	40*	46*	51*	52*	51*	56*	56*	59*	65*	68
Idaho	63*	68*	—	71*	70*	73*	73*	75	78	77
Illinois	50*	—	—	68*	67*	66*	68*	70	73	73
Indiana	56*	60*	68*	76	74	74	74	76	78	77
Iowa	70*	76	78	—	—	76	75	77	76	77
Kansas	—	—	—	77	76	76*	77*	81	79	80
Kentucky	43*	51*	56*	63*	60*	65*	64*	69	70	72
Louisiana	32*	37*	38*	48*	47*	57*	59	64	62	63
Maine	—	72*	77	76	73*	75*	74*	78	78	78
Maryland	50*	54*	57*	65*	62*	67*	66*	74	75	74
Massachusetts	—	63*	68*	76*	70*	76*	80*	85	85	86
Michigan	53*	58*	67	70	68	68	68	66	68	71
Minnesota	67*	74*	75*	80	80	82	79*	81	83	83
Mississippi	—	33*	36*	41*	42*	47*	52*	54	54	58
Missouri	—	62*	64*	67*	64*	71	68	72	77*	73
Montana	74*	—	75*	80	79*	79*	80*	79*	82	83
Nebraska	68*	70*	76	74	73	74	75	74	75	74
Nevada	—	—	—	58*	55*	59*	60*	60*	63*	67
New Hampshire	65*	71*	—	—	—	79	77*	78*	82	82
New Jersey	58*	62*	—	—	—	72*	74*	77*	80	82
New Mexico	43*	48*	51*	50*	48*	52*	53*	57*	59*	64
New York	50*	57*	61*	68	63*	70	70	70	73	70
North Carolina	38*	47*	56*	70*	67*	72	72	73	74	75
North Dakota	75*	78*	77*	77*	76*	81*	81*	86	86	85
Ohio	53*	59*	—	75	73*	74*	74*	76	76	79
Oklahoma	52*	59*	—	64*	62*	65*	63*	66*	68*	72
Oregon	62*	—	67*	71	71	70	72	73	75	72
Pennsylvania	56*	62*	—	—	—	69*	72	77	78*	74
Rhode Island	49*	56*	60*	64*	59*	63*	63*	65*	68*	73
South Carolina	—	48*	48*	55*	53*	68	71	71	69	70
South Dakota	—	—	—	—	—	78*	80	81	83	82
Tennessee	—	47*	53*	53*	52*	59*	61	64	65	64
Texas	45*	53*	59*	68*	67*	69*	72*	78*	78*	81
Utah	—	67*	70	68*	66*	72	71	72	75	73
Vermont	—	—	72*	75*	73*	77*	78*	81	81	82
Virginia	52*	57*	58*	67*	65*	72*	75	77	76	78
Washington	—	—	67*	—	—	72*	75	75	78	77
West Virginia	42*	47*	54*	62	58*	63	60*	61*	61*	65
Wisconsin	66*	71*	75	—	—	75*	76	76	79	79
Wyoming	64*	67*	68*	70*	69*	77*	76*	80	78	80
Other jurisdictions										
District of Columbia	17*	22*	20*	23*	23*	29*	31*	34*	40*	48
DoDEA <sup>1</sup>	—	—	64*	70*	68*	79	76*	78	79	80

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

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup>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), various years, 1990-2011 Mathematics Assessments.



**Table A-23. Percentage of eighth-grade public school students at or above *Proficient* in NAEP mathematics, by state/jurisdiction: Various years, 1990-2011**

