BOSTON Public Schools
Focus on Children

Report on 2011 Trial Urban District Assessment (TUDA) National Assessment of Educational Progress (NAEP)

Grades 4 and 8 Reading and Mathematics

Office of Research, Assessment, and Evaluation
December 2011

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Prepared by the Office of Research, Assessment and Evaluation
December 2011

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EXECUTIVE SUMMARY

The Trial Urban District Assessment (TUDA) was started in 2002 as part of the National Assessment of Educational Progress (NAEP). In 2011, Boston Public Schools was one of twenty-one urban districts that voluntarily participated in the NAEP assessment. Boston participated in the grades 4 and 8 reading and mathematics assessments in 2003, 2005, 2007, 2009 and 2011, as well as in the Science assessments in 2005, 2009 and 2011 (Grade 8 only), and Writing in 2007.

This report examines the 2011 Reading and Mathematics results of the TUDA districts and compares their performance to each other, to public schools across the nation, and to public schools across Large Cities (LC).

Reading

Boston's Performance over Time:

- Boston's average scores in both grades 4 and 8 have continued to increase or hold steady each year since the district first participated in NAEP/TUDA in 2003.
- In grade 4, while the Nation's average score remained unchanged since 2007, Boston's average scale score in 2011 was 217, up 7 points, a significant gain since 2007. **Boston's gain since 2003 is even more impressive, totaling 11 points and significantly surpassing the 4-point gain nationally and 7-point gain experienced by large cities, indicating Boston's 4th graders experienced a higher growth in reading performance resulting in a significantly narrower gap with the Nation.**
- Boston's 8th grade average score in 2011 was not significantly different from any of the four previous administrations, while students across the nation and Large Cities significantly increased their scores by 3 and 6 points between 2003 and 2011, respectively.

Boston's Performance Compared to other TUDA Districts, Large Cities, and the Nation:

- In grade 4, while Boston's average score was significantly lower than the Nation by 3 points, the district performed significantly better than Large Cities across the country (with a population over 250,000) by 6 points. The average score for Boston's 8th graders was the same as that of Large Cities and was 9 points lower than the national average, but the difference was not statistically significant.
- Of the 21 participating TUDA districts, Boston was one of eight to have a score significantly higher than, or equal to, that of Large Cities in both the grade 4 and grade 8 reading assessments.
- Compared to other TUDA districts, Boston's average scores in both grades 4 and 8 were higher than or equal to those of 15 other districts. Only five districts (Austin, Charlotte, Hillsborough, Jefferson, and Miami-Dade) scored higher than Boston in both test grades.

Performance by Racial/Ethnic Group:

- Between 2003 and 2011, all but the Asian student group made statistically significant gains in their average scores on the 4th grade test. White students' average increased 16 points; Black students saw a 9-point gain; and Hispanic students experienced a 13-point gain.
- The gains made by Boston's 8th grade students between 2003 and 2011 are not statistically significant for any ethnic group.
- In Boston, the gaps in performance between Asian/White students and Black/Hispanic students persist in both 4th and 8th grade.
- However, Boston's Black students outperformed their peers across the nation: 4th graders in Boston had an average score of 211, compared to the national average of 205. Similarly, Black students in Boston outscored their peers in Large Cities by 9 points. Overall, Boston's Black students had the third highest scale score of all TUDA districts in 4th grade; in 8th grade, only Charlotte had a significantly higher average score.
- **Boston's Hispanic students in 4th grade also had higher average scores than Hispanic students across the Nation and in Large Cities**. Boston's 8th grade Hispanic students also performed significantly better than their peers across the Nation. Compared to other TUDA districts, Boston's Hispanic 4th and 8th graders performed as well as or significantly better than all other districts, with two exceptions (Miami-Dade and Hillsborough County).

Low-Income Students:

- In grade 4, low-income students in Boston scored significantly higher than the Nation (by 5 points) and Large Cities (by 8 points). Boston's average was also the fourth highest among TUDA districts and was only significantly exceeded by Hillsborough County.
- Among 8th graders, the performance of Boston's low-income students was comparable to the national average and the Large City average. Compared to other TUDA districts, only two had a significantly higher average score (Miami-Dade and Hillsborough County).

Students with Disabilities:

- Students with disabilities in Boston outperformed their peers in Large Cities in grade 4; in grade 8, they had the same average score as their peers in Large Cities. In both grades, students with disabilities in Boston perform as well as their peers nationally. Compared to other TUDA districts, only one had a higher average score in both grades (Hillsborough County).

English Language Learners:

- Boston's English Language Learners (ELLs) in 4th grade scored higher than the national average and higher than their peers in Large Cities; none of the TUDA districts scored significantly higher than Boston.

- ELL students in 8th grade performed as well as their peers across the Nation and in Large Cities. Boston's ELL average was lower than that of 8 TUDA districts, but only Hillsborough County's and Detroit's scores were significantly better.

Performance by Achievement Level:

- In 2011, 62% of Boston's 4th grade students scored at the basic level or above on the reading assessment. Only three TUDA districts had a higher percentage. Boston's performance was also better compared to Large Cities (55%) but lower than the Nation (66%).
- In grade 8, the percentage of students in Boston who performed at or above Basic was 63%, statistically surpassing or equaling the rates of 15 TUDA districts and Large Cities (65%). However, Boston's rate was lower than that of 5 districts and the Nation (75%)..
- In grade 4, Boston made significant improvements in the percentage of students performing at or above Proficient since 2003, with a 10-points increase, compared to 5 points for Large Cities. However, the percentage proficient/advanced in 8th grade remained unchanged across the five assessment years, compared to a significant 4 point increase for Large Cities since 2003.

Performance by Percentile Rank:

- Boston's 4th graders saw a significant and steady improvement since 2003 across all but the lowest quintile. In particular, students performing at the 25th and 50th percentile have made significant gains in the first three NAEP administrations in reading since 2003. By contrast, there have been no significant gains experienced by 8th grade students in any of the quintiles since the 2003 administration.

Mathematics

Boston's Performance over Time:

- Boston's average scores in both grades 4 and 8 have continued to increase or remain constant each year since the district first participated in NAEP/TUDA in 2003.
- In grade 4, though Boston did not see a significant scale score gain since 2009, its gain since 2003 is impressive, totaling 17 points and surpassing the 6-point gain nationally, and 9-point gain experienced by Large Cities. The performance gap with Nation is also significantly smaller (3 points). In 2003, Boston's performance compared to Large Cities was significantly lower: that trend was reversed in 2005 and Boston continues to outperform Large Cities.
- Boston's 8th grade students also experienced significant gains since 2003: the 2011 score was up 20 points, compared to a 7-point increase nationally and a 12-point increase for Large Cities.

Boston's Performance Compared to other TUDA Districts, Large Cities, and the Nation:

- While Boston's average scores were lower than the Nation in both grades 4 and 8 (3-points in grade 4 and 1 point in grade 8), the district performed significantly better than Large Cities: the average score was 6 points higher in grade 4, and 8 points higher in grade 8.
- Of the 21 participating TUDA districts, Boston was one of only six to score significantly higher than Large Cities in both grades 4 and 8.
- Compared to other TUDA districts, Boston's average scores in both grades 4 and 8 were higher than or equal to those of 17 other districts. Only two districts (Austin, and Charlotte) scored higher than Boston in both grades; and one district (Hillsborough County) scored higher than Boston in grade 4.

