



This report provides selected results for Miami-Dade's public school students at grades 4 and 8 from the National Assessment of Educational Progress (NAEP) assessment in mathematics. Results are reported by average scale scores and by achievement levels (*Basic*, *Proficient*, and *Advanced*).

While state-level results in mathematics are available for eight assessment years (at grade 8 in 1990; and at both grades 4 and 8 in 1992, 1996, 2000, 2003, 2005, 2007, and 2009), district-level results in mathematics began in 2003 and are available for participating districts for 2003, 2005, 2007, and 2009. In the 2009 assessment, Miami-Dade was one of 18 urban school districts that participated and met the criteria for reporting public school results.

For more information about the assessment, see the NAEP website

<http://nces.ed.gov/nationsreportcard/> which contains

- *The Nation's Report Card, Trial Urban District Assessment, Mathematics 2009*
- The full set of national, state, and district results in an interactive database
- Released test questions, scoring guides, and question-level performance data

NAEP is a project of the National Center for Education Statistics (NCES), reporting on the academic achievement of elementary and secondary students in the United States.

K E Y F I N D I N G S F O R 2 0 0 9

Grade 4:

- In 2009, the average mathematics score for fourth-grade students in Miami-Dade was 236. This was lower than that of the nation's public schools (239) and was higher than that in large city schools (231).
- In 2009, the percentage of students in Miami-Dade who performed at or above *Proficient* was 33 percent. This was smaller than that for the nation's public schools (38 percent) and was greater than that in large city schools (29 percent).
- In 2009, the percentage of students in Miami-Dade who performed at or above *Basic* was 81 percent. This was not significantly different from that for the nation's public schools (81 percent) and was greater than that in large city schools (72 percent).

Grade 8:

- In 2009, the average mathematics score for eighth-grade students in Miami-Dade was 273. This was lower than that of the nation's public schools (282) and was not significantly different from that in large city schools (271).
- In 2009, the percentage of students in Miami-Dade who performed at or above *Proficient* was 22 percent. This was smaller than that for the nation's public schools (33 percent) and was not significantly different from that in large city schools (24 percent).
- In 2009, the percentage of students in Miami-Dade who performed at or above *Basic* was 64 percent. This was smaller than that for the nation's public schools (71 percent) and was greater than that in large city schools (60 percent).

The U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 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) under the direction of the Governing Board. The current framework is available at the Governing Board's website <http://www.nagb.org/publications/frameworks/math-framework09.pdf>.

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

Content Areas and Mathematical Complexity

The 2009 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. 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 and trial urban district, are available on the NAEP website at <http://nces.ed.gov/nationsreportcard/itmrls/>.

Some questions in the 2009 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?

Eighteen districts participated in the voluntary NAEP Trial Urban District Assessment (TUDA) in mathematics in 2009. The school district names, as used in the National Center for Education Statistics (NCES) Common Core of Data (CCD), are

- Atlanta Public Schools,
- Austin Independent School District,
- Baltimore City Public Schools,
- Boston Public Schools,
- Charlotte-Mecklenburg Schools,
- Chicago Public Schools,
- Cleveland Metropolitan School District,
- Detroit Public Schools,
- District of Columbia Public Schools (DCPS),
- Fresno Unified School District,
- Houston Independent School District,
- Jefferson County Public Schools (Louisville, KY),
- Los Angeles Unified School District,
- Miami-Dade County Public Schools,
- Milwaukee Public Schools,
- New York City Department of Education,
- School District of Philadelphia, and
- San Diego Unified School District.

The overall participation rates for schools and students must meet guidelines established by 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 2009 mathematics assessment are available on the NAEP website at http://nationsreportcard.gov/math_2009/participation.asp.

The sample of students in the participating TUDA school districts represents an augmentation of the sample of students who would usually be selected by NAEP as part of the state samples. These augmented samples allow reliable reporting of student groups within these districts. Students in the TUDA samples are also included in "higher-level" samples. For example, data from students tested in the Los Angeles sample were used to report results for Los Angeles, and also contributed to the California and the national samples.

Some charter schools that operate within the geographic boundaries of a school district are independent of the district and are not included in the districts' Adequate Yearly Progress (AYP) report to the U.S. Department of Education under the Elementary and Secondary Education Act. Beginning in 2009, charter schools of this type were no longer included in the results for TUDA districts as they had been in past NAEP assessments.

School districts vary in whether the charter schools within their boundaries are independent of the districts. In 2007, charter schools were included in the TUDA district results if they were listed as part of the district's Local Education Agency in the NCES Common Core of Data. In 2009, charter schools are included in TUDA district results if they contribute to the district's AYP results as part of the Elementary and Secondary Education Act.

Referred to as "large central cities" in previous district reports, results for large cities include public schools located in cities with populations of 250,000 or more. The comparisons between national, district, and large city results 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 2009 district results are compared to results from three earlier assessments (2003, 2005, and 2007).

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 sets 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 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 figures 1-A and 1-B.

Figure 1-A	The Nation's Report Card 2009 Trial Urban District Assessment
	Descriptions of fourth-grade achievement levels for 2009 NAEP mathematics assessment

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

NOTE: The scores in parentheses indicate the cut point on the scale at which the achievement-level range begins.
 SOURCE: National Assessment Governing Board. (2008). *Mathematics Framework for the 2009 National Assessment of Educational Progress*. Washington, DC: Author.

Figure 1-B	The Nation's Report Card 2009 Trial Urban District Assessment
	Descriptions of eighth-grade achievement levels for 2009 NAEP mathematics assessment

Basic Level (262)	Eighth-grade students performing at the <i>Basic</i> 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.
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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 Level (299)	Eighth-grade students performing at the <i>Proficient</i> level should apply mathematical concepts and procedures consistently to complex problems in the five NAEP content areas.
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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 Level (333)	Eighth-grade students performing at the <i>Advanced</i> 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.
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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.

NOTE: The scores in parentheses indicate the cut point on the scale at which the achievement-level range begins.
 SOURCE: National Assessment Governing Board. (2008). *Mathematics Framework for the 2009 National Assessment of Educational Progress*. Washington, DC: Author.

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 NAEP national and state reports. Since the TUDA in mathematics began in 2003, the results for all the TUDA assessment years include students who received accommodations.

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 districts. The types of accommodations used in the 2009 NAEP mathematics assessment are available on the NAEP website at http://nationsreportcard.gov/math_2009/type_accomm.asp.