State/jurisdiction	Accommodations not permitted				Accommodations permitted					
	1990	1992	1996	2000	2000	2003	2005	2007	2009	2011
<b>Nation (public)</b>	<b>15*</b>	<b>20*</b>	<b>23*</b>	<b>26*</b>	<b>25*</b>	<b>27*</b>	<b>28*</b>	<b>31*</b>	<b>33*</b>	<b>34</b>
Alabama	9*	10*	12*	16	16	16*	15*	18	20	20
Alaska	—	—	30*	—	—	30*	29*	32	33	35
Arizona	13*	15*	18*	21*	20*	21*	26*	26*	29	31
Arkansas	9*	10*	13*	14*	13*	19*	22*	24*	27	29
California	12*	16*	17*	18*	17*	22*	22*	24	23	25
Colorado	17*	22*	25*	—	—	34*	32*	37*	40	43
Connecticut	22*	26*	31*	34	33*	35	35	35	40	38
Delaware	14*	15*	19*	—	—	26*	30	31	32	32
Florida	12*	15*	17*	—	—	23*	26	27	29	28
Georgia	14*	13*	16*	19*	19*	22*	23*	25	27	28
Hawaii	12*	14*	16*	16*	16*	17*	18*	21*	25*	30
Idaho	18*	22*	—	27*	26*	28*	30*	34	38	37
Illinois	15*	—	—	27*	26*	29	29*	31	33	33
Indiana	17*	20*	24*	31	29*	31*	30*	35	36	34
Iowa	25*	31	31	—	—	33	34	35	34	34
Kansas	—	—	—	34*	34*	34*	34*	40	39	41
Kentucky	10*	14*	16*	21*	20*	24*	23*	27*	27	31
Louisiana	5*	7*	7*	12*	11*	17*	16*	19	20	22
Maine	—	25*	31*	32*	30*	29*	30*	34*	35*	39
Maryland	17*	20*	24*	29*	27*	30*	30*	37	40	40
Massachusetts	—	23*	28*	32*	30*	38*	43*	51	52	51
Michigan	16*	19*	28	28	28	28	29	29	31	31
Minnesota	23*	31*	34*	40*	39*	44*	43*	43*	47	48
Mississippi	—	6*	7*	8*	9*	12*	14*	14*	15*	19
Missouri	—	20*	22*	22*	21*	28*	26*	30	35*	32
Montana	27*	—	32*	37*	36*	35*	36*	38*	44	46
Nebraska	24*	26*	31	31	30	32	35	35	35	33
Nevada	—	—	—	20*	18*	20*	21*	23*	25*	29
New Hampshire	20*	25*	—	—	—	35*	35*	38*	43	44
New Jersey	21*	24*	—	—	—	33*	36*	40*	44	47
New Mexico	10*	11*	14*	13*	12*	15*	14*	17*	20*	24
New York	15*	20*	22*	26	24*	32	31	30	34*	30
North Carolina	9*	12*	20*	30*	27*	32*	32*	34	36	37
North Dakota	27*	29*	33*	31*	30*	36*	35*	41	43	43
Ohio	15*	18*	—	31*	30*	30*	33*	35	36	39
Oklahoma	13*	17*	—	19*	18*	20*	21*	21*	24	27
Oregon	21*	—	26*	32	31	32	34	35	37*	33
Pennsylvania	17*	21*	—	—	—	30*	31*	38	40	39
Rhode Island	15*	16*	20*	24*	22*	24*	24*	28*	28*	34
South Carolina	—	15*	14*	18*	17*	26*	30	32	30	32
South Dakota	—	—	—	—	—	35*	36*	39	42	42
Tennessee	—	12*	15*	17*	16*	21	21	23	25	24
Texas	13*	18*	21*	24*	24*	25*	31*	35*	36	40
Utah	—	22*	24*	26*	25*	31*	30*	32	35	35
Vermont	—	—	27*	32*	31*	35*	38*	41*	43	46
Virginia	17*	19*	21*	26*	25*	31*	33*	37	36*	40
Washington	—	—	26*	—	—	32*	36*	36*	39	40
West Virginia	9*	10*	14*	18*	17*	20	18*	19*	19	21
Wisconsin	23*	27*	32*	—	—	35*	36*	37*	39	41
Wyoming	19*	21*	22*	25*	23*	32*	29*	36	35	37
Other jurisdictions										
District of Columbia	3*	4*	5*	6*	6*	6*	7*	8*	11*	17
DoDEA <sup>1</sup>	—	—	22*	27*	26*	33*	33*	33*	36	37

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

\* Significantly different ( $p < .05$ ) from 2011 when only one state/jurisdiction or the nation is being examined.

<sup>1</sup>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), various years, 1990-2011 Mathematics Assessments.