Performance by Racial/Ethnic Group:

- From 2003 to 2011, students in all racial groups made statistically significant gains in their average scores on the 4th grade test. Black students saw a 14-point gain while Asian, Hispanic, and White students experienced 16-point, 19-point, and 21-point gains respectively.
- The gains made by Boston's 8th grade students between 2003 and 2011 were also statistically significant across all ethnic groups: improvements ranged from 16 points for White students, to 21 points for Black students.
- Despite consistent performance gains for students of all ethnic backgrounds, the gaps in performance between Boston's Asian/White students and Black/Hispanic students persist in both 4th and 8th grade.
- However, in both grades 4 and 8, Boston's Black students significantly outperformed their peers across the nation and in Large Cities. Importantly, **Boston's Black students had the highest scale scores of all TUDA districts in 8th grade**.
- **Boston's Hispanic students in 4th grade also had higher average scores than Hispanic students across the Nation and in Large Cities.** Compared to other TUDA districts, Boston's Hispanic 4th and 8th graders performed as well as or significantly better than all other districts, with only one exception (Houston) in grade 8, and two districts (Hillsborough County and Charlotte) in grade 4.

Low-Income Students:

- In grade 4, low-income students in Boston scored significantly higher than the Nation (by 5 points) and Large Cities (by 7 points). Boston's average was also the second highest (tied with Hillsborough County) among TUDA districts, and not significantly different from Austin's and Charlotte's.
- Among 8th graders, the performance of Boston's low-income students was the second highest of all TUDA districts; higher than the Nation; and higher than the Large City average.

Students with Disabilities:

- In both 4th and 8th grade, students with disabilities in Boston outperformed their peers in Large Cities. Their average score was not significantly different form the national average. Boston's special education students also performed better than most TUDA districts. In particular, Boston's 8th grade students with disabilities had the second highest score among all TUDA districts, the Nation, and Large Cities.

English Language Learners:

- Boston's English Language Learners (ELLs) in both 4th and 8th grade scored significantly higher than their peers across the Nation and in Large Cities. None of the 18 TUDA districts with a sufficiently large ELL student sample had significantly higher averages than Boston's.

Performance by Achievement Level:

- In 2011, 81% of Boston's 4th grade students scored at the basic level or above on the math assessment. Only three TUDA districts had a higher percentage. Boston's performance was also better than Large Cities (74%), and not statistically different from the Nation (82%).
- In grade 8, the percentage of students in Boston who performed at or above Basic was 69%, higher than Large Cities (63%) but 3 points lower than the Nation (72%).
- The percentage of Boston students scoring at or above Proficient in 2011 in both grades 4 and 8 was comparable to or significantly higher than that of Large Cities, and lower than just four TUDA districts.
- In both grades Boston made significant improvements in the percentage of students performing at or above Proficient since 2003. Boston also saw a significant improvement in grade 8 from 2007 to 2011, with a 7-point increase. Since 2003, the percentage of 4th graders who are proficient/advanced increased 21 points, compared to 10 points for large cities; and the percentage proficient/advanced in 8th grade increased 17 points, compared to 10 points for Large Cities.

Performance by Percentile Rank:

- Boston's 4th and 8th graders have experienced significant gains since 2003 across all quintiles. However, there have been no significant gains for any quintile in any grade since 2009.

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OVERVIEW AND BACKGROUND

Developed in 1969, the National Assessment of Educational Progress (NAEP), also referred to as the Nation's Report Card, is the largest nationally representative assessment of what America's students know and can do. It provides a common yardstick for measuring the progress of students' education across the country. While each state has its own unique assessment, NAEP asks the same questions in every state, making state comparisons possible.

In 2001, following discussions between the National Center for Education Statistics (NCES), the National Assessment Governing Board (NAGB), and the Council of the Great City Schools (CGCS), Congress appropriated funds for district-level assessments on a trial basis, similar to the trial for state assessments that began in 1990. As a result, the NAGB passed a resolution approving the selection of urban districts for participation in the Trial Urban District Assessment (TUDA), a special project within NAEP that would make assessment results available at the district level. Representatives of the Council of Great City Schools worked with the staff of NAGB to identify districts to be invited for the trial assessment. Districts were selected based on a number of characteristics, including size, minority concentrations, federal program participation, socioeconomic conditions, and percentages of students with disabilities (SD) and English Language Learners (ELL).

In 2002, five urban school districts participated in NAEP's first Trial Urban District Assessment (TUDA) in reading and writing. In 2003, ten urban districts (including the original five) participated in the TUDA program in reading and mathematics in grades 4 and 8: Atlanta, Boston, Charlotte-Mecklenburg, Chicago, Cleveland, Houston, Los Angeles, New York City, San Diego, and Washington, D.C. (District of Columbia Public Schools-DCPS). In 2005, Austin was added to the group of school systems that participated in the reading, math and science testing. These eleven large urban school districts continued participating in TUDA in 2007. In 2009, seven more districts (Baltimore City, Detroit, Fresno Unified, Jefferson County (KY), Miami-Dade County, Milwaukee, and Philadelphia) joined the TUDA project. For 2011, twenty-one districts, with three new additions (Albuquerque, Dallas and Hillsborough County-FL), were invited by the NAGB to participate in mathematics and reading TUDA assessments at grades 4 and 8 and Science at grade 8.

It should be noted that since 2009, in addition to public-school students, the sampled charter schools were included in the NAEP TUDA results if they were also included in a district's Adequate Yearly Progress (AYP) reports. Additionally, the "Large Cities (LC)" designation refers to public schools located in urban areas with populations of 250,000 or more (as defined by NCES). Comparisons between national, district, and large city results are limited to public school students. In NAEP reports, the category "Nation (public)" does not include Department of Defense or Bureau of Indian Education schools. It should also be noted that among the TUDA districts, ten of the twenty-one consist entirely of schools in cities with a population of 250,000 or more; eleven of them however – Albuquerque, Atlanta, Austin, Charlotte, Cleveland, Dallas, Fresno, Hillsborough (FL), Houston, Jefferson County, Los Angeles and Miami-Dade — also include a number of fourth and eighth grade students enrolled in surrounding suburban or rural areas. Results for these districts include data from all students, both urban and suburban/rural, a fact that

must be kept in mind when comparing their performance to other districts, large cities, or the nation.

This report provides results for Boston's public school students in grades 4 and 8 from the National Assessment of Educational Progress (NAEP) assessment in Reading and in Mathematics. Results are reported by average scale score (reported on a 0-500 scale), and by achievement levels (Basic, Proficient, and Advanced).

An overview of the Reading and Math assessment frameworks is included in Appendix A. Appendix B provides in-depth comparisons of the NAEP and MCAS assessment designs, reporting, and formats. Appendix C presents sample questions from the 2011 fourth and eighth grade NAEP assessments.