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. Therefore, the results are subject to a measure of uncertainty, reflected in the standard error of the estimates—a range of up to a few points above or below the score or percentage—which takes into account potential score fluctuation due to sampling error and measurement error. 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 2009 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.

The reader is cautioned against making simple causal inferences between student performance and the other variables (e.g., race/ethnicity and gender) 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 2009 Mathematics Overall Scale Score and Achievement-Level Results for Public School Students

Overall mathematics results are reported in this section for public school students from Miami-Dade along with large city and national results.

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.

Tables 1-A and 1-B show the overall performance results of grades 4 and 8 public school students in Miami-Dade, the nation (public), and large cities (public). The first column of results presents the average score on the NAEP mathematics scale. The remaining columns show the scores at selected percentiles. A percentile indicates the percentage 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 2009, the average scale score for students in Miami-Dade was 236. This was lower than the score for students across the nation (239) and was higher than the score for students in large city schools nationally (231).

Grade 8 Scale Score Results

- In 2009, the average scale score for students in Miami-Dade was 273. This was lower than the score for students across the nation (282) and was not significantly different from the score for students in large city schools nationally (271).

**Table
1-A**

Average scale scores and selected percentile scores in NAEP mathematics for fourth-grade public school students, by assessment year and jurisdiction: 2009

Year and jurisdiction		Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
2009	Nation (public)	239 *	201	221	241 *	259 *	275 *
	Large city (public)	231 *	191 *	211 *	232 *	252	270
	Miami-Dade	236	202	219	237	255	270

* Value is significantly different ($p < .05$) from the value in Miami-Dade.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500.

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

**Table
1-B**

Average scale scores and selected percentile scores in NAEP mathematics for eighth-grade public school students, by assessment year and jurisdiction: 2009

Year and jurisdiction		Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
2009	Nation (public)	282 *	235 *	258 *	283 *	307 *	328 *
	Large city (public)	271	222 *	246 *	271	297	321 *
	Miami-Dade	273	229	250	274	296	316

* Value is significantly different ($p < .05$) from the value in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500.

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

Overall Achievement-Level Results

Student results are reported as the percentage 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.

Tables 2-A and 2-B show the percentage of students at grades 4 and 8 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 2009, the percentage of Miami-Dade's students who performed at or above *Proficient* was 33 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Proficient* (38 percent) and was greater than the percentage of the students in large city schools who performed at or above *Proficient* (29 percent).
- In 2009, the percentage of Miami-Dade's students who performed at or above *Basic* was 81 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Basic* (81 percent) and was greater than the percentage of the students in large city schools who performed at or above *Basic* (72 percent).

Grade 8 Achievement-Level Results

- In 2009, the percentage of Miami-Dade's students who performed at or above *Proficient* was 22 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Proficient* (33 percent) and was not significantly different from the percentage of the students in large city schools who performed at or above *Proficient* (24 percent).
- In 2009, the percentage of Miami-Dade's students who performed at or above *Basic* was 64 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Basic* (71 percent) and was greater than the percentage of the students in large city schools who performed at or above *Basic* (60 percent).

**Table
2-A**

Percentage of fourth-grade public school students at or above NAEP mathematics achievement levels, by assessment year and jurisdiction: 2009

Year and jurisdiction		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
2009	Nation (public)	19	81	38*	6*
	Large city (public)	28*	72*	29*	5
	Miami-Dade	19	81	33	3

* Value is significantly different ($p < .05$) from the value in Miami-Dade.

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. 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), 2009 Mathematics Assessment.

**Table
2-B**

Percentage of eighth-grade public school students at or above NAEP mathematics achievement levels, by assessment year and jurisdiction: 2009

Year and jurisdiction		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
2009	Nation (public)	29*	71*	33*	7*
	Large city (public)	40*	60*	24	5*
	Miami-Dade	36	64	22	3

* Value is significantly different ($p < .05$) from the value in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. 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), 2009 Mathematics Assessment.

Comparisons Between Miami-Dade, the Nation, Large Cities, and Other Participating Districts

Eighteen districts participated in the mathematics assessment in 2009. These included Atlanta, Austin, Baltimore City, Boston, Charlotte-Mecklenburg, Chicago, Cleveland, Detroit, the District of Columbia (DCPS), Fresno, Houston, Jefferson County (Louisville, KY), Los Angeles, Miami-Dade County, Milwaukee, New York City, Philadelphia, and San Diego.

Comparisons by Average Scale Scores

Figures 2-A and 2-B compare Miami-Dade's 2009 overall mathematics scale scores at grades 4 and 8 with those in all other participating districts. The participating districts are grouped into categories reflecting whether the average scale scores of their students were found to be higher than, not significantly different from, or lower than the scores in Miami-Dade.

Grade 4 Scale Score Comparison Results

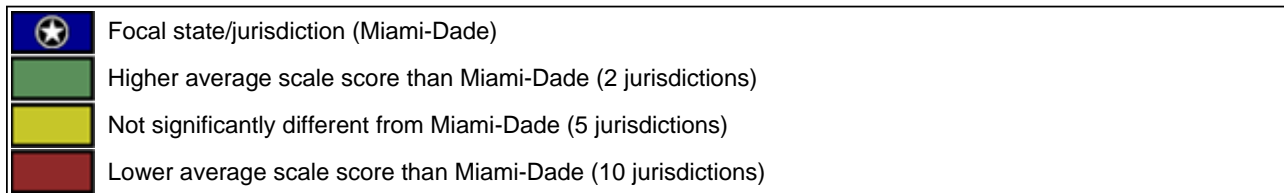
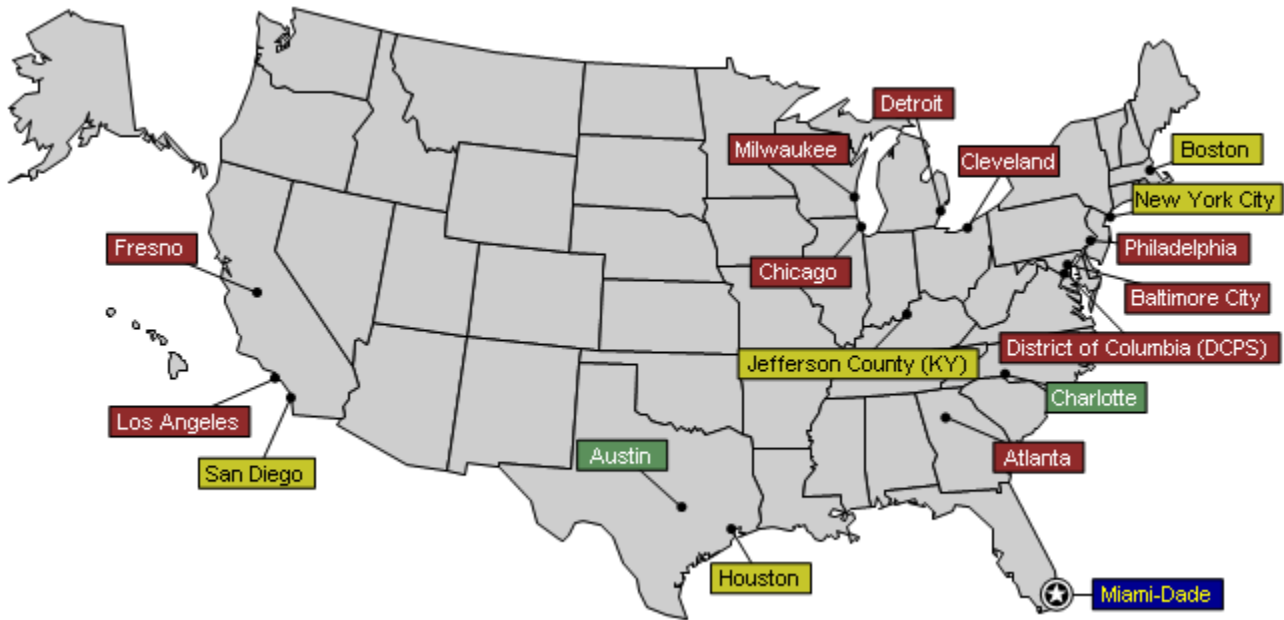
- Students' average score in Miami-Dade was higher than the scores in 10 districts, not significantly different from those in 5 districts, and lower than those in 2 districts.

