

#### **KEY FINDINGS FOR 2011**

#### Grade 4:

- In 2011, the average mathematics score for fourth-grade students in Florida was 240. This was not significantly different from that of the nation's public schools (240).
- The average score for students in Florida in 2011 (240) was higher than that in 1992 (214) and was not significantly different from that in 2009 (242).
- In 2011, the percentage of students in Florida who performed at or above *Proficient* was 37 percent. This was not significantly different from that for the nation's public schools (40 percent).
- The percentage of students in Florida who performed at or above *Proficient* in 2011 (37 percent) was greater than that in 1992 (13 percent) and was not significantly different from that in 2009 (40 percent).
- In 2011, the percentage of students in Florida who performed at or above Basic was 84 percent. This was
  not significantly different from that for the nation's public schools (82 percent).
- The percentage of students in Florida who performed at or above Basic in 2011 (84 percent) was greater than that in 1992 (52 percent) and was not significantly different from that in 2009 (86 percent).

The U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, and National Assessment of Educational Progress (NAEP) has provided software that generated user-selectable data, statistical significance test result statements, and technical descriptions of the NAEP assessments for this report. Content may be added or edited by states or other jurisdictions. This document, therefore, is not an official publication of the National Center for Education Statistics.

# Introduction

#### What Was Assessed?

The content for each NAEP assessment is determined by the National Assessment Governing Board. The framework for each assessment documents the content and process areas to be measured and sets guidelines for the types of questions to be used. The mathematics frameworks were developed with the guidance of the Council of Chief State School Officers (CCSSO) and under the direction of the Governing Board. The current framework is available at the Governing Board's website <u>http://www.nagb.org/publications/frameworks/math-2011-framework.pdf</u>.

For grades 4 and 8, the mathematics framework for the 2011 assessment is similar to earlier versions that guided the 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009 mathematics assessments. Although the frameworks are updated periodically, the mathematics content objectives for grades 4 and 8 have not changed, allowing students' performance in 2011 to be compared with previous years.

#### **Content Areas and Mathematical Complexity**

The 2011 mathematics framework classifies assessment questions in two dimensions, *content area* and *mathematical complexity*, that are used to guide the assessment. Each question is designed to measure one of the five content areas. However, certain aspects of mathematics, such as computation, occur in all content areas. Although the names of the content areas (as well as some topics in those areas) have changed from one framework to the next, a consistent focus has remained on measuring student performance in all five content areas. The distribution of questions among each content area differs by grade to reflect the knowledge and skills appropriate for each grade level.

- Number properties and operations measures students' understanding of ways to represent, calculate, and estimate with numbers.
- **Measurement** measures students' knowledge of measurement attributes, such as capacity and temperature, and geometric attributes, such as length, area, and volume.
- Geometry measures students' knowledge and understanding of shapes in a plane and in space.
- Data analysis, statistics, and probability measures students' understanding of data representation, characteristics of data sets, experiments and samples, and probability.
- Algebra measures students' understanding of patterns, using variables, algebraic representation, and functions.

The mathematical complexity of a question refers to the level of cognitive demand it places on students. Each level of complexity includes aspects of knowing and doing mathematics, such as performing procedures, understanding concepts, or solving problems.

- Low complexity questions typically specify what a student is to do, which is often to carry out a routine mathematical procedure.
- Moderate complexity questions involve more flexibility of thinking and often require a response with multiple steps.
- **High complexity** questions make heavier demands and often require abstract reasoning or analysis in a novel situation.

#### Assessment Design

Because of the breadth of the content covered in the NAEP mathematics assessment, each student took just a portion of the test, consisting of two 25-minute sections. Most student's testing time was divided evenly between multiple-choice and constructed-response questions. Short constructed-response questions asked students to provide the answer for a numerical problem or to briefly describe the solution to a problem. Longer constructed-response questions required students to write both a solution and its justification, explanation, or interpretation. Released test questions, along with student performance data by state, are available on the NAEP website at <a href="http://nces.ed.gov/nationsreportcard/itmrls/">http://nces.ed.gov/nationsreportcard/itmrls/</a>.

Some questions in the 2011 assessment incorporated the use of calculators (four-function calculators at grade 4 and scientific or graphing calculators at grade 8), rulers, protractors (at grade 8), or manipulatives such as spinners and geometric shapes. Calculator use at all grades was permitted on approximately one-third of the assessment.

#### Who Was Assessed?

All 50 states, the District of Columbia, and the Department of Defense Schools participated in the 2011 mathematics assessment at grades 4 and 8. The overall participation rates for schools and students must meet guidelines established by the National Center for Education Statistics (NCES) and the National Assessment Governing Board for assessment results to be reported publicly. A participation rate of at least 85 percent for schools in each subject and grade was required. Participation rates for the 2011 mathematics assessment are available on the NAEP website at <a href="http://nationsreportcard.gov/math\_2011/participation.asp">http://nationsreportcard.gov/math\_2011/participation.asp</a>.

The schools and students participating in NAEP assessments are selected to be representative both nationally and for public schools at the state level. The comparisons between national and state results in this report present the performance of public school students only. In NAEP reports, the category "nation (public)" does not include Department of Defense or Bureau of Indian Education schools.

#### How Is Student Mathematics Performance Reported?

The 2011 state results are compared to results from seven earlier assessments at grade 4 and from eight earlier assessments at grade 8.

**Scale Scores**: Student performance is reported as an average score based on the NAEP mathematics scale, which ranges from 0 to 500 for grades 4 and 8. Because NAEP scales are developed independently for each subject and for each content area within a subject, the scores cannot be compared across subjects or across content areas within the same subject. Results are also reported at five percentiles (10th, 25th, 50th, 75th, and 90th) to show trends in performance for lower-, middle-, and higher-performing students.

Achievement Levels: Based on recommendations from policymakers, educators, and members of the general public, the Governing Board has set specific achievement levels for each subject area and grade. Achievement levels are performance standards indicating what students should know and be able to do. They provide another perspective with which to interpret student performance. NAEP results are reported in terms of three achievement levels. *Basic, Proficient, and Advanced*—and are expressed in terms of the percentage of students who attained each level. The three achievement levels are defined as follows:

- *Basic* denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.
- Proficient represents solid academic performance for each grade assessed. Students reaching this level
  have demonstrated competency over challenging subject matter, including subject-matter knowledge,
  application of such knowledge to real-world situations, and appropriate analytical skills.
- Advanced represents superior performance.

The 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 competencies associated with both the *Basic* and the *Proficient* levels.

As provided by law, NCES, upon review of congressionally mandated evaluations of NAEP, has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. The NAEP achievement levels have been widely used by national and state officials. The mathematics achievement-level descriptions are summarized in figure 1.