2011 NAEP READING

READING: DEMOGRAPHIC CONTEXT

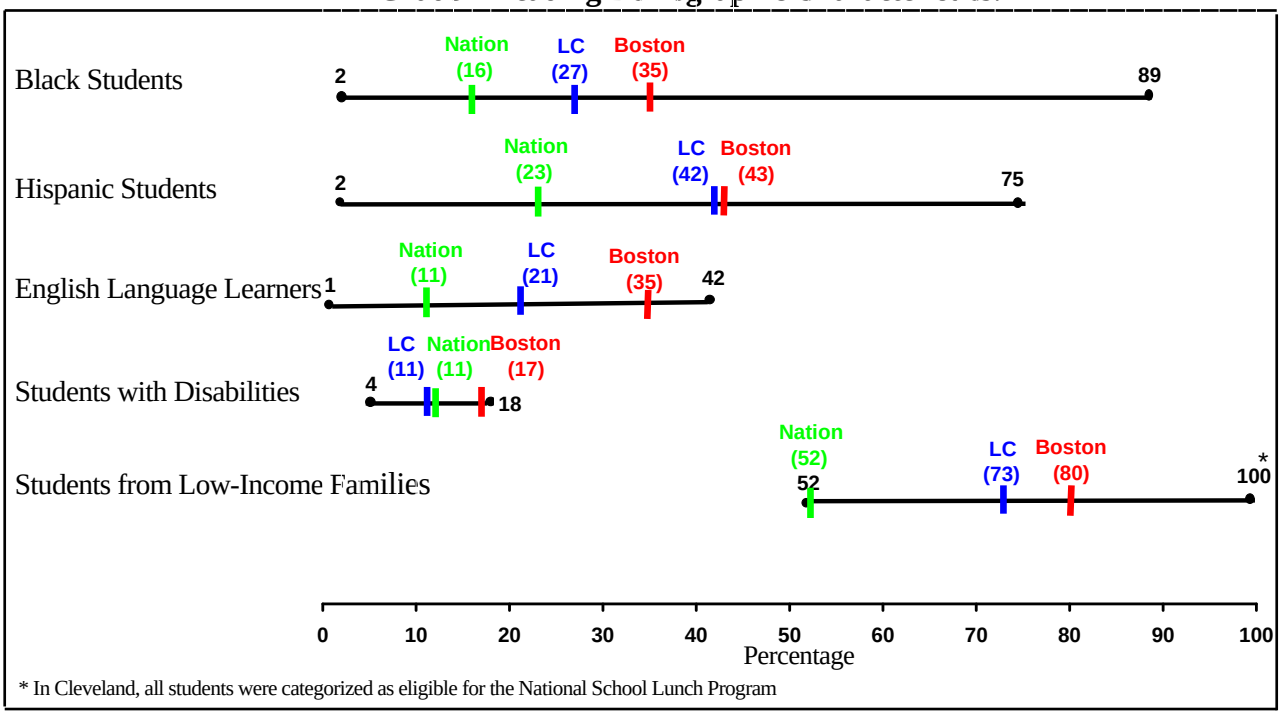
The charts below display the percentage of students who participated in the 2011 TUDA NAEP Reading test by their racial/ethnic identification, disability (SD), English Language Learner (ELL) status, and Low-Income status. The charts display not only Boston's participation rates, but also the Nation's and Large Cities', as well as the TUDA minimums and maximums.

Boston's percentages of Black and Hispanic students in both grades 4 and 8 fall in the middle range of the other TUDA districts. However, almost 80% of students in Boston receive a free/reduced-price lunch, far larger than the national average (about 50%) and Large Cities (about 70%). **Boston also has very high participation rates for students with disabilities and English Language Learners, particularly at grade 4, compared to other TUDA districts**. These differences are important to consider in comparing results across jurisdictions.

In addition, because results are based on samples rather than entire populations, examining statistical significance is essential in determining differences across groups.

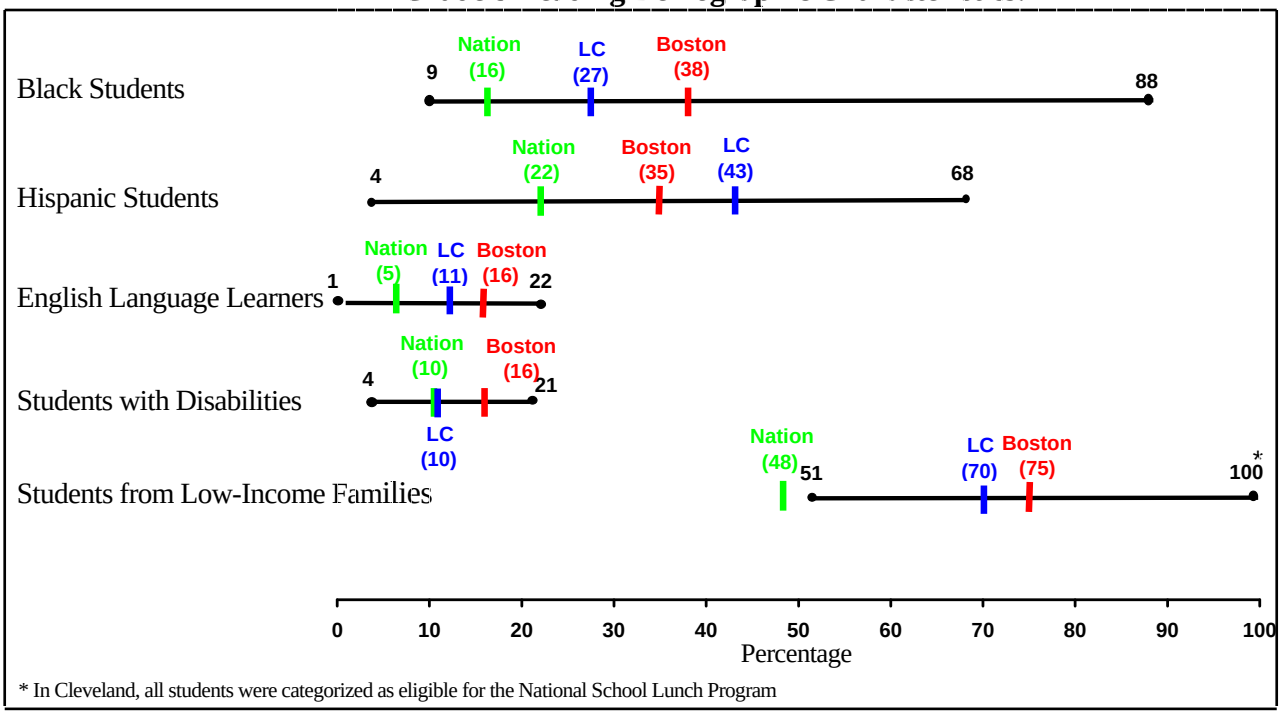
Distribution of Selected Student Groups for TUDA Districts

Grade 4 Reading Demographic Characteristics:



* In Cleveland, all students were categorized as eligible for the National School Lunch Program

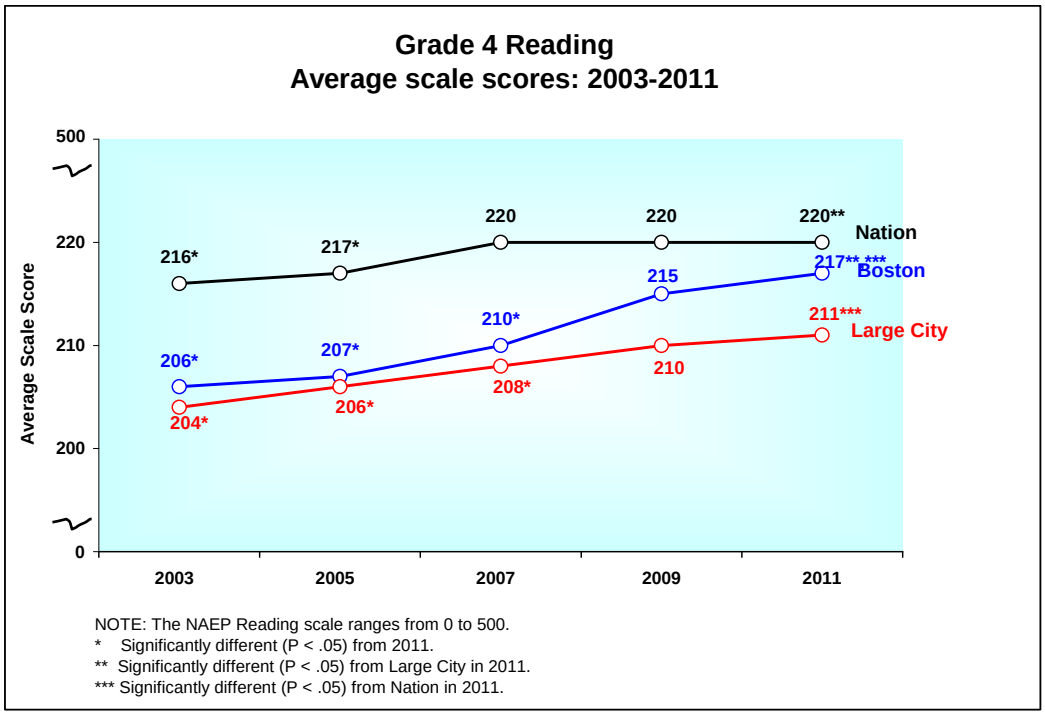
Grade 8 Reading Demographic Characteristics:



* In Cleveland, all students were categorized as eligible for the National School Lunch Program

(1) Average Reading Scale Scores Over Time: 2003 - 2011

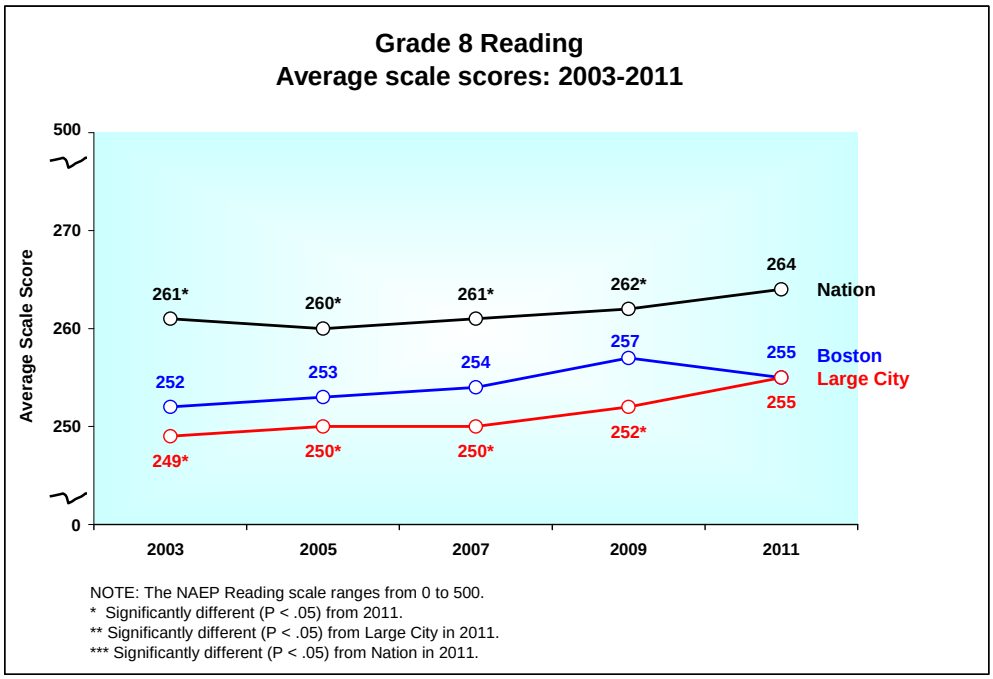
Grade 4



- Boston's 4th grade reading average score in 2011 was **significantly higher than in the first three administrations** of the NAEP, from 2003 to 2007.
- While the Nation's average score remained unchanged since 2007, Boston's average scale score in 2011 was up 7 points (217), a significant gain since 2007. **Boston's gain since 2003 is even more impressive, totaling 11 points and significantly surpassing the 4-point gain nationally and 7-point gain experienced by large cities, indicating Boston's 4th graders have experienced a higher growth in reading performance resulting in a significantly narrower gap with the Nation.**
- Although Boston's performance in 2011 was 3 points lower than the national average, it was **significantly better compared to Large Cities**[*].

[*] Large Cities include students from all cities in the nation with populations of 250,000 or more including the participating districts.

Grade 8



- Boston's 8th grade students had an average score of 255, the same as that of Large Cities; it was 9 points lower than the national average, but the difference was not statistically significant.
- Boston's 8th grade average score in 2011 was not significantly different from any of the four previous administrations; by contrast, the national and Large City averages have increased significantly since 2003 (3 points nationally and 6 points in Large Cities).

(2) 2011 Reading Scale Score Comparisons Across Jurisdictions

Large City vs. TUDA Districts

2011 Average Scale Score Comparisons - Large City (LC) vs TUDA Districts

Grade Level	Albuquerque	Atlanta	Austin	Baltimore City	BOSTON	Charlotte	Chicago	Cleveland	Dallas	Detroit	Dist. of Columbia(DCPS)	Fresno	Hillsborough County (FL)	Houston	Jefferson County (KY)	Los Angeles	Miami-Dade	Milwaukee	N.Y.C.	Philadelphia	San Diego
Grade 4	=	=	↑	↓	↑	↑	↓	↓	↓	↓	↓	↓	↑	=	↑	↓	↑	↓	↑	↓	↑
Grade 8	=	=	↑	↓	=	↑	=	↓	↓	↓	↓	↓	↑	↓	↑	↓	↑	↓	=	↓	=

Relative to each district listed at the top of the figure:

↑ : That Distict had significantly (P < .05) higher average scale score than Large City

= : No significant difference between that District and Large City

↓ : That District had significantly (P < .05) lower average scale score than Large City

- Of the 21 participating TUDA districts, Boston was one of eight to score significantly higher than the Large City average in grade 4; in grade 8, Boston's score equaled the Large City average.