Grade 8 Scale Score Comparison Results

- Students' average score in Miami-Dade was higher than the scores in 10 districts, not significantly different from those in 2 districts, and lower than those in 5 districts.

Figure 2-A

Miami-Dade's average scale score in NAEP mathematics for fourth-grade public school students compared with scores for other participating districts: 2009

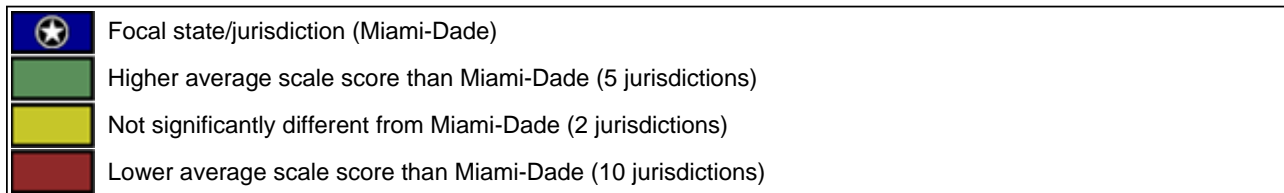
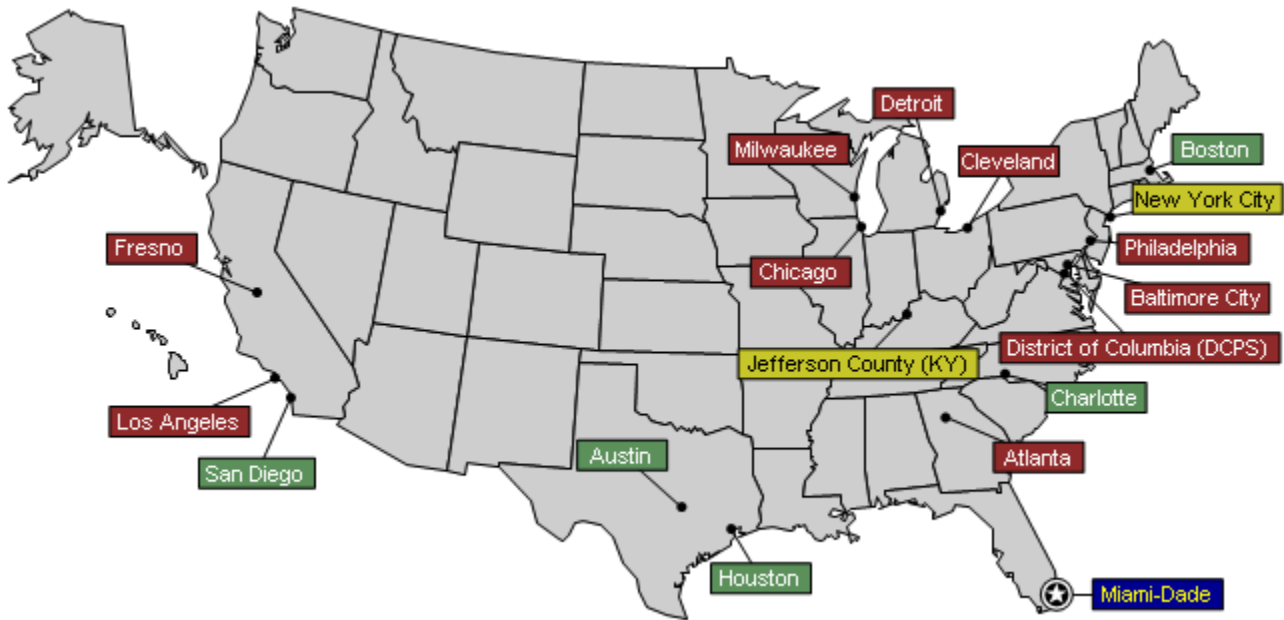


NOTE: DCPS = District of Columbia Public Schools.

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

Figure 2-B

Miami-Dade's average scale score in NAEP mathematics for eighth-grade public school students compared with scores for other participating districts: 2009



NOTE: DCPS = District of Columbia Public Schools.

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

Comparisons by Achievement Levels

Figures 3-A and 3-B permit comparisons of all districts participating in the NAEP 2009 mathematics assessment in terms of percentages of grades 4 and 8 students performing at or above *Proficient*. The participating districts are grouped into categories reflecting whether the percentage of their students performing at or above *Proficient* (including *Proficient* and *Advanced*) was found to be higher than, not significantly different from, or lower than the percentage in Miami-Dade. Statistical comparisons among districts by achievement level can be calculated online by using the NAEP Data Explorer at <http://nces.ed.gov/nationsreportcard/naepdata/>.