**Table A-24. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by race/ethnicity and state/jurisdiction: 2011**

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
<b>Nation (public)</b>	<b>293</b>	<b>17</b>	<b>83</b>	<b>43</b>	<b>10</b>	<b>262</b>	<b>50</b>	<b>50</b>	<b>13</b>	<b>1</b>	<b>269</b>	<b>40</b>	<b>60</b>	<b>20</b>	<b>3</b>
Alabama	280	26	74	28	4	250	64	36	7	#	255	60	40	9	1
Alaska	296	12	88	47	10	273	34	66	17	1	277	33	67	25	5
Arizona	294	17	83	46	12	269	39	61	18	1	266	45	55	18	2
Arkansas	287	21	79	37	6	257	56	44	9	1	272	36	64	20	2
California	290	20	80	41	11	254	58	42	12	1	260	51	49	13	1
Colorado	302	10	90	55	16	270	39	61	17	2	271	38	62	20	3
Connecticut	297	14	86	48	13	262	50	50	11	2	262	51	49	13	1
Delaware	294	15	85	43	10	266	44	56	14	1	274	32	68	21	2
Florida	287	21	79	37	8	258	54	46	11	1	274	35	65	22	3
Georgia	291	18	82	40	9	262	49	51	12	1	277	31	69	25	5
Hawaii	290	18	82	41	7	277	28	72	26	5	263	52	48	19	2
Idaho	291	18	82	41	10	‡	‡	‡	‡	‡	267	42	58	16	3
Illinois	294	16	84	44	11	260	52	48	10	1	272	36	64	19	3
Indiana	290	18	82	40	8	264	46	54	11	1	275	32	68	21	3
Iowa	288	20	80	37	9	258	52	48	11	1	269	38	62	14	1
Kansas	295	14	86	47	10	269	41	59	16	2	274	35	65	22	2
Kentucky	284	25	75	33	7	261	53	47	12	1	269	39	61	18	1
Louisiana	283	25	75	31	4	259	54	46	10	1	269	39	61	16	1
Maine	290	21	79	40	11	265	42	58	18	3	‡	‡	‡	‡	‡
Maryland	303	11	89	56	18	267	45	55	18	3	273	39	61	27	4
Massachusetts	304	9	91	58	17	275	35	65	26	4	273	36	64	21	3
Michigan	286	22	78	35	6	250	66	34	7	#	274	36	64	23	5
Minnesota	302	11	89	55	16	266	45	55	18	1	270	41	59	18	3
Mississippi	283	24	76	30	5	255	60	40	8	#	273	30	70	20	2
Missouri	288	21	79	36	8	254	60	40	8	#	267	42	58	16	#
Montana	297	13	87	49	12	‡	‡	‡	‡	‡	285	23	77	31	7
Nebraska	290	18	82	39	8	255	58	42	8	1	261	52	48	11	1
Nevada	292	17	83	43	10	259	55	45	12	1	266	45	55	15	2
New Hampshire	293	17	83	45	11	‡	‡	‡	‡	‡	266	45	55	15	2
New Jersey	304	9	91	59	17	272	37	63	21	3	274	33	67	24	3
New Mexico	290	19	81	40	8	265	49	51	16	2	269	41	59	18	2
New York	291	18	82	40	9	264	47	53	13	1	263	49	51	13	1
North Carolina	296	15	85	48	13	267	43	57	15	2	275	34	66	23	4
North Dakota	296	11	89	47	9	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Ohio	295	14	86	46	10	263	50	50	12	1	273	39	61	26	4
Oklahoma	286	19	81	34	5	262	48	52	11	1	264	44	56	14	1
Oregon	287	22	78	37	9	263	51	49	18	1	268	42	58	17	2
Pennsylvania	294	17	83	47	11	257	56	44	9	1	269	42	58	22	3
Rhode Island	292	18	82	42	10	256	52	48	12	1	261	49	51	13	2
South Carolina	293	17	83	43	10	263	50	50	14	2	273	37	63	25	4
South Dakota	295	13	87	47	10	270	40	60	21	1	274	34	66	20	3
Tennessee	281	27	73	28	6	252	62	38	9	1	266	44	56	15	1
Texas	304	8	92	58	15	277	29	71	21	4	283	24	76	31	4
Utah	289	20	80	41	8	‡	‡	‡	‡	‡	257	57	43	9	1
Vermont	295	18	82	47	13	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	297	15	85	48	14	268	42	58	18	1	279	31	69	27	5
Washington	294	17	83	46	12	265	44	56	15	2	269	42	58	22	3
West Virginia	274	34	66	22	3	260	51	49	10	#	‡	‡	‡	‡	‡
Wisconsin	295	15	85	47	11	256	57	43	11	1	270	40	60	21	3
Wyoming	291	16	84	41	8	‡	‡	‡	‡	‡	271	37	63	20	2
Other jurisdictions															
District of Columbia	319	3	97	76	32	256	56	44	13	2	261	50	50	17	2
DoDEA <sup>1</sup>	295	13	87	46	10	274	32	68	17	2	282	26	74	29	4

See notes at end of table.

**Table A-24. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by race/ethnicity and state/jurisdiction: 2011—Continued**