### Figure The Nation's Report Card 2011 State Assessment Descriptions of fourth-grade achievement levels for 2011 NAEP mathematics assessment

<b>Basic</b> Level (214)	Fourth-grade students performing at the <i>Basic</i> level should show some evidence of understanding the mathematical concepts and procedures in the five NAEP content areas.
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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	Fourth-grade students performing at the <i>Proficient</i> level should consistently apply integrated
Level	procedural knowledge and conceptual understanding to problem solving in the five NAEP content
(249)	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	Fourth-grade students performing at the Advanced level should apply integrated procedural
Level	knowledge and conceptual understanding to complex and nonroutine real-world problem solving
(282)	in the five NAEP content areas.

Fourth-graders performing at the *Advanced* level should be able to solve complex and 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.

SOURCE: National Assessment Governing Board. (2010). Mathematics Framework for the 2011 National Assessment of Educational Progress. Washington, DC: Author.

NOTE: The scores in parentheses in the shaded boxes indicate the lowest point on the 0-500 scale at which the achievement-level range begins.

#### Assessing Students With Disabilities and/or English Language Learners

Testing accommodations, such as extra testing time or individual (rather than group) administration, are provided for students with disabilities (SD) or English language learners (ELL) who could not fairly and accurately demonstrate their abilities without modified test administration procedures. In 1996, administration procedures were introduced at the national level allowing certain accommodations for students requiring such accommodations to participate.

In state NAEP mathematics assessments prior to 2000, no testing accommodations or adaptations were permitted for SD or ELL students. In 2000, NAEP was administered using a split sample of schools—one sample in which accommodations were permitted for special-needs students who normally received them and another sample in which accommodations were not permitted. Therefore, there were two different sets of results available for 2000, and both are shown in the tables in this report. Results for the assessment years when accommodations were not permitted in state NAEP assessments (1990, 1992, 1996) are reported in the same tables as the results when accommodations were permitted (2000, 2003, 2005, 2007, 2009, 2011).

Even with the availability of accommodations, however, some students may still be excluded from the NAEP assessment. Due to differences in policies and practices regarding the identification and inclusion of SD and ELL students, variations in exclusion and accommodation rates should be considered when comparing students' performance over time and across states. The types of accommodations used in the 2011 NAEP mathematics assessment are available on the NAEP website at <a href="http://nationsreportcard.gov/math">http://nationsreportcard.gov/math</a> 2011/type accomm.

#### **Interpreting Results**

The scores and percentages in this report are estimates based on samples of students rather than on entire populations. In addition, the collection of questions used at each grade level is only a sample of the many questions that could have been asked to assess the skills and abilities described in the NAEP framework. 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. Statistical tests that factor in these standard errors are used to determine whether the differences between average scores or percentages are significant. All differences were tested for statistical significance at the .05 level using unrounded numbers.

NAEP sample sizes have increased since 2002 compared to previous years, resulting in smaller standard errors. As a consequence, smaller differences are detected as statistically significant than were detected in previous assessments. In addition, estimates based on smaller groups are likely to have relatively large standard errors. Thus, some seemingly large differences may not be statistically significant. That is, it cannot be determined whether these differences are due to sampling error, or to true differences in the population of interest.

Differences between scores or between percentages are discussed in this report only when they are significant from a statistical perspective. Significant differences between 2011 and prior assessments are marked with a notation (\*) in the tables. Any differences in scores within a year or across years that are mentioned in the text as "higher," "lower," "greater," or "smaller" are statistically significant.

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

The reader is cautioned against making simple causal inferences between student performance and the other variables (e.g., race/ethnicity, gender, and type of school location) discussed in this report. A statistically significant relationship between a variable and measures of student performance does not imply that the variable causes differences in how well students perform. The relationship may be influenced by a number of other variables not accounted for in this report, such as family income, parental involvement, or student attitudes.

# NAEP 2011 Mathematics Overall Average Score and Achievement-Level Results for Public School Students

Overall mathematics results for public school students from Florida are reported in this section, as well as regional and national results. The regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West (<u>http://nces.ed.gov/nationsreportcard/hsts/tabulations/regions.asp</u>). Therefore, trend data by region are not provided for assessment years prior to 2003.

Prior to 2000, testing accommodations were not provided for students with special needs in NAEP state mathematics assessments. For 2000, results are displayed for both the sample in which accommodations were permitted and the sample in which they were not permitted. Subsequent assessment results were based on the more inclusive samples. In the text of this report, comparisons to 2000 results refer only to the sample in which accommodations were permitted.

#### **Overall Scale Score Results**

Student performance is reported as an average score based on the NAEP mathematics scale, which ranges from 0 to 500 for grades 4 and 8.

Table 1 shows the overall performance results of grade 4 public school students in Florida, the nation (public), and the region. Prior to 2003, the list of states that comprise a given region for NAEP differed from the list used by the U.S. Census Bureau, which has been used in NAEP from 2003 onward. Therefore, the data for the state's region are given only for 2003, 2005, 2007, 2009, and 2011. The first column of results presents the average score on the NAEP mathematics scale. The remaining columns show the scores at selected percentiles. Percentiles indicate the percentages of students whose scores fell at or below a particular score. For example, the 25th percentile demarks the cut point for the lowest 25 percent of students within the distribution of scale scores.

#### Grade 4 Scale Score Results

- In 2011, the average scale score for students in Florida was 240. This was not significantly different from that of students across the nation (240).
- In Florida, the average scale score for students in 2011 was not significantly different from that in 2009 (242). However, the average scale score for students in public schools across the nation in 2011 was higher than that in 2009 (239).
- In Florida, the average scale score for students in 2011 was higher than the scores in 1992, 1996, and 2003. However, it was not significantly different from the scores in 2005, 2007, and 2009.

#### The Nation's Report Card 2011 State Assessment

Table 1

Average scale scores and selected percentile scores in NAEP mathematics for fourth-grade public school students, by year and jurisdiction: Various years, 1992–2011

Year and jurisd	iction	Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
1992 <sup>1</sup>	Nation (public)	219*	176*	197*	220*	241*	259*
	Florida	214*	172*	193*	215*	235*	254*
1996 <sup>1</sup>	Nation (public)	222*	180*	201*	224*	244*	261*
	Florida	216*	173*	195*	218*	239*	255*
2003	Nation (public)	234*	196*	215*	235*	254*	270*
	South <sup>2</sup>	233*	197*	215*	234*	253*	268*
	Florida	234*	196*	215*	235*	254*	270*
2005	Nation (public)	237*	199*	219*	239*	257*	272*
	South <sup>2</sup>	237*	201*	219*	238*	256*	271*
	Florida	239	204	221	240	258	274
2007	Nation (public)	239*	201*	221	241	259*	274*
	South <sup>2</sup>	239*	203	221	240	257*	272*
	Florida	242	209	225*	243	260	275
2009	Nation (public)	239*	201*	221*	241*	259*	275*
	South <sup>2</sup>	238*	203*	221	239	257*	273
	Florida	242	209	225	243	260	275
2011	Nation (public)	240	202	222	242	260	276
	South <sup>2</sup>	239	204	222	240	258	274
	Florida	240	205	222	241	258	274

\* Value is significantly different (p < .05) from the value for the same jurisdiction in 2011.