Grade 4 Achievement-Level Comparison Results

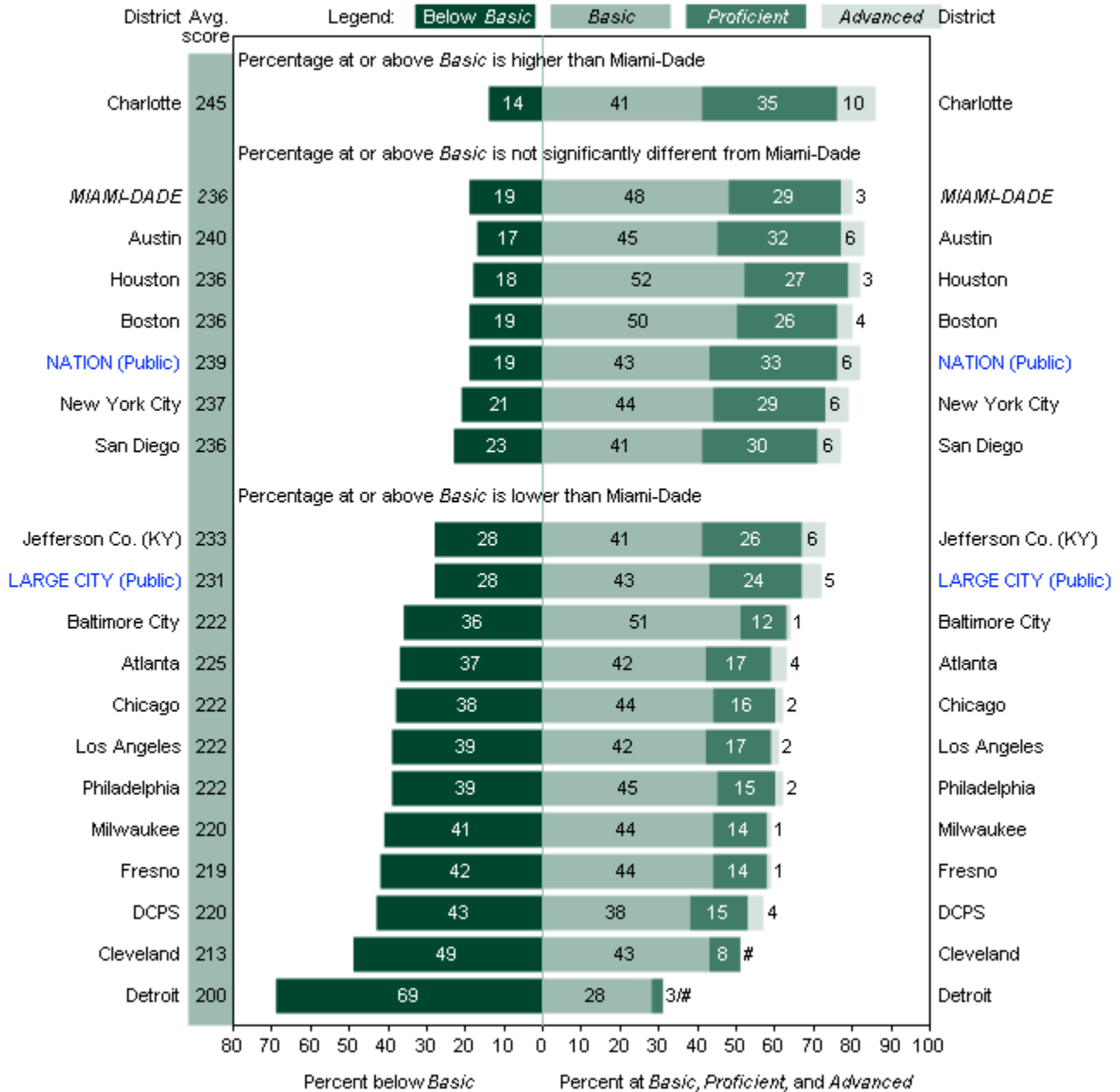
- The percentage of students performing at or above the *Proficient* level in Miami-Dade was higher than the percentage in 10 districts, not significantly different from those in 6 districts, and lower than those in 1 district (data not shown).
- The percentage of students performing at or above the *Basic* level in Miami-Dade was higher than the percentage in 11 districts, not significantly different from those in 5 districts, and lower than those in 1 district.

Grade 8 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Miami-Dade was higher than the percentage in 9 districts, not significantly different from those in 4 districts, and lower than those in 4 districts (data not shown).
- The percentage of students performing at or above the *Basic* level in Miami-Dade was higher than the percentage in 11 districts, not significantly different from those in 3 districts, and lower than those in 3 districts.

Figure 3-A

Average scale scores in NAEP mathematics for fourth-grade public school students, percentage within each achievement level, and Miami-Dade's percentage at or above *Basic* compared with the nation, large city and other participating districts: 2009