State/jurisdiction	Asian/Pacific Islander					American Indian/Alaska Native				
	Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>302</b>	<b>15</b>	<b>85</b>	<b>55</b>	<b>22</b>	<b>266</b>	<b>45</b>	<b>55</b>	<b>17</b>	<b>4</b>
Alabama	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Alaska	282	29	71	32	8	258	52	48	15	3
Arizona	302	11	89	58	17	253	60	40	12	3
Arkansas	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
California	298	17	83	50	19	‡	‡	‡	‡	‡
Colorado	313	8	92	67	30	‡	‡	‡	‡	‡
Connecticut	307	8	92	60	20	‡	‡	‡	‡	‡
Delaware	311	7	93	67	24	‡	‡	‡	‡	‡
Florida	312	8	92	65	25	‡	‡	‡	‡	‡
Georgia	302	12	88	52	24	‡	‡	‡	‡	‡
Hawaii	277	33	67	29	6	‡	‡	‡	‡	‡
Idaho	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Illinois	314	8	92	67	31	‡	‡	‡	‡	‡
Indiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Iowa	291	23	77	45	11	‡	‡	‡	‡	‡
Kansas	300	15	85	53	22	‡	‡	‡	‡	‡
Kentucky	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Louisiana	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maine	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Maryland	311	9	91	65	27	‡	‡	‡	‡	‡
Massachusetts	320	6	94	72	39	‡	‡	‡	‡	‡
Michigan	310	13	87	63	31	‡	‡	‡	‡	‡
Minnesota	282	27	73	35	7	263	49	51	11	4
Mississippi	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Missouri	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Montana	‡	‡	‡	‡	‡	264	47	53	19	5
Nebraska	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Nevada	287	27	73	41	11	‡	‡	‡	‡	‡
New Hampshire	303	16	84	60	24	‡	‡	‡	‡	‡
New Jersey	318	6	94	73	36	‡	‡	‡	‡	‡
New Mexico	‡	‡	‡	‡	‡	258	56	44	7	1
New York	302	14	86	55	21	‡	‡	‡	‡	‡
North Carolina	314	12	88	71	38	265	46	54	22	5
North Dakota	‡	‡	‡	‡	‡	264	46	54	15	2
Ohio	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Oklahoma	304	13	87	60	19	273	36	64	21	3
Oregon	297	18	82	49	18	260	55	45	16	3
Pennsylvania	310	14	86	62	33	‡	‡	‡	‡	‡
Rhode Island	287	23	77	41	7	‡	‡	‡	‡	‡
South Carolina	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
South Dakota	‡	‡	‡	‡	‡	263	48	52	14	2
Tennessee	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Texas	316	3	97	69	30	‡	‡	‡	‡	‡
Utah	284	24	76	35	7	244	73	27	4	2
Vermont	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Virginia	313	7	93	65	32	‡	‡	‡	‡	‡
Washington	302	16	84	55	25	256	51	49	12	2
West Virginia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Wisconsin	290	24	76	43	16	‡	‡	‡	‡	‡
Wyoming	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Other jurisdictions										
District of Columbia	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
DoDEA <sup>1</sup>	290	17	83	40	8	‡	‡	‡	‡	‡

# Rounds to zero.

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

<sup>1</sup> 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 of two or more races. 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), 2011 Mathematics Assessment.

**Table A-25. Percentage of students, average scores, and achievement-level results in eighth-grade NAEP mathematics, by selected racial/ethnic groups and state/jurisdiction: 2011**

State/jurisdiction	Asian					Native Hawaiian/Other Pacific Islander					Two or more races				
	Percentage of students	Average scale score	Percentage of students			Percentage of students	Average scale score	Percentage of students			Percentage of students	Average scale score	Percentage of students		
			At or above Basic	At or above Proficient	At or above Advanced			At or above Basic	At or above Proficient	At or above Advanced			At or above Basic	At or above Proficient	At or above Advanced
<b>Nation</b>	<b>5</b>	<b>305</b>	<b>88</b>	<b>58</b>	<b>24</b>	<b>#</b>	<b>269</b>	<b>59</b>	<b>22</b>	<b>4</b>	<b>2</b>	<b>288</b>	<b>78</b>	<b>39</b>	<b>11</b>
<b>Nation (public)</b>	<b>5</b>	<b>305</b>	<b>88</b>	<b>58</b>	<b>24</b>	<b>#</b>	<b>265</b>	<b>55</b>	<b>19</b>	<b>3</b>	<b>2</b>	<b>286</b>	<b>76</b>	<b>37</b>	<b>10</b>
Alabama	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Alaska	8	287	77	38	10	2	‡	‡	‡	‡	7	281	72	32	7
Arizona	3	303	90	59	15	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Arkansas	1	‡	‡	‡	‡	1	‡	‡	‡	‡	1	‡	‡	‡	‡
California	14	301	86	53	20	1	‡	‡	‡	‡	1	‡	‡	‡	‡
Colorado	4	313	92	68	30	#	‡	‡	‡	‡	3	304	89	57	23
Connecticut	4	307	92	60	20	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Delaware	3	311	93	67	24	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Florida	3	314	94	66	26	#	‡	‡	‡	‡	3	283	76	32	5
Georgia	3	303	89	53	24	#	‡	‡	‡	‡	2	275	60	23	7
Hawaii	39	288	78	40	10	33	263	53	16	1	7	276	65	30	7
Idaho	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Illinois	4	315	93	68	32	#	‡	‡	‡	‡	2	281	70	33	7
Indiana	1	‡	‡	‡	‡	#	‡	‡	‡	‡	4	282	74	29	5
Iowa	2	293	79	46	12	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Kansas	3	302	87	56	23	#	‡	‡	‡	‡	4	280	68	31	10
Kentucky	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Louisiana	2	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Maine	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Maryland	6	313	92	67	28	#	‡	‡	‡	‡	3	296	80	47	16
Massachusetts	4	321	94	73	39	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Michigan	3	311	87	63	32	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Minnesota	6	282	73	35	7	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Mississippi	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Missouri	2	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Montana	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Nebraska	2	‡	‡	‡	‡	#	‡	‡	‡	‡	3	281	72	29	7
Nevada	7	292	78	45	13	1	‡	‡	‡	‡	4	282	73	36	9
New Hampshire	3	305	84	62	25	#	‡	‡	‡	‡	#	‡	‡	‡	‡
New Jersey	8	318	94	74	36	#	‡	‡	‡	‡	#	‡	‡	‡	‡
New Mexico	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
New York	8	302	86	55	21	#	‡	‡	‡	‡	#	‡	‡	‡	‡
North Carolina	3	316	90	72	38	#	‡	‡	‡	‡	4	292	81	45	12
North Dakota	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Ohio	2	‡	‡	‡	‡	#	‡	‡	‡	‡	4	284	79	32	4
Oklahoma	2	305	88	61	19	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Oregon	4	302	86	53	21	#	‡	‡	‡	‡	4	282	70	36	7
Pennsylvania	3	312	87	63	34	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Rhode Island	3	287	78	42	7	#	‡	‡	‡	‡	2	286	82	30	6
South Carolina	2	‡	‡	‡	‡	#	‡	‡	‡	‡	2	‡	‡	‡	‡
South Dakota	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Tennessee	2	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Texas	4	317	98	69	31	#	‡	‡	‡	‡	1	305	83	54	33
Utah	2	‡	‡	‡	‡	2	‡	‡	‡	‡	1	‡	‡	‡	‡
Vermont	2	‡	‡	‡	‡	#	‡	‡	‡	‡	2	‡	‡	‡	‡
Virginia	6	313	93	66	32	#	‡	‡	‡	‡	4	290	81	38	9
Washington	8	306	87	59	28	1	‡	‡	‡	‡	4	292	79	44	16
West Virginia	1	‡	‡	‡	‡	#	‡	‡	‡	‡	#	‡	‡	‡	‡
Wisconsin	4	289	75	42	16	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Wyoming	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
Other jurisdictions															
District of Columbia	1	‡	‡	‡	‡	#	‡	‡	‡	‡	1	‡	‡	‡	‡
DoDEA <sup>1</sup>	7	292	86	42	8	1	‡	‡	‡	‡	12	286	76	36	6