<sup>1</sup> Accommodations were not permitted for this assessment.

<sup>2</sup> Region in which jurisdiction is located. Regional data are not provided for years prior to 2003 to be consistent with the U.S. Census Bureau defined regions.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. All differences were calculated and tested using unrounded numbers. 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.

#### **Overall Achievement-Level Results**

Student results are reported as the percentages of students performing relative to performance standards set by the National Assessment Governing Board. These performance standards for what students should know and be able to do were based on the recommendations of broadly representative panels of educators and members of the public.

Table 2 shows the percentage of students at grade 4 who performed below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced*. Because the percentages are cumulative from *Basic* to *Proficient* to *Advanced*, they may sum to more than 100 percent. Only the percentage of students performing at or above *Basic* (which includes the students at *Proficient* and *Advanced*) plus the students below *Basic* will sum to 100 percent.

#### Grade 4 Achievement-Level Results

- In 2011, the percentage of Florida's students who performed at or above *Proficient* was 37 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Proficient* (40 percent).
- In Florida, the percentage of students who performed at or above *Proficient* in 2011 was greater than the percentages in 1992, 1996, and 2003, but was not significantly different from the percentages in 2005, 2007, and 2009.
- In 2011, the percentage of Florida's students who performed at or above *Basic* was 84 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Basic* (82 percent).
- In Florida, the percentage of students who performed at or above *Basic* in 2011 was greater than the percentages in 1992, 1996, and 2003, but was not significantly different from the percentages in 2005, 2007, and 2009.

#### The Nation's Report Card 2011 State Assessment

Table 2

Percentage of fourth-grade public school students at or above NAEP mathematics achievement levels, by year and jurisdiction: Various years, 1992–2011

Year and juri	sdiction	Below Basic	At or above Basic	At or above Proficient	At Advanced
19921	Nation (public)	43*	57*	17*	2*
	Florida	48*	52*	13*	1*
1996 <sup>1</sup>	Nation (public)	38*	62*	20*	2*
	Florida	45*	55*	15*	1*
2003	Nation (public)	24*	76*	31*	4*
	South <sup>2</sup>	24*	76*	29*	3*
	Florida	24*	76*	31*	4*
2005	Nation (public)	21*	79*	35*	5*
	South <sup>2</sup>	20*	80*	34*	4*
	Florida	18	82	37	5
2007	Nation (public)	19	81	39*	5*
	South <sup>2</sup>	18	82	36*	5*
	Florida	14	86	40	6
2009	Nation (public)	19*	81*	38*	6*
	South <sup>2</sup>	18	82	36	5
	Florida	14	86	40	5
2011	Nation (public)	18	82	40	6
	South <sup>2</sup>	18	82	37	5
	Florida	16	84	37	5

\* Value is significantly different (p < .05) from the value for the same jurisdiction in 2011.

<sup>1</sup> Accommodations were not permitted for this assessment.

<sup>2</sup> Region in which jurisdiction is located. Regional data are not provided for years prior to 2003 to be consistent with the U.S. Census Bureau defined regions.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

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.

# Comparisons Between Florida, the Nation, and Participating States and Jurisdictions

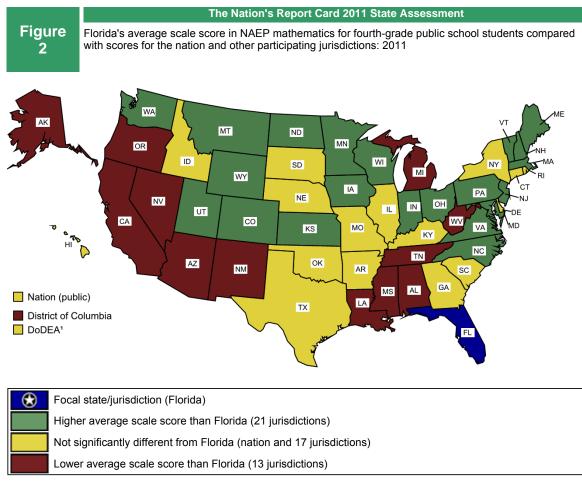
All 50 states, the District of Columbia, and the Department of Defense Schools participated in the 2011 mathematics assessment at grades 4 and 8. References to "jurisdictions" in the results statements may include states, the District of Columbia, and Department of Defense Schools.

#### **Comparisons by Scale Scores**

Figure 2 compares Florida's 2011 overall mathematics scale scores at grade 4 with those of public schools in the nation and all other participating states and jurisdictions. The different shadings indicate whether the average score of the nation (public), a state, or a jurisdiction was found to be higher than, lower than, or not significantly different from that of Florida in the NAEP 2011 mathematics assessment.

#### Grade 4 Scale Score Comparison Results

• The average score for students in Florida was higher than the scores in 13 jurisdictions, not significantly different from those in 17 jurisdictions, and lower than those in 21 jurisdictions.



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

NOTE: Significance tests used a multiple comparison procedure based on all jurisdictions that participated. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

#### **Comparisons by Achievement Levels**

Figure 3 permits comparisons of all jurisdictions (and the nation) participating in the NAEP 2011 mathematics assessment in terms of percentages of grade 4 students performing at or above *Proficient*. The participating states and jurisdictions are grouped into categories reflecting whether the percentage of their students performing at or above *Proficient* (including *Advanced*) was found to be higher than, not significantly different from, or lower than the percentage in Florida.

Note that the selected state is listed first in its category, and the other states and jurisdictions within each category are listed alphabetically; statistical comparisons among jurisdictions in each of the three categories are not included in this report. However, statistical comparisons among states by achievement level can be calculated online by using the NAEP Data Explorer at <a href="http://nces.ed.gov/nationsreportcard/naepdata/">http://nces.ed.gov/nationsreportcard/naepdata/</a>.

#### Grade 4 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Florida was greater than the percentage in 7 jurisdictions, not significantly different from those in 20 jurisdictions, and smaller than those in 24 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Florida was greater than the percentage in 19 jurisdictions, not significantly different from those in 20 jurisdictions, and smaller than those in 12 jurisdictions (data not shown).