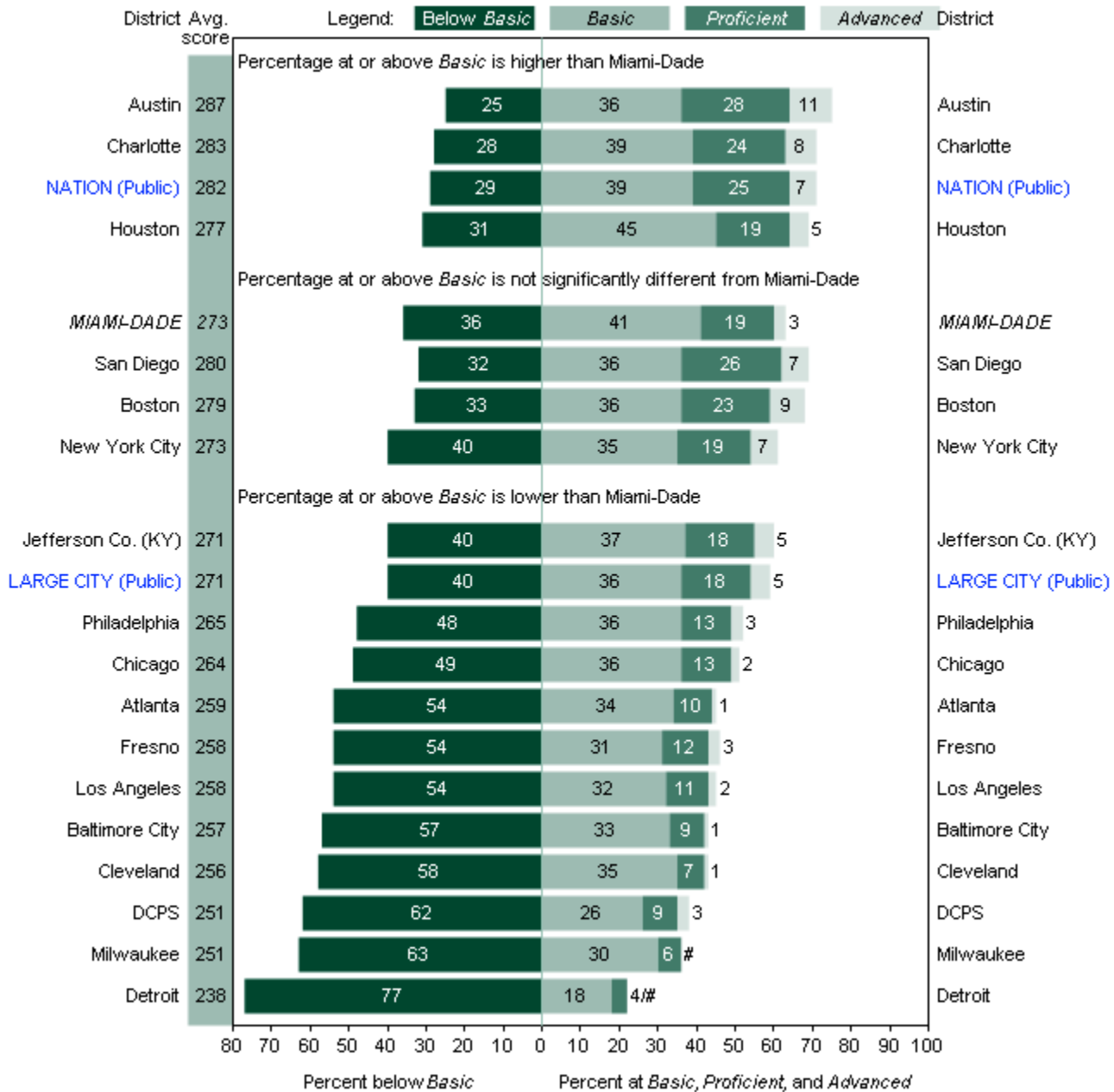
Rounds to zero.

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 *Basic* category begins, so that they may be compared at *Basic* and above. Detail may not sum to totals because of rounding. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated. DCPS = District of Columbia Public Schools.

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

Figure 3-B

Average scale scores in NAEP mathematics for eighth-grade public school students, percentage within each achievement level, and Miami-Dade's percentage at or above *Basic* compared with the nation, large city and other participating districts: 2009



Rounds to zero.

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 *Basic* category begins, so that they may be compared at *Basic* and above. Detail may not sum to totals because of rounding. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated. DCPS = District of Columbia Public Schools.

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

Mathematics Performance of Selected Student Groups

This section of the report presents results for public school students in Miami-Dade, in the nation, and in large city public schools by demographic characteristics.

Student performance data are reported for

- race/ethnicity
- gender
- student eligibility for the National School Lunch Program
- parents' highest level of education (grade 8 only)

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.

For districts that have participated in the past, 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 2009 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 2009 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 <http://nces.ed.gov/nationsreportcard/naepdata/>.

Race/Ethnicity

Schools reported the race/ethnicity subgroup that best described each student. The six mutually exclusive categories are White, Black, Hispanic, Asian/Pacific Islander, American Indian/Alaska Native, and Unclassified. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Tables 3-A and 3-B show average scale scores and achievement-level data for public school students at grades 4 and 8 in Miami-Dade, in the nation, and in large city public schools, by race/ethnicity.

Grade 4 Scale Score Results by Race/Ethnicity

- In 2009, White students in Miami-Dade had an average scale score that was higher than the scores of Black and Hispanic students.
- In Miami-Dade, Black students had an average score that was lower than that of White students by 32 points. In the nation, the average score for Black students was lower than that of White students by 26 points.
- In Miami-Dade, Hispanic students had an average score that was lower than that of White students by 15 points. In the nation, the average score for Hispanic students was lower than that of White students by 21 points.

Grade 4 Achievement-Level Results by Race/Ethnicity

- In Miami-Dade in 2009, the percentage of White students performing at or above *Proficient* was greater than the corresponding percentages of Black and Hispanic students.

**Table
3-A**

Percentage of fourth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2009

Race/ethnicity, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
White							
2009	Nation (public)	54 *	248 *	10 *	90 *	50 *	8
	Large city (public)	20 *	250	10 *	90 *	55	12
	Miami-Dade	10	253	4	96	61	8
Black							
2009	Nation (public)	16 *	222	37	63	15	1
	Large city (public)	29	219	41	59	14	1
	Miami-Dade	25	222	36	64	12	#
Hispanic							
2009	Nation (public)	22 *	227 *	30 *	70 *	21 *	1 *
	Large city (public)	42 *	226 *	31 *	69 *	21 *	1 *
	Miami-Dade	62	239	16	84	35	3
Asian/Pacific Islander							
2009	Nation (public)	5 *	255	9	91	61	18
	Large city (public)	7 *	253	10	90	58	17
	Miami-Dade	1	‡	‡	‡	‡	‡
American Indian/Alaska Native							
2009	Nation (public)	1	227	32	68	23	2
	Large city (public)	1	227	34	66	26	2
	Miami-Dade	#	‡	‡	‡	‡	‡
Unclassified¹							
2009	Nation (public)	2	242	14	86	41	6
	Large city (public)	1 *	240	17	83	40	6
	Miami-Dade	2	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

¹ The unclassified category includes students whose school-reported race/ethnicity was "other" or unavailable, or was missing, and whose race/ethnicity category could not be determined from self-reported information.

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. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

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

Grade 8 Scale Score Results by Race/Ethnicity

- In 2009, White students in Miami-Dade had an average scale score that was higher than the scores of Black and Hispanic students.
- In Miami-Dade, Black students had an average score that was lower than that of White students by 31 points. In the nation, the average score for Black students was lower than that of White students by 32 points.
- In Miami-Dade, Hispanic students had an average score that was lower than that of White students by 17 points. In the nation, the average score for Hispanic students was lower than that of White students by 26 points.

Grade 8 Achievement-Level Results by Race/Ethnicity

- In Miami-Dade in 2009, the percentage of White students performing at or above *Proficient* was greater than the corresponding percentages of Black and Hispanic students.