# Rounds to zero

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

<sup>1</sup>Department of Defense Education Activity (overseas and domestic schools).

NOTE: 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), 2011 Mathematics Assessment.

**Table A-26. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by gender and state/jurisdiction: 2011**

State/jurisdiction	Male					Female				
	Percentage of students					Percentage of students				
	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>283</b>	<b>28</b>	<b>72</b>	<b>34</b>	<b>9</b>	<b>282</b>	<b>28</b>	<b>72</b>	<b>33</b>	<b>7</b>
Alabama	269	40	60	21	3	269	40	60	19	2
Alaska	283	26	74	36	7	284	25	75	35	7
Arizona	282	30	70	34	9	276	34	66	29	6
Arkansas	280	30	70	31	6	278	31	69	28	4
California	273	38	62	26	7	273	39	61	25	6
Colorado	291	21	79	44	12	292	19	81	43	13
Connecticut	288	24	76	39	11	286	26	74	37	9
Delaware	282	27	73	31	7	284	25	75	33	7
Florida	278	32	68	29	6	277	32	68	27	5
Georgia	279	33	67	29	7	278	30	70	27	5
Hawaii	277	33	67	30	6	279	31	69	30	6
Idaho	287	23	77	37	9	286	23	77	36	8
Illinois	283	28	72	33	10	283	26	74	32	7
Indiana	285	24	76	34	7	285	23	77	34	6
Iowa	286	23	77	34	8	284	24	76	33	7
Kansas	291	19	81	41	9	289	21	79	40	8
Kentucky	282	29	71	32	7	281	28	72	29	5
Louisiana	272	39	61	22	3	274	34	66	22	3
Maine	288	23	77	38	11	289	20	80	39	10
Maryland	289	25	75	42	13	287	26	74	38	10
Massachusetts	299	15	85	52	17	298	14	86	51	14
Michigan	282	28	72	33	7	279	30	70	29	5
Minnesota	295	17	83	47	14	295	16	84	48	12
Mississippi	267	45	55	18	3	272	39	61	20	3
Missouri	283	27	73	33	7	281	28	72	30	6
Montana	293	18	82	46	12	293	16	84	45	10
Nebraska	284	25	75	35	8	282	26	74	31	5
Nevada	279	32	68	29	7	277	34	66	28	5
New Hampshire	292	19	81	44	11	292	18	82	44	11
New Jersey	294	19	81	48	15	294	17	83	46	12
New Mexico	275	35	65	24	4	274	36	64	24	3
New York	280	30	70	30	7	281	30	70	30	7
North Carolina	285	26	74	37	10	287	23	77	37	9
North Dakota	293	15	85	45	9	291	16	84	40	7
Ohio	290	21	79	40	9	288	22	78	37	8
Oklahoma	280	28	72	29	5	278	29	71	26	3
Oregon	285	26	74	35	9	280	30	70	30	6
Pennsylvania	287	26	74	40	10	285	26	74	38	9
Rhode Island	283	27	73	35	8	283	26	74	33	6
South Carolina	280	31	69	31	7	282	28	72	32	7
South Dakota	291	19	81	42	9	290	17	83	41	7
Tennessee	276	35	65	26	6	272	37	63	22	3
Texas	291	19	81	41	10	290	18	82	39	7
Utah	285	26	74	37	8	281	28	72	33	5
Vermont	294	19	81	46	14	294	17	83	46	12
Virginia	289	23	77	40	12	289	22	78	40	10
Washington	288	25	75	41	11	288	22	78	40	11
West Virginia	274	34	66	22	3	272	36	64	21	3
Wisconsin	290	20	80	43	11	287	22	78	39	8
Wyoming	290	18	82	41	9	285	21	79	34	5
Other jurisdictions										
District of Columbia	259	54	46	17	4	262	50	50	17	3
DoDEA <sup>1</sup>	289	20	80	37	8	287	20	80	36	6