#### The Nation's Report Card 2011 State Assessment

Average scale scores in NAEP mathematics for fourth-grade public school students, percentage within each achievement level, and Florida's percentage at or above *Proficient* compared with the nation and other participating states/jurisdictions: 2011

State/jurisdiction		Legend:	Below Basic	Basic	Proficient	Advanced	State/jurisdiction
:	score	Percentage at or	above Proficie	nt is higher the	an Florida		
Colorado	244		16	37	37	10	Colorado
Connecticut	242		18	36	37	8	Connecticut
Indiana	244		13	42	37	7	Indiana
lowa	243		14	43	37	6	Iowa
Kansas	246		10	42	41	7	Kansas
Maine	244		13	42	38	7	Maine
Maryland	247		14	39	35	13	Maryland
Massachusetts	253		7	34	45	13	Massachusetts
Minnesota			12	35	41	12	Minnesota
Missouri			17	41	36	6	Missouri
Montana			13	42	40	5	Montana
New Hampshire			8	35	47	11	New Hampshire
New Jersey			11	38	41	10	New Jersey
North Carolina			12	44	38	7	North Carolina
North Dakota			10	43	41	5	North Dakota
Ohio			14	41	38	7	Ohio
Pennsylvania			13	39	39	9	Pennsylvania
Rhode Island			16	41	36	7	Rhode Island
Utah			15	42	36	7	Utah
Vermont			11	39	41	8	Vermont
Virginia	245		13	41	37	9	Virginia
Washington			1/	39	36	9	Washington
Wisconsin			14	39	39	8	Wisconsin
Wyoming	244		12	44	38	5	Wyoming
		Percentage at or	above Proficie	<i>nt</i> is not signif	icantly different fro	om Florida	
FLORIDA	240		16	46	32	5	FLORIDA
NATION (Public)	240		18	42	33	6	NATION (Public)
Alaska	236		22	41	31 6	3	Alaska
Arizona	235		23	44	29	4	Arizona
Arkansas	238		19	43	33	4	Arkansas
California	234		26	40	28 6		California
Delaware	240		16	45	34	5	Delaware
DoDEA <sup>1</sup>	241		14	47	35	4	DoDEA <sup>1</sup>
Georgia	238		20	43	31 6	3	Georgia
Hawaii	239		20	41		6	Hawaii
Idaho			17	44	34	5	Idaho
Illinois			20	41	31		Illinois
Kentucky			15	46	34	5	Kentucky
Michigan			22	43	30	5	Michigan
Nebraska			17	43	34	5	Nebraska
Nevada			21	43	31	5	Nevada
New York		_	20	44	30	5	New York
Oklahoma			17	49		3	Oklahoma
Oregon			23	41	30 6		Oregon
South Carolina			21	43	31	5	South Carolina
South Dakota			14	46	36	4	South Dakota
Texas	241		15	46	34	5	Texas
		Percentage at or	above Proficie	<i>nt</i> is lower tha	n Florida		
Alabama	231		25	47	25 3		Alabama
District of Columbia	222		40	38	17 4		District of Columbia
Louisiana	231		27	47	24 2		Louisiana
Mississippi	230		28	47	23 2		Mississippi
New Mexico	233		25	45	26 4		New Mexico
Tennessee	233		25	46	26 4		Tennessee
West Virginia	235		22	47	28 3		West Virginia
C C							
	10	00 90 80 70	60 50 40 3	30 20 10	0 10 20 30	40 50 60 7	0 80
		Demont -	low Posis an -t	Pagia	Doroont at Durf	alantar Advar	d
		Percent be	elow <i>Basic</i> or at	Dasic	Percent at Profi	cient or Advance	a

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

NOTE: The bars above contain percentages of students in each NAEP mathematics achievement level. Achievement levels corresponding to each population of students are aligned at the point where the *Proficient* category begins, so that they may be compared at *Proficient* and above. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated. 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** 

3

# **Mathematics Performance of Selected Student Groups**

This section of the report presents trend results for public school students in Florida and the nation by demographic characteristics. Student performance data are reported for

- race/ethnicity
- gender
- student eligibility for the National School Lunch Program
- type of school location (for 2007, 2009, and 2011)
- parents' highest level of education

Results for each of the variables are reported in tables that include the percentage of students in each group in the first column, and the average scale score in the second column. The columns to the right show the percentage of students below *Basic* and at or above each achievement level.

Results by students' race/ethnicity and gender include statements about score point differences between student groups (e.g., between White and Black or White and Hispanic students, or between male and female students) in 2011 and in the first assessment year. Because these differences are calculated using unrounded values, they may differ slightly from what would be obtained by subtracting the rounded values that appear in the tables. Statements indicating a narrowing or widening of the gap in students' scores are only made if the change in the gap from the first assessment year to 2011 was found to be statistically significant.

The reader is cautioned against making simple causal inferences about group differences, as a complex mix of educational and socioeconomic factors may affect student performance. NAEP collects information on many additional variables, including school and home factors related to achievement. This information is in an interactive database available on the NAEP website <u>http://nces.ed.gov/nationsreportcard/naepdata/</u>.

#### **Race/Ethnicity**

Prior to 2011, student race/ethnicity was obtained from school records and reported for the six mutually exclusive categories shown below:

- White
- Black
- Hispanic
- Asian/Pacific Islander
- American Indian/Alaska Native
- Unclassified (not shown in tables)

Students who 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.

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 below:

- White
- Black or African American
- Hispanic
- Asian
- American Indian/Alaska Native
- Native Hawaiian/Other Pacific Islander
- Two or more races

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 who 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 classified as "Two or more races" in 2011.

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

Table 3 shows average scale scores and percentage of students by achievement-level data for public school students at grade 4 in Florida and the nation, by race/ethnicity.

#### Grade 4 Scale Score Results by Race/Ethnicity

- In 2011, White students in Florida had an average scale score that was higher than the average scores of Black and Hispanic students, but lower than the average score of Asian/Pacific Islander students.
- In 2011, the average scale scores of White, Black, and Hispanic students in Florida were higher than their respective scores in 1992, 1996, and 2003, but not significantly different from their respective scores in 2005, 2007, and 2009.
- In 2011, the average scale score of Asian/Pacific Islander students in Florida was not significantly different from their respective scores in 2003, 2005, 2007, and 2009.
- In 2011, Black students in Florida had an average score that was lower than that of White students by 23 points. This performance gap was narrower than that of 1992 (34 points).
- In 2011, Hispanic students in Florida had an average score that was lower than that of White students by 14 points. In 1992, the average score for Hispanic students was lower than that of White students by 16 points.

#### Grade 4 Achievement-Level Results by Race/Ethnicity

- In 2011 in Florida, the percentage of White students performing at or above *Proficient* was greater than the corresponding percentages of Black and Hispanic students, but not significantly different from the percentage of Asian/Pacific Islander students.
- In 2011, the percentages of White and Black students in Florida performing at or above *Proficient* were greater than the percentages of their respective peers in 1992, 1996, and 2003, but not significantly different from the percentages of their respective peers in 2005, 2007, and 2009.
- In 2011, the percentage of Asian/Pacific Islander students in Florida performing at or above *Proficient* was not significantly different from the percentages of their respective peers in 2003, 2005, 2007, and 2009.
- In 2011, the percentage of Hispanic students in Florida performing at or above *Proficient* was greater than the percentages of their respective peers in 1992 and 1996, but not significantly different from the percentages of their respective peers in 2003, 2005, 2007, and 2009.