Boston's scale scores for all students as well as for student subgroups are provided in Appendix D. Scale scores for all TUDA districts are provided in appendix E.

Boston vs. TUDA Districts

2011 Average Scale Score Comparisons - Boston vs TUDA Districts

Grade Level	LARGE CITY	Albuquerque	Atlanta	Austin	Baltimore City	Charlotte	Chicago	Cleveland	Dallas	Detroit	Dist. of Columbia (DCPS)	Fresno	Hillsborough County (FL)	Houston	Jefferson County (KY)	Los Angeles	Miami-Dade	Milwaukee	N.Y.C.	Philadelphia	San Diego
Grade 4	↑	↑	↑	↓	↑	↓	↑	↑	↑	↑	↑	↑	↓	↑	↓	↑	↓	↑	=	↑	=
Grade 8	=	=	=	↓	↑	↓	=	↑	↑	↑	↑	↑	↓	=	↓	↑	↓	↑	=	↑	=

Relative to each district listed at the top of the figure:

↑ : Boston had significantly (P < .05) higher average scale score than that District

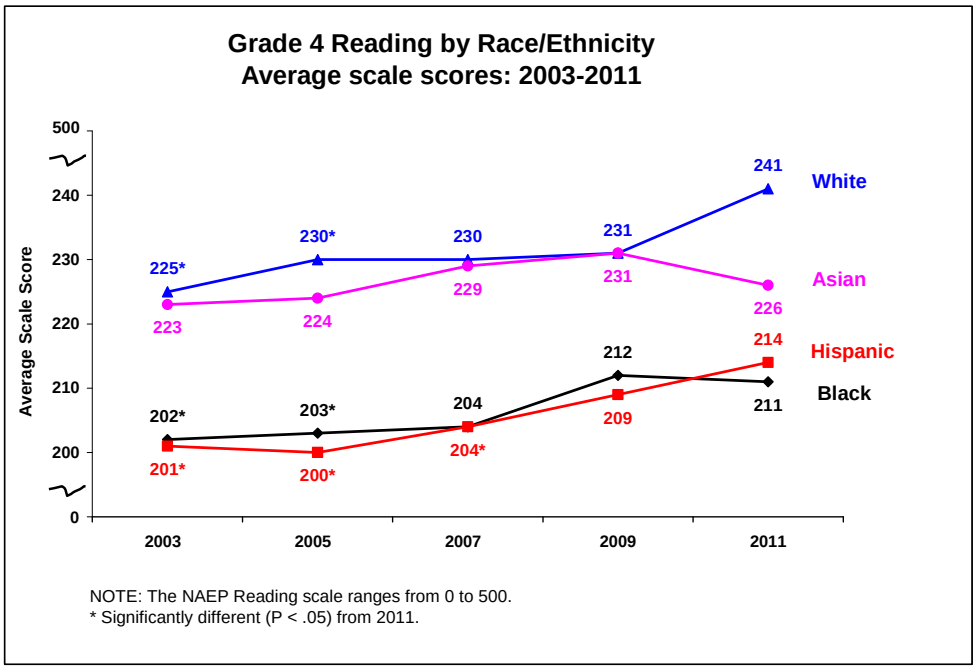
= : No significant difference between Boston and that District

↓ : Boston had significantly (P < .05)lower average scale score than that District

- In addition to its higher scores compared to Large Cities, Boston's performance stands out in comparison to other TUDA districts: in **both** grades 4 and 8, Boston scored higher than or equal to all but five districts (Austin, Charlotte, Hillsborough, Jefferson, and Miami-Dade).

(3) Average Reading Scale Scores by Race/Ethnicity

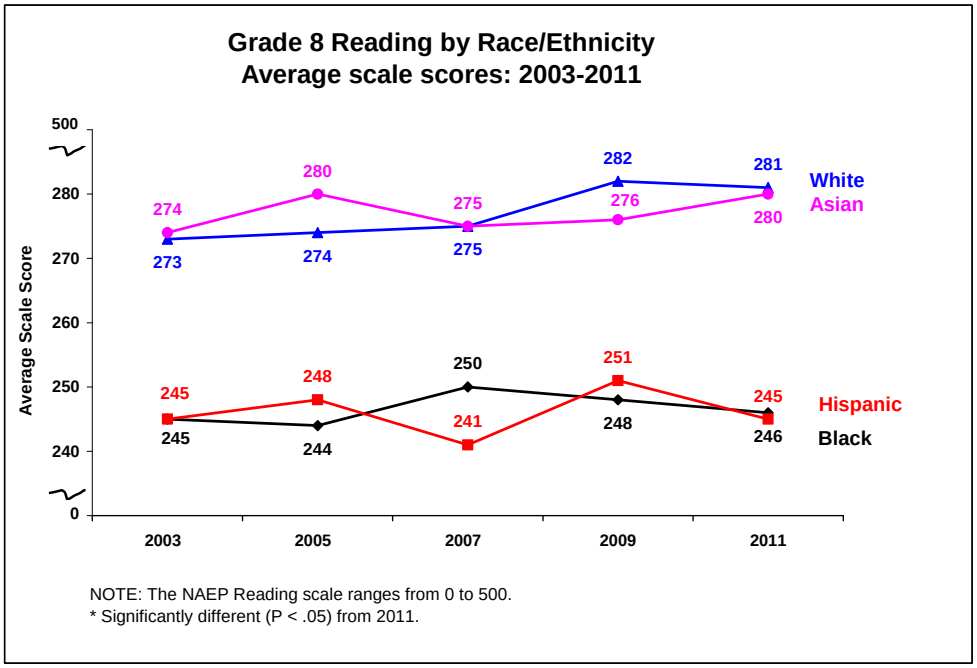
Grade 4: 2003-2011



NOTE: The NAEP Reading scale ranges from 0 to 500.
* Significantly different (P < .05) from 2011.

- Compared to 2009, the average scores for White and Hispanic students rose 10 and 5 points respectively; Asian and Black students saw a 5 and 1 point drop respectively, although these changes were not statistically significant.
- From 2003 to 2011, White, Hispanic, and Black students have experienced statistically significant gains, with 16, 13, and 9-point gains respectively. Asian students have also seen a 3-point increase in that period, though the change was not statistically significant.