<sup>1</sup> 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), 2011 Mathematics Assessment.

**Table A-27. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by eligibility for free/reduced-price school lunch and state/jurisdiction: 2011**

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
<b>Nation (public)</b>	<b>269</b>	<b>41</b>	<b>59</b>	<b>19</b>	<b>2</b>	<b>295</b>	<b>16</b>	<b>84</b>	<b>47</b>	<b>13</b>	<b>275</b>	<b>37</b>	<b>63</b>	<b>26</b>	<b>6</b>
Alabama	256	55	45	9	#	284	23	77	32	6	‡	‡	‡	‡	‡
Alaska	269	40	60	21	3	294	15	85	45	11	‡	‡	‡	‡	‡
Arizona	267	43	57	19	3	292	20	80	45	13	284	21	79	35	3
Arkansas	269	40	60	18	2	292	18	82	44	9	‡	‡	‡	‡	‡
California	260	51	49	14	2	288	23	77	40	12	269	43	57	17	4
Colorado	273	37	63	23	4	303	10	90	56	17	‡	‡	‡	‡	‡
Connecticut	264	47	53	14	1	298	14	86	50	14	‡	‡	‡	‡	‡
Delaware	270	39	61	17	2	293	17	83	43	11	‡	‡	‡	‡	‡
Florida	267	43	57	16	2	291	19	81	42	10	‡	‡	‡	‡	‡
Georgia	267	42	58	16	2	293	17	83	43	11	‡	‡	‡	‡	‡
Hawaii	268	43	57	21	3	286	23	77	38	8	‡	‡	‡	‡	‡
Idaho	276	32	68	24	4	295	15	85	47	12	‡	‡	‡	‡	‡
Illinois	269	39	61	17	2	296	16	84	47	14	‡	‡	‡	‡	‡
Indiana	273	34	66	20	3	294	15	85	45	10	‡	‡	‡	‡	‡
Iowa	271	37	63	17	2	293	15	85	43	11	‡	‡	‡	‡	‡
Kansas	276	32	68	24	3	300	10	90	54	13	‡	‡	‡	‡	‡
Kentucky	271	39	61	18	2	294	16	84	44	11	‡	‡	‡	‡	‡
Louisiana	265	46	54	14	1	286	22	78	35	6	‡	‡	‡	‡	‡
Maine	276	32	68	25	4	298	14	86	49	15	‡	‡	‡	‡	‡
Maryland	266	45	55	17	2	299	16	84	52	17	‡	‡	‡	‡	‡
Massachusetts	280	28	72	29	5	308	8	92	62	21	‡	‡	‡	‡	‡
Michigan	266	45	55	16	2	291	18	82	41	9	‡	‡	‡	‡	‡
Minnesota	276	32	68	26	4	304	10	90	58	18	‡	‡	‡	‡	‡
Mississippi	260	52	48	12	1	288	20	80	35	7	‡	‡	‡	‡	‡
Missouri	269	41	59	18	2	292	17	83	42	10	‡	‡	‡	‡	‡
Montana	280	28	72	31	5	301	11	89	55	15	‡	‡	‡	‡	‡
Nebraska	269	40	60	16	2	293	16	84	44	10	‡	‡	‡	‡	‡
Nevada	267	44	56	18	2	288	23	77	38	9	‡	‡	‡	‡	‡
New Hampshire	276	34	66	27	4	297	14	86	49	12	‡	‡	‡	‡	‡
New Jersey	274	34	66	24	4	303	11	89	57	18	‡	‡	‡	‡	‡
New Mexico	267	44	56	15	1	288	22	78	39	8	‡	‡	‡	‡	‡
New York	269	43	57	18	3	293	16	84	43	10	‡	‡	‡	‡	‡
North Carolina	273	36	64	22	3	300	14	86	52	16	‡	‡	‡	‡	‡
North Dakota	278	29	71	27	4	298	9	91	50	10	‡	‡	‡	‡	‡
Ohio	274	35	65	22	2	299	11	89	52	13	‡	‡	‡	‡	‡
Oklahoma	270	37	63	16	2	289	18	82	39	7	‡	‡	‡	‡	‡
Oregon	271	38	62	20	2	295	17	83	46	13	‡	‡	‡	‡	‡
Pennsylvania	268	43	57	20	2	298	15	85	52	14	‡	‡	‡	‡	‡
Rhode Island	267	42	58	16	2	295	16	84	46	11	‡	‡	‡	‡	‡
South Carolina	268	43	57	18	3	295	16	84	47	12	‡	‡	‡	‡	‡
South Dakota	277	30	70	25	3	298	11	89	51	11	‡	‡	‡	‡	‡
Tennessee	262	49	51	13	2	287	21	79	36	8	‡	‡	‡	‡	‡
Texas	281	26	74	28	3	304	8	92	58	17	‡	‡	‡	‡	‡
Utah	269	42	58	20	4	291	19	81	43	9	‡	‡	‡	‡	‡
Vermont	277	30	70	26	3	302	12	88	56	18	‡	‡	‡	‡	‡
Virginia	270	39	61	18	2	298	14	86	50	16	‡	‡	‡	‡	‡
Washington	273	38	62	25	4	299	14	86	51	16	‡	‡	‡	‡	‡
West Virginia	264	47	53	13	1	282	25	75	29	5	‡	‡	‡	‡	‡
Wisconsin	269	40	60	20	2	299	12	88	52	13	‡	‡	‡	‡	‡
Wyoming	277	30	70	26	4	293	14	86	43	9	‡	‡	‡	‡	‡
Other jurisdictions															
District of Columbia	253	59	41	11	1	278	34	66	33	9	‡	‡	‡	‡	‡
DoDEA <sup>1</sup>	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	288	20	80	37	7