#### The Nation's Report Card 2011 State Assessment

Table 3

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2011

				Percent			
Race/ethnicity jurisdiction	, year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above Proficient	At Advanced
White							
1992 <b>1</b>	Nation (public)	72*	227*	32*	68*	22*	2*
	Florida	63*	224*	35*	65*	18*	2*
1996 <sup>1</sup>	Nation (public)	71*	230*	27*	73*	25*	3*
	Florida	59*	227*	30*	70*	21*	1*
2003	Nation (public)	58*	243*	13*	87*	42*	5*
	Florida	50*	243*	13*	87*	43*	5
2005	Nation (public)	57*	246*	11*	89*	47*	7*
	Florida	48*	247	9	91	49	8
2007	Nation (public)	55*	248*	9	91	51	8*
	Florida	48*	250	6	94	54	8
2009	Nation (public)	54*	248*	10	90	50*	8
	Florida	46*	250	7	93	53	9
2011	Nation (public)	52	249	9	91	52	9
	Florida	40	250	8	92	52	9
Black							
1992 <b>1</b>	Nation (public)	18*	192*	78*	22*	2*	#
	Florida	24	189*	80*	20*	2*	#
1996 <sup>1</sup>	Nation (public)	17	199*	70*	30*	4*	#
	Florida	24	193*	76*	24 *	3*	#
2003	Nation (public)	17*	216*	46*	54 *	10*	#*
	Florida	25	215*	48*	52*	8*	#
2005	Nation (public)	17*	220*	40*	60*	13*	1*
	Florida	23	224	33	67	16	1
2007	Nation (public)	17	222*	37*	63*	15*	1
	Florida	21	225	29	71	15	1
2009	Nation (public)	16	222*	37*	63*	15*	1
	Florida	22	228	27	73	20	1
2011	Nation (public)	16	224	34	66	17	1
	Florida	25	226	30	70	18	1

See notes at end of table.

#### The Nation's Report Card 2011 State Assessment

Table 3

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2011—Continued

				Percent			
Race/ethnicity, y jurisdiction	vear, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above Proficient	At Advanced
Hispanic							
19921	Nation (public)	7*	201*	68*	32*	5*	#
	Florida	12*	208*	60*	40*	7*	1
1996 <sup>1</sup>	Nation (public)	9*	204*	63*	37*	7*	#
	Florida	16*	208*	56*	44 *	7*	#
2003	Nation (public)	19*	221*	38*	62*	15*	1*
	Florida	21*	232*	26	74	27	3
2005	Nation (public)	20*	225*	33*	67 *	19*	1*
	Florida	24*	233	22	78	28	2
2007	Nation (public)	21*	227*	31*	69*	22*	1
	Florida	25	238	17	83	33	3
2009	Nation (public)	22*	227*	30	70	21*	1
	Florida	25*	238	16	84	33	2
2011	Nation (public)	24	229	28	72	24	2
	Florida	29	236	19	81	31	3
Asian/Pacific Isl	ander						
1992 <sup>1</sup>	Nation (public)	3*	231*	26*	74*	27*	4*
	Florida	1*	‡	‡	‡	‡	‡
1996 <sup>1</sup>	Nation (public)	3*	225*	35*	65*	20*	5*
	Florida	1*	‡	‡	‡	‡	‡
2003	Nation (public)	4*	246*	13*	87*	48*	10*
	Florida	2*	249	10	90	53	12
2005	Nation (public)	4*	251*	11	89	54*	14*
	Florida	2	259	4	96	66	21
2007	Nation (public)	5	254	9	91	59	16
	Florida	2	255	7	93	59	17
2009	Nation (public)	5	255	9	91	61	18
	Florida	2*	261	7	93	73	21
2011	Nation (public)	5	256	9	91	62	20
	Florida	3	257	4	96	64	17

See notes at end of table.

#### The Nation's Report Card 2011 State Assessment

# Table

3

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2011—Continued

				Percent			
Race/ethnicity, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above <i>Basic</i>	At or above Proficient	At Advanced
American Indian/	Alaska Native						
1992 <sup>1</sup>	Nation (public)	1	‡	‡	‡	‡	‡
	Florida	#	‡	‡	‡	‡	‡
1996 <sup>1</sup>	Nation (public)	1*	‡	‡	‡	‡	‡
	Florida	#	‡	‡	‡	‡	‡
2003	Nation (public)	1	224	35	65	18*	1
	Florida	#	‡	‡	‡	‡	‡
2005	Nation (public)	1	227	31	69	22	2
	Florida	#	‡	‡	‡	‡	‡
2007	Nation (public)	1	229*	28*	72*	26	3
	Florida	#	‡	‡	‡	‡	‡
2009	Nation (public)	1	227	32	68	23	2
	Florida	#	‡	‡	‡	‡	‡
2011	Nation (public)	1	227	32	68	24	2
	Florida	#	‡	‡	‡	‡	‡

# Rounds to zero.

‡ Reporting standards not met.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2011.

<sup>1</sup> Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Naviana. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

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 4 shows average scale scores and percentage of students by achievement-level data for the seven racial/ethnic categories used in 2011: White, Black, Hispanic, Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, and Two or more races at grade 4 in Florida and the nation, by race/ethnicity.

#### The Nation's Report Card 2011 State Assessment

Table 4

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2011

						Percent	
Race/ethnicity, year, and jurisdiction		Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above Proficient	At Advanced
White							
2011	Nation (public) Florida	52* 40	249 250	9 8	91 92	52 52	9 9
Black		-		_	-		
2011	Nation (public) Florida	16* 25	224 226	34 30	66 70	17 18	1 1
Hispanic							
2011	Nation (public) Florida	24* 29	229* 236	28* 19	72* 81	24* 31	2* 3
Asian		-		-	-		
2011	Nation (public) Florida	5* 3	257 258	8 4	92 96	64 66	21 17
American Indian/Ala	aska Native						
2011	Nation (public) Florida	1* #	227 ‡	32 ‡	68 ‡	24 ‡	2 ‡
Native Hawaiian/Oth Islander	ner Pacific						
2011	Nation (public) Florida	#* #	235 ‡	24 ‡	76 ‡	33 ‡	7 ‡
Two or more races			-				-
2011	Nation (public) Florida	2* 3	244 242	15 12	85 88	43 38	9 8

# Rounds to zero.

‡ Reporting standards not met.

\* Value is significantly different (p < .05) from the value for the same group in Florida.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

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

#### Gender

Information on student gender is reported by the student's school when rosters of the students eligible to be assessed are submitted to NAEP.

Table 5 shows average scale scores and percentage of students by achievement-level data for public school students at grade 4 in Florida and the nation, by gender.

#### Grade 4 Scale Score Results by Gender

- In 2011, male students in Florida had an average score in mathematics (240) that was not significantly different from that of female students (240). In 1992, male students in Florida had an average score in mathematics (215) that was not significantly different from that of female students (212).
- In 2011, male students in Florida had an average scale score in mathematics (240) that was not significantly different from that of male students in public schools across the nation (241). Similarly, female students in Florida had an average scale score (240) that was not significantly different from that of female students across the nation (239).
- In Florida, the average scale score of male students in 2011 was higher than the scores of male students in 1992, 1996, and 2003, but lower than the score of male students in 2007, and not significantly different from the scores of male students in 2005 and 2009.
- In Florida, the average scale score of female students in 2011 was higher than the scores of female students in 1992, 1996, and 2003, but not significantly different from the scores of female students in 2005, 2007, and 2009.