**Table
3-B**

Percentage of eighth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2009

Race/ethnicity, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
White							
2009	Nation (public)	56*	292	18	82	43	10
	Large city (public)	21*	294	19	81	46	13
	Miami-Dade	10	291	16	84	40	8
Black							
2009	Nation (public)	16*	260	51	49	12	1
	Large city (public)	27*	256	56	44	10	1
	Miami-Dade	22	260	52	48	12	1
Hispanic							
2009	Nation (public)	21*	266*	44*	56*	17*	2
	Large city (public)	42*	264*	46*	54*	16*	2
	Miami-Dade	65	274	35	65	23	3
Asian/Pacific Islander							
2009	Nation (public)	5*	300	16	84	53	20
	Large city (public)	8*	299	17	83	52	18
	Miami-Dade	1	‡	‡	‡	‡	‡
American Indian/Alaska Native							
2009	Nation (public)	1	267	43	57	20	3
	Large city (public)	1	271	36	64	21	5
	Miami-Dade	#	‡	‡	‡	‡	‡
Unclassified¹							
2009	Nation (public)	1	283	28	72	33	7
	Large city (public)	1	280	31	69	29	4
	Miami-Dade	1	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

¹ The unclassified category includes students whose school-reported race/ethnicity was "other" or unavailable, or was missing, and whose race/ethnicity category could not be determined from self-reported information.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

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

Tables 4-A and 4-B show average scale scores and achievement-level data for public school students at grades 4 and 8 in Miami-Dade, in the nation, and in large city public schools, by gender.

Grade 4 Scale Score Results by Gender

- In Miami-Dade, male students had an average score that was not found to be significantly different from that of female students. In the nation, male students had an average score that was higher than that of female students.
- In 2009, male students in Miami-Dade had an average scale score in mathematics (237) that was lower than that of male students in public schools across the nation (240). However, female students in Miami-Dade had an average scale score (236) that was not significantly different from that of female students across the nation (238).
- In 2009, male students in Miami-Dade had an average scale score in mathematics (237) that was higher than that of male students in public schools in large cities (231). Similarly, female students in Miami-Dade had an average scale score (236) that was higher than that of female students in large city schools (231).

Grade 4 Achievement-Level Results by Gender

- The percentage of male students in Miami-Dade's public schools who were at or above *Proficient* in 2009 (34 percent) was smaller than that of male students in the nation (40 percent) and greater than that of male students in large city schools (30 percent).
- The percentage of female students in Miami-Dade's public schools who were at or above *Proficient* in 2009 (31 percent) was smaller than that of female students in the nation (37 percent) and not significantly different from that of female students in large city schools (28 percent).

**Table
4-A**

Percentage of fourth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by gender, year, and jurisdiction: 2009

Gender, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
Male							
2009	Nation (public)	51	240*	19	81	40*	7*
	Large city (public)	51	231*	28*	72*	30*	5
	Miami-Dade	50	237	19	81	34	4
Female							
2009	Nation (public)	49	238	19	81	37*	5*
	Large city (public)	49	231*	27*	73*	28	4
	Miami-Dade	50	236	20	80	31	3

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

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. 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), 2009 Mathematics Assessment.

Grade 8 Scale Score Results by Gender

- In Miami-Dade, male students had an average score that was not found to be significantly different from that of female students. In the nation, male students had an average score that was higher than that of female students.
- In 2009, male students in Miami-Dade had an average scale score in mathematics (273) that was lower than that of male students in public schools across the nation (283). Similarly, female students in Miami-Dade had an average scale score (272) that was lower than that of female students across the nation (281).
- In 2009, male students in Miami-Dade had an average scale score in mathematics (273) that was not significantly different from that of male students in public schools in large cities (272). Similarly, female students in Miami-Dade had an average scale score (272) that was not significantly different from that of female students in large city schools (270).

Grade 8 Achievement-Level Results by Gender

- The percentage of male students in Miami-Dade's public schools who were at or above *Proficient* in 2009 (24 percent) was smaller than that of male students in the nation (34 percent) and not significantly different from that of male students in large city schools (25 percent).
- The percentage of female students in Miami-Dade's public schools who were at or above *Proficient* in 2009 (20 percent) was smaller than that of female students in the nation (31 percent) and not significantly different from that of female students in large city schools (22 percent).

**Table
4-B**

Percentage of eighth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by gender, year, and jurisdiction: 2009

Gender, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
Male							
2009	Nation (public)	51	283 *	28 *	72 *	34 *	8 *
	Large city (public)	50	272	40	60	25	6 *
	Miami-Dade	50	273	36	64	24	3
Female							
2009	Nation (public)	49	281 *	29 *	71 *	31 *	7 *
	Large city (public)	50	270	41 *	59 *	22	5
	Miami-Dade	50	272	37	63	20	3

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. 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), 2009 Mathematics Assessment.

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 results for this category of students are included as an indicator of lower family income.

Tables 5-A and 5-B show average scale scores and achievement-level data for public school students at grades 4 and 8 in Miami-Dade, in the nation, and in large city public schools, by student eligibility for the NSLP.

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

- In 2009, students in Miami-Dade eligible for free/reduced-price lunch had an average mathematics scale score of 230. This was lower than that of students in Miami-Dade not eligible for this program (249).
- In 2009, students in Miami-Dade who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 19 points. In the nation, the average score for students in 2009 who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 22 points.
- Students in Miami-Dade eligible for free/reduced-price lunch had an average scale score (230) in 2009 that was higher than that of students in the nation who were eligible (228) and higher than that of students in large city schools who were eligible (225).

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

- In Miami-Dade, 23 percent of students who were eligible for free/reduced-price lunch and 54 percent of those who were not eligible for this program performed at or above *Proficient* in 2009. These percentages were found to be significantly different from one another.
- For students in Miami-Dade in 2009 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (23 percent) was not significantly different from the corresponding percentage for their counterparts around the nation (22 percent) and not significantly different from the corresponding percentage for their counterparts in large cities (20 percent).

**Table
5-A**

Percentage of fourth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by eligibility for National School Lunch Program, year, and jurisdiction: 2009

Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
Eligible							
2009	Nation (public)	48*	228*	29*	71*	22	1
	Large city (public)	71	225*	34*	66*	20	2
	Miami-Dade	68	230	25	75	23	1
Not eligible							
2009	Nation (public)	51*	250	9	91	54	10
	Large city (public)	27	248	13*	87*	51	12*
	Miami-Dade	32	249	8	92	54	8
Information not available							
2009	Nation (public)	1	240	22	78	42	7
	Large city (public)	1	240	23	77	44	7
	Miami-Dade	#	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

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. 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), 2009 Mathematics Assessment.