# Rounds to zero.

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

<sup>1</sup> 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), 2011 Mathematics Assessment.

**Table A-28. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by status as students with disabilities (SD) and state/jurisdiction: 2011**

State/jurisdiction	SD					Not SD				
	Percentage of students					Percentage of students				
	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
<b>Nation (public)</b>	<b>249</b>	<b>65</b>	<b>35</b>	<b>9</b>	<b>2</b>	<b>287</b>	<b>23</b>	<b>77</b>	<b>36</b>	<b>9</b>
Alabama	225	88	12	1	#	274	35	65	22	3
Alaska	244	70	30	6	#	288	21	79	39	8
Arizona	235	76	24	5	1	284	27	73	34	8
Arkansas	238	78	22	3	#	284	25	75	32	5
California	232	78	22	6	2	277	35	65	27	7
Colorado	251	60	40	8	1	296	16	84	47	13
Connecticut	261	52	48	13	2	290	21	79	41	11
Delaware	243	73	27	5	1	288	20	80	36	8
Florida	250	66	34	9	1	282	27	73	30	6
Georgia	244	70	30	4	#	281	28	72	30	6
Hawaii	230	84	16	3	1	283	26	74	33	7
Idaho	243	72	28	6	2	290	19	81	39	9
Illinois	252	64	36	10	2	288	22	78	36	9
Indiana	255	56	44	7	#	289	19	81	38	8
Iowa	246	70	30	4	#	291	16	84	38	9
Kansas	257	57	43	10	2	293	16	84	44	9
Kentucky	253	62	38	10	2	284	25	75	33	7
Louisiana	243	71	29	5	#	277	32	68	25	3
Maine	257	60	40	13	3	295	14	86	44	12
Maryland	257	54	46	12	1	290	24	76	42	13
Massachusetts	268	44	56	16	3	304	9	91	58	18
Michigan	246	68	32	7	1	284	25	75	33	6
Minnesota	260	53	47	14	4	299	12	88	52	15
Mississippi	241	71	29	4	1	271	40	60	20	3
Missouri	249	63	37	10	1	286	23	77	34	7
Montana	248	68	32	6	1	299	11	89	51	12
Nebraska	250	64	36	6	#	287	21	79	36	7
Nevada	242	73	27	6	#	281	30	70	30	6
New Hampshire	262	52	48	14	2	298	12	88	49	13
New Jersey	261	52	48	18	4	299	12	88	51	15
New Mexico	245	72	28	6	1	278	31	69	26	4
New York	249	64	36	5	1	286	24	76	34	8
North Carolina	254	58	42	9	1	291	20	80	41	11
North Dakota	265	44	56	10	1	295	12	88	46	9
Ohio	258	55	45	11	1	292	17	83	42	9
Oklahoma	246	67	33	10	1	282	25	75	29	5
Oregon	247	71	29	7	2	287	22	78	36	8
Pennsylvania	252	63	37	11	2	292	20	80	43	11
Rhode Island	248	66	34	7	1	289	19	81	39	9
South Carolina	245	71	29	7	2	284	26	74	34	8
South Dakota	255	60	40	8	1	294	14	86	45	9
Tennessee	239	77	23	4	1	277	32	68	26	5
Texas	261	54	46	15	4	292	16	84	42	9
Utah	241	77	23	4	1	287	23	77	38	7
Vermont	257	56	44	9	1	302	10	90	54	16
Virginia	257	57	43	12	2	293	18	82	43	12
Washington	244	69	31	9	1	293	18	82	44	12
West Virginia	238	77	23	3	#	278	30	70	24	3
Wisconsin	252	62	38	8	2	294	16	84	46	10
Wyoming	253	60	40	9	1	292	14	86	41	8
Other jurisdictions										
District of Columbia	220	89	11	3	#	267	46	54	19	4
DoDEA <sup>1</sup>	256	62	38	11	1	291	16	84	39	7

# Rounds to zero.

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. 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), 2011 Mathematics Assessment.