#### Grade 4 Achievement-Level Results by Gender

- In the 2011 assessment, 38 percent of male students and 36 percent of female students performed at or above *Proficient* in Florida. The difference between these percentages was not statistically significant.
- The percentage of male students in Florida's public schools who were at or above *Proficient* in 2011 (38 percent) was not significantly different from that of male students in the nation (41 percent).
- The percentage of female students in Florida's public schools who were at or above *Proficient* in 2011 (36 percent) was not significantly different from that of female students in the nation (39 percent).
- In Florida, the percentage of male students performing at or above *Proficient* in 2011 was greater than the corresponding percentages of students in 1992, 1996, and 2003, but not significantly different from the corresponding percentages of students in 2005, 2007, and 2009.
- In Florida, the percentage of female students performing at or above *Proficient* in 2011 was greater than the corresponding percentages of students in 1992, 1996, and 2003, but not significantly different from the corresponding percentages of students in 2005, 2007, and 2009.

#### The Nation's Report Card 2011 State Assessment

Table 5

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by gender, year, and jurisdiction: Various years, 1992–2011

						Percent	
Gender, year, a	nd jurisdiction	Percentage of students	Average scale score	Below Basic	At or above <i>Basic</i>	At or above Proficient	At Advanced
Male							
1992 <sup>1</sup>	Nation (public)	50	220*	41*	59*	19*	2*
	Florida	48*	215*	47*	53*	15*	1*
1996 <sup>1</sup>	Nation (public)	51	224*	37*	63*	22*	3*
	Florida	52	215*	47*	53*	15*	1*
2003	Nation (public)	51	235*	23*	77*	34 *	5*
	Florida	52	235*	24*	76*	33*	5
2005	Nation (public)	51	238*	20*	80*	37*	6*
	Florida	50	240	17	83	38	6
2007	Nation (public)	51	240	18	82	41	7*
	Florida	51	243*	13*	87*	43	7
2009	Nation (public)	51	240*	19	81	40	7
	Florida	50	243	14	86	42	6
2011	Nation (public)	51	241	18	82	41	7
	Florida	51	240	17	83	38	6
Female							
1992 <sup>1</sup>	Nation (public)	50	218*	44*	56*	16*	1*
	Florida	52*	212*	50*	50*	12*	1*
1996 <sup>1</sup>	Nation (public)	49	221*	39*	61*	17*	1*
	Florida	48	217*	44*	56*	14 *	1*
2003	Nation (public)	49	233*	25*	75*	29*	3*
	Florida	48	233*	25*	75*	29*	3*
2005	Nation (public)	49	236*	21*	79*	33*	4*
	Florida	50	238	19	81	35	5
2007	Nation (public)	49	238*	19	81	36*	4*
	Florida	49	241	14	86	38	5
2009	Nation (public)	49	238*	19	81	37 *	5*
	Florida	50	241	14	86	39	5
2011	Nation (public)	49	239	18	82	39	6
	Florida	49	240	16	84	36	5

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2011.

<sup>1</sup> Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

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.

#### Student Eligibility for the National School Lunch Program

NAEP collects data on eligibility for the federal program providing free or reduced-price school lunches. The free/reduced-price lunch component of the National School Lunch Program (NSLP) offered through the U.S. Department of Agriculture (USDA) is designed to ensure that children near or below the poverty line receive nourishing meals. Eligibility is determined through the USDA's Income Eligibility Guidelines, and data for this category of students are included as an indicator of lower family income. NAEP first collected information on participation in this program in 1996; therefore, cross-year comparisons to assessments prior to 1996 cannot be made.

Table 6 shows average scale scores and percentage of students by achievement-level data for public school students at grade 4 in Florida and the nation, by student eligibility for the NSLP.

#### Grade 4 Scale Score Results by Free/Reduced-Price School Lunch Eligibility

- In 2011, students in Florida eligible for free/reduced-price lunch had an average mathematics scale score of 232. This was lower than that of students in Florida not eligible for this program (252).
- In 2011, students in Florida who were eligible for free/reduced-price school lunch had an average score that
  was lower than that of students who were not eligible by 20 points. In 1996, the average score for students in
  Florida who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by
  24 points.
- Students in Florida eligible for free/reduced-price lunch had an average scale score (232) in 2011 that was higher than that of students in the nation who were eligible (229).
- In Florida, students eligible for free/reduced-price lunch had an average mathematics scale score in 2011 that was higher than that of eligible students in 1996, 2003, and 2005, but not significantly different from that of eligible students in 2007 and 2009.

#### Grade 4 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Florida, 26 percent of students who were eligible for free/reduced-price lunch and 56 percent of those who
  were not eligible for this program performed at or above *Proficient* in 2011. These percentages were
  significantly different from one another.
- For students in Florida in 2011 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (26 percent) was not significantly different from the corresponding percentage for their counterparts around the nation (24 percent).
- In Florida, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* in 2011 was greater than the corresponding percentages in 1996 and 2003, but not significantly different from the corresponding percentages in 2005, 2007, and 2009.

#### The Nation's Report Card 2011 State Assessment

Table 6 Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2011

				Percent			
Eligibility status jurisdiction	, year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above Proficient	At Advanced
Eligible							
1996 <sup>1</sup>	Nation (public)	34*	207*	59*	41*	8*	#*
	Florida	47*	204*	62*	38*	7*	#
2003	Nation (public)	44*	222*	38*	62*	15*	1*
	Florida	49*	222*	37*	63*	16*	1*
2005	Nation (public)	46*	225*	33*	67*	19*	1*
	Florida	52*	229*	26	74	22	2
2007	Nation (public)	46*	227*	30*	70*	22*	1*
	Florida	48*	233	21	79	25	2
2009	Nation (public)	48*	228*	29*	71*	22*	1*
	Florida	55*	235	20	80	29	2
2011	Nation (public)	52	229	27	73	24	2
	Florida	62	232	22	78	26	2
Not eligible							
1996 <sup>1</sup>	Nation (public)	52	231*	27*	73*	25*	3*
	Florida	48*	227*	30*	70*	21*	2*
2003	Nation (public)	52*	244*	12*	88*	45*	6*
	Florida	48*	245*	12*	88*	46*	7*
2005	Nation (public)	52*	248*	10*	90*	50*	8*
	Florida	47*	250	9	91	53	10
2007	Nation (public)	53*	249*	9*	91*	53*	9*
	Florida	51*	251	7	93	55	9
2009	Nation (public)	51*	250*	9*	91*	54 *	10*
	Florida	45*	251	7	93	55	9
2011	Nation (public)	47	252	8	92	57	12
	Florida	38	252	7	93	56	11

See notes at end of table.