Grade 8 Scale Score Results by Free/Reduced-Price School Lunch Eligibility

- In 2009, students in Miami-Dade eligible for free/reduced-price lunch had an average mathematics scale score of 266. This was lower than that of students in Miami-Dade not eligible for this program (284).
- In 2009, students in Miami-Dade who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 18 points. In the nation, the average score for students in 2009 who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 27 points.
- Students in Miami-Dade eligible for free/reduced-price lunch had an average scale score (266) in 2009 that was not significantly different from that of students in the nation who were eligible (266) and higher than that of students in large city schools who were eligible (262).

Grade 8 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Miami-Dade, 16 percent of students who were eligible for free/reduced-price lunch and 33 percent of those who were not eligible for this program performed at or above *Proficient* in 2009. These percentages were found to be significantly different from one another.
- For students in Miami-Dade in 2009 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (16 percent) was not significantly different from the corresponding percentage for their counterparts around the nation (17 percent) and not significantly different from the corresponding percentage for their counterparts in large cities (15 percent).

**Table
5-B**

Percentage of eighth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by eligibility for National School Lunch Program, year, and jurisdiction: 2009

Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
Eligible							
2009	Nation (public)	43*	266	43	57	17	2
	Large city (public)	66	262*	49*	51*	15	2
	Miami-Dade	63	266	44	56	16	2
Not eligible							
2009	Nation (public)	56*	293*	17*	83*	45*	12*
	Large city (public)	32*	289*	23	77	41*	12*
	Miami-Dade	37	284	23	77	33	5
Information not available							
2009	Nation (public)	1	284	28	72	35	10
	Large city (public)	1	273	40	60	29	5
	Miami-Dade	#	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. 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), 2009 Mathematics Assessment.

Parents' Highest Level of Education

Eighth-grade students who participated in the NAEP 2009 assessment were asked to indicate the highest level of education they thought their father and their mother had completed. Five response options were offered: did not finish high school, graduated from high school, some education after high school, graduated from college, and "I don't know." The highest level of education reported for either parent was used in the analysis. Fourth-graders were not asked about their parents' education level because their responses in previous NAEP assessments were not reliable, and a large percentage of them chose the "I don't know" option.

Table 6 shows average scale scores and achievement-level data for public school students at grade 8 in Miami-Dade, in the nation, and in large city public schools, by student reported parents' highest level of education.

Grade 8 Scale Score Results by Parents' Highest Level of Education

- In 2009, students in Miami-Dade who reported that a parent had graduated from college had an average scale score that was higher than the average scores of students with a parent in any of the following education categories: graduated from high school and did not finish high school, but was not found to be significantly different from the average score of students with a parent in any of the following education categories: some education after high school.
- In 2009, the average scale scores for students in Miami-Dade who reported that a parent had graduated from college or had graduated from high school were lower than the corresponding scores of students in the nation.
- In 2009, the average scale scores for students in Miami-Dade who reported that a parent had some education after high school or had not finished high school were not found to be significantly different from the corresponding scores of students in the nation.
- In 2009, the average scale score for students in Miami-Dade who reported that a parent had graduated from college was lower than the score of students in large city schools.
- In 2009, the average scale scores for students in Miami-Dade who reported that a parent had some education after high school, had graduated from high school, or had not finished high school were not found to be significantly different from the corresponding scores of students in large city schools.

Grade 8 Achievement-Level Results by Parents' Highest Level of Education

- In 2009, the percentage of students performing at or above *Proficient* in Miami-Dade who reported that a parent had graduated from college was greater than the percentage for students whose parents' highest level of education was in any of the following education categories: graduated from high school and did not finish high school, but was not found to be significantly different from the percentage for students whose parents' highest level of education was in any of the following education categories: some education after high school.
- In 2009 in Miami-Dade, the percentage of students reporting that a parent had graduated from college who performed at or above *Proficient* was smaller than the percentage of students in the nation.
- In 2009 in Miami-Dade, the percentages of students reporting that a parent had some education after high school, had graduated from high school, or had not finished high school who performed at or above *Proficient* were not found to be significantly different from the corresponding percentages of students in the nation.
- In 2009 in Miami-Dade, the percentage of students reporting that a parent had graduated from college who performed at or above *Proficient* was smaller than the percentage of students in large city schools.
- In 2009 in Miami-Dade, the percentages of students reporting that a parent had some education after high school, had graduated from high school, or had not finished high school who performed at or above *Proficient* were not found to be significantly different from the corresponding percentages of students in large city schools.

**Table
6**

Percentage of eighth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by parental education level, year, and jurisdiction: 2009

Parental education level, year, and jurisdiction	Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
Did not finish high school						
2009 Nation (public)	8	265	45	55	14	1
Large city (public)	13*	264	47	53	15	1
Miami-Dade	8	262	51	49	12	2
Graduated from high school						
2009 Nation (public)	17	270*	38	62	19	2
Large city (public)	17	263	48	52	15	2
Miami-Dade	17	265	45	55	14	1
Some education after high school						
2009 Nation (public)	17	283	24	76	32	5
Large city (public)	16	275	33	67	24	4
Miami-Dade	16	279	29	71	26	3
Graduated from college						
2009 Nation (public)	46	294*	18*	82*	46*	13*
Large city (public)	36*	284*	30	70	37*	11*
Miami-Dade	44	279	30	70	29	5
Unknown						
2009 Nation (public)	12*	264	47	53	16	2*
Large city (public)	18*	258*	55*	45*	13	2
Miami-Dade	15	263	46	54	13	1

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. 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), 2009 Mathematics Assessment.

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.

Tables 7-A and 7-B display data for 4th and 8th grade students in Miami-Dade, the nation, and large cities who were identified as SD and/or ELL, by whether they were excluded, assessed with accommodations, or assessed without accommodations, as a percent of all 4th or 8th grade students in the district/jurisdiction.

Tables 8-A and 8-B show the percentages of students assessed in Miami-Dade, the nation, and large cities by disability status and their performance on the NAEP assessment in terms of average scale scores and percentages performing below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced* for grades 4 and 8.

Tables 9-A and 9-B present the percentages of students assessed in Miami-Dade, the nation, and large cities by ELL status, their average scale scores, and their performance in terms of the percentages below *Basic*, the percentages at or above *Basic*, at or above *Proficient*, and at *Advanced* for grades 4 and 8.