Boston's Grade 8 Students: 2003-2011

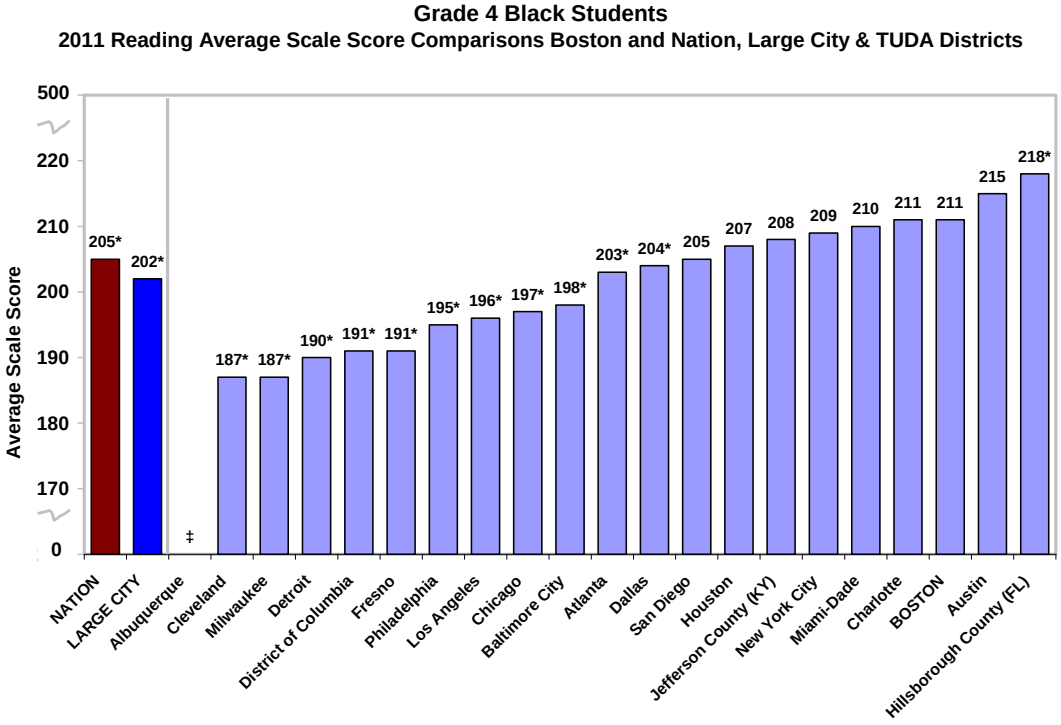


NOTE: The NAEP Reading scale ranges from 0 to 500.
* Significantly different (P < .05) from 2011.

- Reading scores for Boston's 8th grade students between 2009 and 2011 declined for all ethnic groups except for Asian students, who saw a 2 point gain. Though not statistically significant, the drops ranged from 1 point for White students, to 6 points for Hispanic students. Since 2003, no racial group has experienced a statistically significant gain on the 8th grade Reading test.
- The gaps in performance between Boston's White/Asian students and Black/Hispanic students persist in both 4th and 8th grade.

Appendix F provides detailed information on the performance of students by racial group.

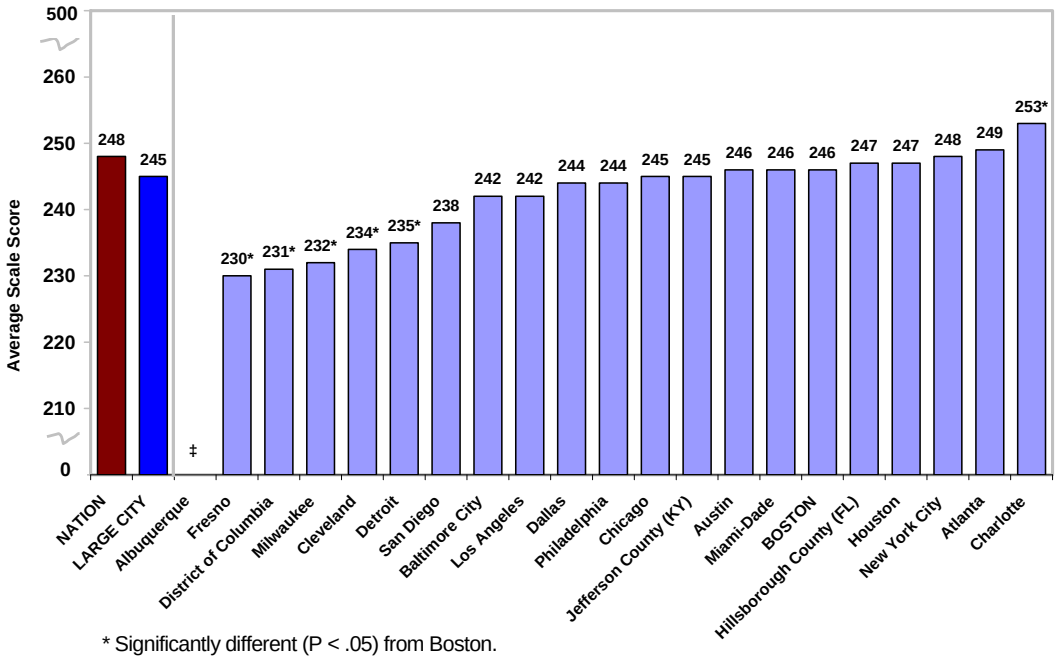
Boston's Black Students Compared to the Nation, Large Cities, and other TUDA Districts



* Significantly different (P < .05) from Boston.

- Despite continued disparity in the performance of Black students compared to their White and Asian peers, the district's Black students outperformed their peers across the nation: 4th graders in Boston had an average score of 211, compared to the national average of 205. Similarly, Black students in Boston had an average score 9 points higher than the average for Large Cities. Boston's average score for Black students was also the third highest among the TUDA districts and not significantly different from that of Austin, but significantly lower than Hillsborough County's.

Grade 8 Black Students
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

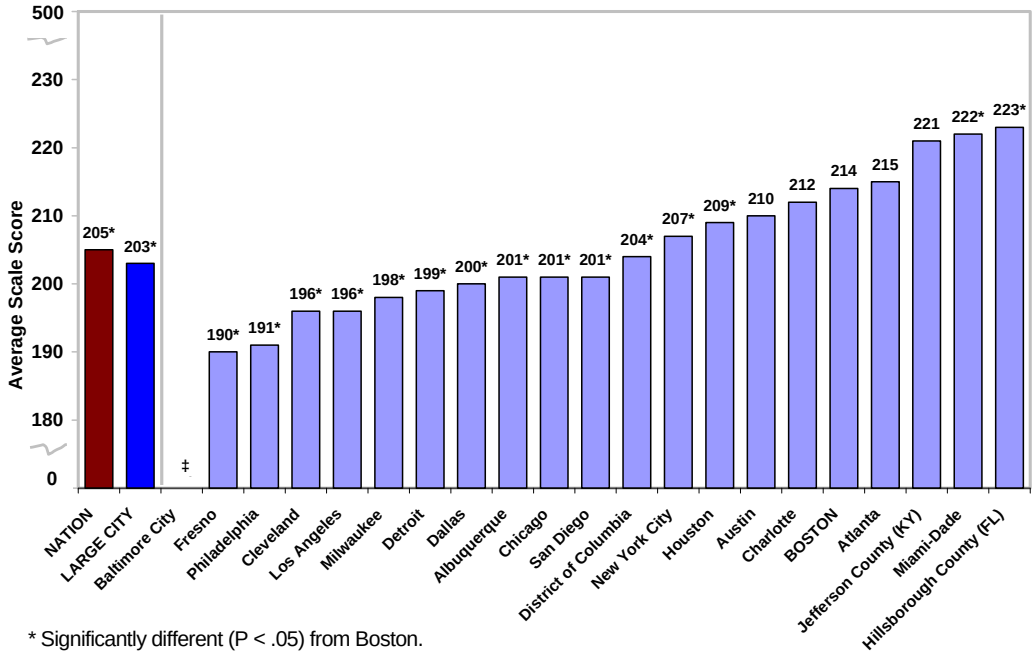


* Significantly different (P < .05) from Boston.