#### The Nation's Report Card 2011 State Assessment

Table 6

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2011—Continued

				Percent			
Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above Proficient	At Advanced
Information not a	available						
1996 <sup>1</sup>	Nation (public)	13*	230*	28*	72*	28*	3*
	Florida	5*	224	37	63	22	1
2003	Nation (public)	4*	235*	23*	77*	34 *	4*
	Florida	3	230	27	73	24	#
2005	Nation (public)	2*	237*	21*	79*	36	5
	Florida	1	‡	‡	‡	‡	‡
2007	Nation (public)	1*	243	17	83	44	8
	Florida	#	‡	‡	‡	‡	‡
2009	Nation (public)	1	240	22	78	42	7
	Florida	#	‡	‡	‡	‡	‡
2011	Nation (public)	#	247	12	88	49	10
	Florida	#	‡	‡	‡	‡	‡

# Rounds to zero.

‡ Reporting standards not met.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2011.

<sup>1</sup> Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1996–2011 Mathematics Assessments.

# A More Inclusive NAEP: Students With Disabilities and English Language Learners

To ensure that the samples are representative, NAEP has established policies and procedures to maximize the inclusion of all students in the assessment. Every effort is made to ensure that all selected students who are capable of participating meaningfully in the assessment are assessed. While some students with disabilities (SD) and/or English language learners (ELL) can be assessed without any special procedures, others require accommodations to participate in NAEP. Still other SD and/or ELL students selected by NAEP may not be able to participate. Local school staff who are familiar with these students are asked a series of questions to help them decide whether each student should participate in the assessment and whether the student needs accommodations.

Within any assessment year, exclusion and accommodation rates may vary across jurisdictions. In addition, exclusion and accommodation rates may increase or decrease between assessment administrations, making it difficult to interpret comparisons over time within jurisdictions. Since SD and/or ELL students tend to score below average on assessments, the exclusion of students from these groups may result in a higher average score than if those students had taken the assessment. On the other hand, providing appropriate testing accommodations (e.g., providing extended time for some SD and/or ELL students to take the assessment) removes barriers that would otherwise prevent them from demonstrating their knowledge and skills.

Prior to 2000, testing accommodations were not provided for students with special needs in NAEP state mathematics assessments. For 2000, results are displayed for both the sample in which accommodations were permitted and the sample in which they were not permitted. Subsequent assessment results were based on the more inclusive samples.

Table 9 displays data for 4<sup>th</sup> grade students in Florida who were identified as SD and/or ELL, by whether they were excluded, assessed with accommodations, or assessed under standard conditions, as a percent of all 4<sup>th</sup> grade students in the state.

Table 10 shows the percentages of students assessed in Florida by disability status and their performance on the NAEP assessment in terms of average scores and percentages performing below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced* for grade 4.

Table 11 presents the percentages of students assessed in Florida by ELL status, their average scores, and their performance in terms of the percentages below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced* for grade 4.

Table 12 presents the total number of grade 4 students assessed in each of the participating states and the percentage of students sampled who were excluded.

#### The Nation's Report Card 2011 State Assessment

Table 9

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 all students, by assessment year and testing status: Various years, 1992–2011

			SD and/or ELL		SD	ELL	
			Nation		Nation		Nation
	testing status	Florida	(public)	Florida	(public)	Florida	(public)
19921	Identified	17	10	13	7	4	3
	Excluded	8	7	7	5	2	2
	Assessed without accommodations	8	4	6	3	2	1
19961	Identified	19	16	14	12	6	4
	Excluded	10	6	7	5	3	2
	Assessed without accommodations	9	9	7	7	3	2
2003	Identified	26	22	18	14	11	11
	Excluded	3	4	2	3	2	1
	Assessed without accommodations	8	10	4	4	5	7
	Assessed with accommodations	15	8	12	7	4	2
2005	Identified	25	23	18	14	8	10
	Excluded	3	3	2 3	3	1	1
	Assessed without accommodations	5	10	3	4	1	7
	Assessed with accommodations	17	10	12	8	5	3
2007	Identified	22	23	15	14	8	11
	Excluded	3	3	2	3	2	1
	Assessed without accommodations	2	10	1	3	1	7
	Assessed with accommodations	16	10	12	8	5	3
2009	Identified	23	23	17	13	8	10
	Excluded	2	2	2	2	#	1
	Assessed without accommodations	4	9	3	3	#	6
	Assessed with accommodations	18	11	12	8	7	4
2011	Identified	23	23	16	13	9	11
	Excluded	2	2	1	2	#	#
	Assessed without accommodations	3	9	3	3	#	6
	Assessed with accommodations	19	12	12	9	8	4

# Rounds to zero.

<sup>1</sup> Accommodations were not permitted for this assessment year.

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2011 Mathematics Assessments.

#### The Nation's Report Card 2011 State Assessment

Table 10

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: Various years, 2003–2011

				Percent			
SD status, year	, and jurisdiction	Percentage of students	Average scale score	Below Basic	At or above <i>Basic</i>	At or above Proficient	At Advanced
SD							
2003	Nation (public)	11*	214*	50*	50*	12*	1*
	Florida	17	214*	50*	50*	13	1
2005	Nation (public)	12	218	44	56	16	2
	Florida	16	227	33	67	24	5
2007	Nation (public)	11*	220*	40*	60*	19*	2
	Florida	13	223	37	63	18	1
2009	Nation (public)	12	220*	41*	59*	19*	2
	Florida	15	230*	28*	72*	26	2
2011	Nation (public)	12	218	45	55	17	2
	Florida	15	223	36	64	18	2
Not SD							
2003	Nation (public)	89*	236*	21*	79*	34*	4*
	Florida	83	238*	19*	81*	35*	4
2005	Nation (public)	88	240*	17*	83*	38*	5*
	Florida	84	241	15	85	39	6
2007	Nation (public)	89*	241*	16*	84*	41*	6*
	Florida	87	245	10	90	44	6
2009	Nation (public)	88	242*	16*	84*	41*	6*
	Florida	85	244	11	89	43	6
2011	Nation (public)	88	243	15	85	43	7
	Florida	85	243	13	87	41	6

\* Value is significantly different (*p* < .05) from the value for the same jurisdiction and student group in 2011.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for students with disabilities in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2003–2011 Mathematics Assessments.