Tables 10-A and 10-B present the total number of grade 4 and 8 students assessed in each of the participating districts and the weighted percentage of students sampled who were excluded.

**Table
7-A**

Fourth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) in NAEP mathematics, by assessment year and testing status, as a percentage of all students: 2009

Year and testing status	SD and/or ELL			SD			ELL			
	Miami-Dade	Nation	Large city	Miami-Dade	Nation	Large city	Miami-Dade	Nation	Large city	
2009										
	Identified	21	23	31	13	13	13	9	10	20
	Excluded	3	2	3	2	2	2	1	1	1
	Assessed without accommodations	2	9	14	1	3	2	1	6	12
	Assessed with accommodations	16	11	14	10	8	9	7	4	7

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), 2009 Mathematics Assessment.

**Table
7-B**

Eighth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) in NAEP mathematics, by assessment year and testing status, as a percentage of all students: 2009

Year and testing status	SD and/or ELL			SD			ELL		
	Miami-Dade	Nation	Large city	Miami-Dade	Nation	Large city	Miami-Dade	Nation	Large city
2009 Identified	20	18	23	12	13	13	8	6	12
Excluded	3	3	3	2	3	3	1	#	1
Assessed without accommodations	1	5	9	#	2	2	#	3	7
Assessed with accommodations	16	10	11	10	8	9	6	2	4

Rounds to zero.

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

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

**Table
8-A**

Percentage of fourth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: 2009

SD status, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
SD							
2009	Nation (public)	12	220	41	59	19*	2
	Large city (public)	11	210*	55*	45*	12	1
	Miami-Dade	11	217	45	55	13	#
Not SD							
2009	Nation (public)	88	242	16	84	41*	6*
	Large city (public)	89	234*	25*	75*	31*	5
	Miami-Dade	89	239	16	84	35	4

Rounds to zero.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

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. 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.

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

**Table
8-B**

Percentage of eighth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: 2009

SD status, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
SD							
2009	Nation (public)	10	249	64	36	9*	1
	Large city (public)	11	238	76	24	6	1
	Miami-Dade	11	244	70	30	3	#
Not SD							
2009	Nation (public)	90	285*	24*	76*	35*	8*
	Large city (public)	89	275	36*	64*	26	6*
	Miami-Dade	89	276	32	68	25	4

Rounds to zero.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. 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.

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

**Table
9-A**

Percentage of fourth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: 2009

ELL status, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
ELL							
2009	Nation (public)	10*	218	43	57	12	1
	Large city (public)	20*	216	45	55	11	#
	Miami-Dade	8	216	45	55	13	1
Not ELL							
2009	Nation (public)	90*	242*	16	84	41*	6*
	Large city (public)	80*	235*	24*	76*	33	6*
	Miami-Dade	92	238	17	83	34	4

Rounds to zero.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

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. 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.

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

**Table
9-B**

Percentage of eighth-grade public school students, average scale score, and percentage at or above achievement levels in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: 2009

ELL status, year, and jurisdiction		Percentage of students	Average scale score	Below Basic	At or above Basic	At or above Proficient	At Advanced
ELL							
2009	Nation (public)	6*	243	72	28	5	1
	Large city (public)	12*	238	77	23	4	#
	Miami-Dade	7	236	78	22	1	#
Not ELL							
2009	Nation (public)	94*	284*	26*	74*	34*	8*
	Large city (public)	88*	275	36	64	26	6*
	Miami-Dade	93	275	33	67	24	3

Rounds to zero.

* Value is significantly different ($p < .05$) from the value for the same group in Miami-Dade.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. 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.

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

**Table
10-A**

Number of fourth-grade public school students assessed in NAEP mathematics and weighted percentage excluded, by jurisdiction: 2009

State/jurisdiction	Number assessed	Weighted percentage excluded
Nation (public)	163,000	2
Large City (public)	37,800	3
Atlanta	1,200	1
Austin	1,500	5
Baltimore City	1,100	9
Boston	1,100	6
Charlotte	1,500	2
Chicago	1,900	4
Cleveland	900	10
Detroit	900	3
District of Columbia (DCPS)	1,300	5
Fresno	1,400	3
Houston	2,200	3
Jefferson County (KY)	1,400	3
Los Angeles	2,200	1
Miami-Dade	2,200	3
Milwaukee	1,300	7
New York City	2,200	2
Philadelphia	1,300	4
San Diego	1,300	3

NOTE: DCPS = District of Columbia Public Schools. 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), 2009 Mathematics Assessment.

**Table
10-B**

Number of eighth-grade public school students assessed in NAEP mathematics and weighted percentage excluded, by jurisdiction: 2009

State/jurisdiction	Number assessed	Weighted percentage excluded
Nation (public)	156,200	3
Large City (public)	34,600	3
Atlanta	900	1
Austin	1,300	7
Baltimore City	900	11
Boston	1,100	9
Charlotte	1,300	3
Chicago	1,800	4
Cleveland	900	11
Detroit	1,000	5
District of Columbia (DCPS)	900	7
Fresno	1,300	2
Houston	1,900	5
Jefferson County (KY)	1,400	4
Los Angeles	2,000	2
Miami-Dade	2,000	3
Milwaukee	1,000	4
New York City	2,100	2
Philadelphia	1,200	6
San Diego	1,000	5

NOTE: DCPS = District of Columbia Public Schools. 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), 2009 Mathematics Assessment.

Where to Find More Information

The NAEP Mathematics Assessment

The latest news about the NAEP 2009 mathematics assessment and the results can be found on the NAEP website at <http://nces.ed.gov/nationsreportcard/mathematics/results/>. The individual snapshot reports for each participating district are also available on the website at http://nces.ed.gov/nationsreportcard/tuda_math_2009/.

The Nation's Report Card: Trial Urban District Assessment in Mathematics 2009 may be ordered or downloaded at the NAEP website.

The *Mathematics Framework for the 2009 National Assessment of Educational Progress*, on which this assessment is based, is available at the National Assessment Governing Board website at <http://www.nagb.org/publications/frameworks/math-framework09.pdf>.

The NAEP Data Explorer (NDE)

The interactive database at <http://nces.ed.gov/nationsreportcard/naepdata/> includes student, teacher, and school variables for all participating districts, the nation, and large city schools. 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 <http://nces.ed.gov/nationsreportcard/tdw/> 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 <http://nces.ed.gov/nationsreportcard/about/inclusion.asp#research>.

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 1398
Jessup, MD 20794-1398

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: <http://www.edpubs.org>.

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, the arts, 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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