- In Grade 8, the performance of Boston's Black students was about the same as their peers across the Nation and in Large Cities. Among the TUDA districts, Boston's Black students performed as well as or significantly better than all other districts, with only one exception (Charlotte).

Boston's Hispanic Students Compared to the Nation, Large Cities, and other TUDA Districts

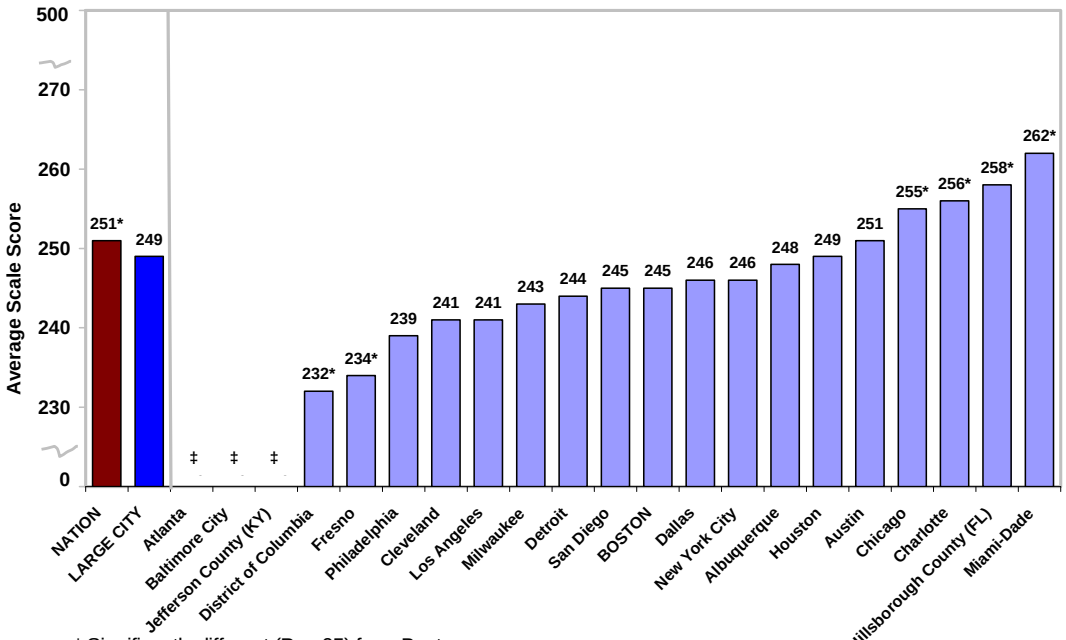
Grade 4 Hispanic Students
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- Boston's Hispanic students in 4th grade also had higher average scores (214) than Hispanic students across the Nation (205) and in Large Cities (203). Among the participating TUDA districts, only Miami-Dade and Hillsborough County's Hispanic 4th graders scored significantly higher than Boston's.

Grade 8 Hispanic Students
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



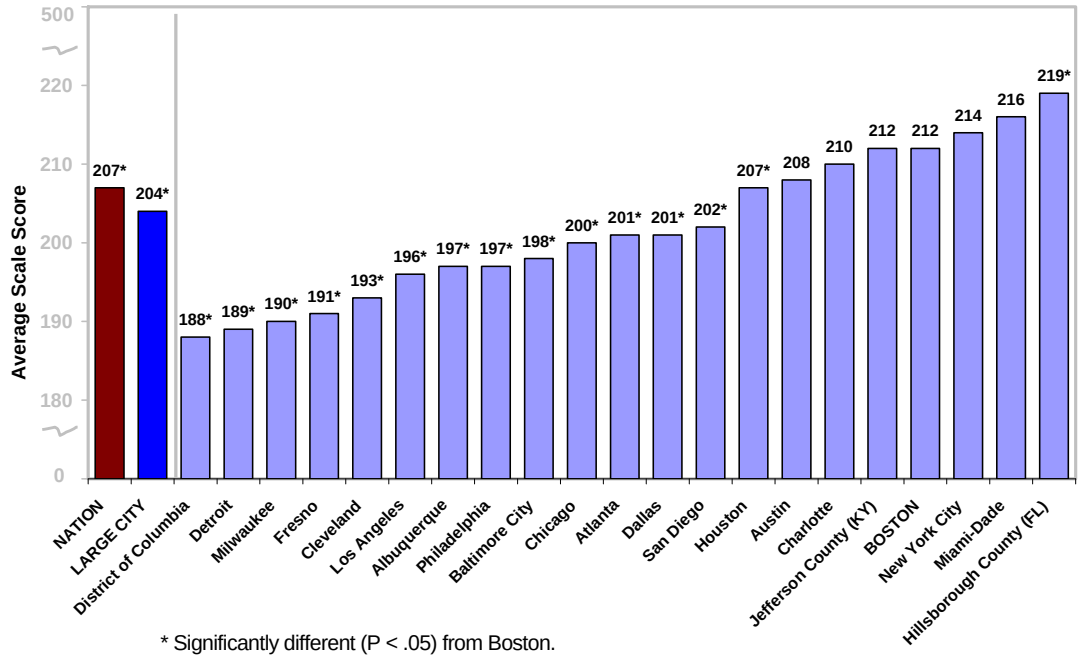
* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- In Grade 8, Boston's Hispanic students performed as well as their peers in Large Cities but significantly lower than Hispanic students across the Nation. Among TUDA districts with a sufficiently large sample of Hispanic students, four districts outperformed Boston (Chicago, Charlotte, Hillsborough County and Miami-Dade).