#### The Nation's Report Card 2011 State Assessment

Table 11

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: Various years, 2003–2011

				Percent			
ELL status, yea	r, and jurisdiction	Percentage of students	Average scale score	Below Basic	At or above <i>Basic</i>	At or above Proficient	At Advanced
ELL							
2003	Nation (public)	9*	214*	51*	49*	9*	#*
	Florida	9	222	38	62	16	1
2005	Nation (public)	10*	216*	46*	54*	11*	1
	Florida	7*	219	43	57	15	2
2007	Nation (public)	10*	217*	44 *	56*	13	1
	Florida	7*	223	36	64	16	1
2009	Nation (public)	10*	218	43	57	12*	1*
	Florida	8	226*	31*	69*	19	1
2011	Nation (public)	11	219	42	58	14	1
	Florida	9	219	42	58	13	#
Not ELL							
2003	Nation (public)	91*	236*	21*	79*	34*	4*
	Florida	91	235*	23*	77*	33*	4*
2005	Nation (public)	90*	239*	18*	82*	38*	5*
	Florida	93*	240	16	84	38	6
2007	Nation (public)	90*	242*	16*	84*	42*	6*
	Florida	93*	243	12	88	42	6
2009	Nation (public)	90*	242*	16*	84*	41*	6*
	Florida	92	243	12	88	42	6
2011	Nation (public)	89	243	15	85	43	7
	Florida	91	242	14	86	40	6

# Rounds to zero.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2011.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient includes Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for English language learners in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2003–2011 Mathematics Assessments.

#### The Nation's Report Card 2011 State Assessment

Table 12

Number of fourth-grade public school students assessed in NAEP mathematics and weighted percentage excluded, by state/jurisdiction: 2011

Nation (public)AlabamaAlabamaAlaskaArizonaArkansasCaliforniaColoradoColoradoConnecticutDelawareFloridaGeorgiaHawaiiIdahoIllinoisIndiana	<b>198,900</b> 3,000 2,700 3,700 3,500 9,100 3,500 3,000 3,400 7,100 5,300 3,300 3,600	2 1 3 1 1 2 1 1 4 2 2 2
Alaska Arizona Arkansas California Colorado Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	2,700 3,700 3,500 9,100 3,500 3,000 3,400 7,100 5,300 3,300 3,600	3 1 2 1 1 4 2 2
Arizona Arkansas California Colorado Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	3,700 3,500 9,100 3,500 3,000 3,400 7,100 5,300 3,300 3,600	1 1 2 1 1 4 2 2
Arkansas California Colorado Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	3,500 9,100 3,500 3,000 3,400 7,100 5,300 3,300 3,600	1 2 1 1 4 2 2
California Colorado Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	9,100 3,500 3,000 3,400 7,100 5,300 3,300 3,600	2 1 1 4 2 2
Colorado Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	3,500 3,000 3,400 7,100 5,300 3,300 3,600	1 1 4 2 2
Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	3,500 3,000 3,400 7,100 5,300 3,300 3,600	1 4 2 2
Connecticut Delaware Florida Georgia Hawaii Idaho Illinois	3,000 3,400 7,100 5,300 3,300 3,600	1 4 2 2
Delaware Florida Georgia Hawaii Idaho Illinois	3,400 7,100 5,300 3,300 3,600	4 2 2
Florida Georgia Hawaii Idaho Illinois	7,100 5,300 3,300 3,600	2
Georgia Hawaii Idaho Illinois	5,300 3,300 3,600	2
Hawaii Idaho Illinois	3,300 3,600	
Idaho Illinois	3,600	
Illinois		2
	5 000	1
Indiana	5,000	2
	3,400	2
lowa	3,300	11
Kansas	3,100	2
Kentucky	4,800	3
Louisiana	3,300	2
Maine	3,200	2
Maryland	4,400	6
Massachusetts	5,000	3
Michigan	4,100	2
Minnesota	3,600	- 1
Mississippi	3,000	1
Missouri	3,400	2
Montana	3,100	2
Nebraska	3,100	2
Nevada	3,800	2
New Hampshire	3,300	2
New Jersey	3,300	3
New Mexico	4,100	3
New York	4,700	1
North Carolina	5,300	2
North Dakota	3,000	4
Ohio	4,200	2
Oklahoma	2,900	8
Oregon	3,600	3
Pennsylvania	4,600	1
Rhode Island	3,200	1
South Carolina	3,300	1
South Dakota	3,200	2
Tennessee		2 3
	3,400 9,600	
Texas	,	4
Utah	4,000	2
Vermont	2,700	2
Virginia	3,600	2
Washington	3,900	2
West Virginia	3,000	2
Wisconsin	4,500	2
Wyoming	2,900	2
Other jurisdictions		
District of Columbia	2,000	5
DoDEA <sup>1</sup>	3,100	3

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

NOTE: The number of students assessed is rounded to the nearest hundred.

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

# Where to Find More Information

#### The NAEP Mathematics Assessment

The latest news about the NAEP 2011 mathematics assessment and the results can be found on the NAEP website at <a href="http://nces.ed.gov/nationsreportcard/mathematics">http://nces.ed.gov/nationsreportcard/mathematics</a>. The individual snapshot reports for each participating state and other jurisdictions are also available in the state results section of the website at <a href="http://nces.ed.gov/nationsreportcard/states/">http://nces.ed.gov/nationsreportcard/mathematics</a>. The individual snapshot reports for each participating state and other jurisdictions are also available in the state results section of the website at <a href="http://nces.ed.gov/nationsreportcard/states/">http://nces.ed.gov/nationsreportcard/states/</a>.

The Nation's Report Card: Mathematics 2011 may be ordered or downloaded at the NAEP website.

The *Mathematics Framework for the 2011 National Assessment of Educational Progress*, on which this assessment is based, is available at the National Assessment Governing Board website at <u>http://www.nagb.org/publications/math-2011-framework.pdf</u>.

#### The NAEP Data Explorer (NDE)

The interactive database at <u>http://nces.ed.gov/nationsreportcard/naepdata/</u> includes student, teacher, and school variables for all participating districts, the nation, and public schools in large cities. Data tables are also available for districts, with all contextual questions cross-tabulated with the major demographic variables. Users can design and create tables and can perform tests of statistical significance at this website.

#### Technical Documentation on the Web (TDW)

Technical documentation section of the NAEP website <u>http://nces.ed.gov/nationsreportcard/tdw/</u> contains information about the technical procedures and methods of NAEP. The TDW site is organized by topic (from Item Development through Analysis and Scaling) with subtopics, including information specific to a particular assessment. The content is written for researchers and assumes knowledge of educational measurement and testing.

#### Publications on the inclusion of students with disabilities and English language learners

References for a variety of research publications related to the assessment of students with special needs may be found at <u>http://nces.ed.gov/nationsreportcard/about/inclusion.asp#research</u>.

#### To order publications

Recent NAEP publications related to mathematics are listed on the mathematics page of the NAEP website and are available electronically. Publications can also be ordered from

Education Publications Center (ED Pubs) U.S. Department of Education P.O. Box 22207 Alexandria, VA 22304

Call toll free: 1-877-4ED-Pubs (1-877-433-7827) TTY/TDD: 1-877-576-7734 FAX: 1-301-470-1244 Order online at: <u>http://www.edpubs.gov</u>.

The NAEP State Report Generator was developed for the NAEP 2011 reports by Phillip Leung, Bobby Rampey, Rebecca Moran, Rick Hasney, and Ming Kuang.

#### What is the Nation's Report Card<sup>™</sup>?

The Nation's Report Card<sup>™</sup> 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, state, and local 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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