**Table A-29. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by status as English language learners (ELL) and state/jurisdiction: 2011**

State/jurisdiction	ELL					Not ELL				
	Average scale score	Percentage of students				Average scale score	Percentage of students			
		Below Basic	At or above Basic	At or above Proficient	At Advanced		Below Basic	At or above Basic	At or above Proficient	At Advanced
<b>Nation (public)</b>	<b>244</b>	<b>72</b>	<b>28</b>	<b>5</b>	<b>1</b>	<b>285</b>	<b>25</b>	<b>75</b>	<b>35</b>	<b>8</b>
Alabama	‡	‡	‡	‡	‡	270	39	61	20	3
Alaska	235	76	24	2	#	289	20	80	39	8
Arizona	‡	‡	‡	‡	‡	280	31	69	32	7
Arkansas	260	53	47	9	1	280	29	71	30	5
California	234	82	18	2	#	280	30	70	30	7
Colorado	243	71	29	3	#	296	16	84	47	13
Connecticut	237	86	14	#	#	289	22	78	40	10
Delaware	‡	‡	‡	‡	‡	284	25	75	32	7
Florida	246	67	33	5	#	279	30	70	29	6
Georgia	245	72	28	6	#	279	31	69	28	6
Hawaii	243	69	31	5	1	281	29	71	32	6
Idaho	242	76	24	2	#	288	20	80	38	9
Illinois	243	70	30	4	#	285	25	75	34	8
Indiana	261	51	49	9	1	286	22	78	35	7
Iowa	248	68	32	3	#	286	22	78	35	8
Kansas	261	50	50	9	#	292	18	82	43	9
Kentucky	238	79	21	2	#	282	28	72	31	6
Louisiana	‡	‡	‡	‡	‡	273	36	64	23	3
Maine	272	37	63	27	5	289	21	79	39	10
Maryland	245	70	30	8	2	289	25	75	41	12
Massachusetts	247	67	33	8	1	300	13	87	53	16
Michigan	261	57	43	17	10	281	29	71	31	6
Minnesota	255	58	42	8	1	297	15	85	50	14
Mississippi	‡	‡	‡	‡	‡	269	42	58	19	3
Missouri	‡	‡	‡	‡	‡	282	27	73	32	7
Montana	‡	‡	‡	‡	‡	294	16	84	46	11
Nebraska	235	79	21	3	#	284	24	76	34	7
Nevada	241	77	23	4	#	282	28	72	31	7
New Hampshire	‡	‡	‡	‡	‡	293	18	82	44	11
New Jersey	244	67	33	12	4	295	17	83	48	14
New Mexico	243	75	25	2	#	278	31	69	27	4
New York	239	81	19	1	#	283	27	73	32	7
North Carolina	254	60	40	7	#	288	23	77	38	10
North Dakota	‡	‡	‡	‡	‡	293	14	86	44	8
Ohio	248	71	29	4	#	289	20	80	39	8
Oklahoma	237	79	21	4	1	280	27	73	28	4
Oregon	245	73	27	5	#	285	25	75	35	8
Pennsylvania	242	78	22	6	2	287	25	75	40	10
Rhode Island	227	83	17	4	#	285	25	75	35	8
South Carolina	267	43	57	19	2	282	29	71	32	7
South Dakota	‡	‡	‡	‡	‡	292	17	83	42	8
Tennessee	‡	‡	‡	‡	‡	275	35	65	24	5
Texas	261	52	48	10	1	293	16	84	43	10
Utah	234	82	18	1	#	285	25	75	36	7
Vermont	‡	‡	‡	‡	‡	295	18	82	47	13
Virginia	258	54	46	5	1	291	21	79	42	12
Washington	240	78	22	3	1	291	21	79	42	12
West Virginia	‡	‡	‡	‡	‡	273	35	65	21	3
Wisconsin	257	53	47	8	1	290	20	80	43	10
Wyoming	‡	‡	‡	‡	‡	288	19	81	38	7
Other jurisdictions										
District of Columbia	240	75	25	6	1	262	51	49	18	4
DoDEA <sup>1</sup>	266	45	55	11	#	289	19	81	38	7

# Rounds to zero.

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

<sup>1</sup> 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), 2011 Mathematics Assessment.



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