(4) Average Reading Scale Scores for Other Student Groups

Students Eligible for Free/Reduced Lunch

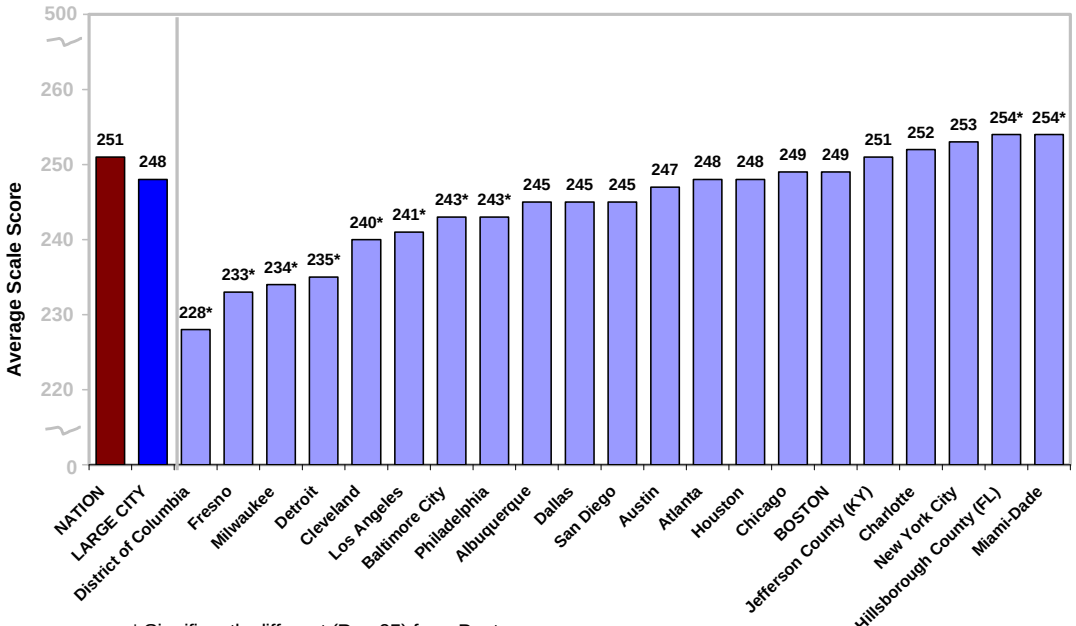
Grade 4 Low-Income Students
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.

- In grade 4, low-income students in Boston scored significantly higher than the Nation (by 5 points) and Large Cities (by 8 points). Boston's average was also the fourth highest among the TUDA districts and was only significantly exceeded by Hillsborough County.

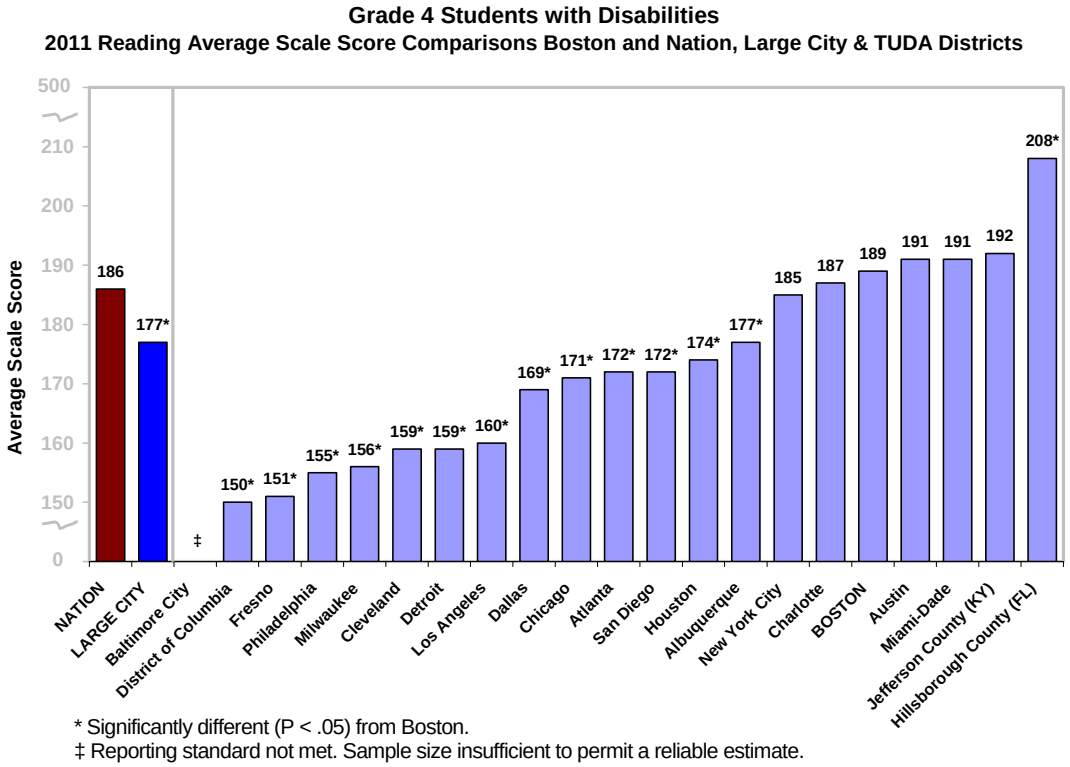
Grade 8 Low-Income Students
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.

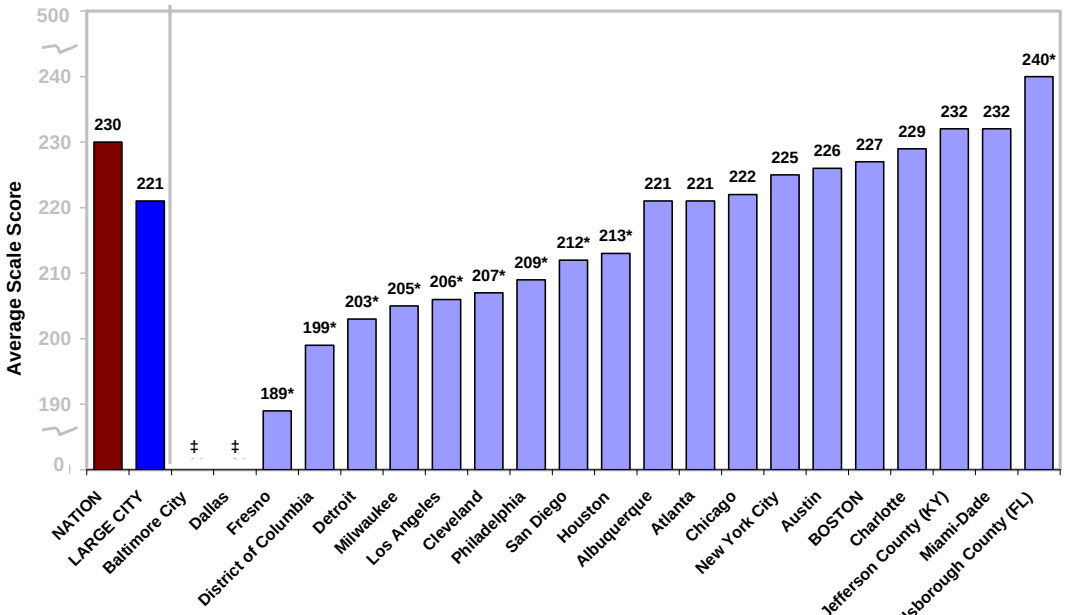
- Among 8th graders, Boston's low-income students performed as well as their peers across the Nation and in Large Cities. Compared to other TUDA districts, only Hillsborough County and Miami-Dade had a significantly higher average.

Students with Disabilities



- In 4th grade, students with disabilities in Boston outperformed their peers in Large Cities. Their average score was not significantly different form the national average. Boston's special education students performed equally well or better than all but one district (Hillsborough County).

Grade 8 Students with Disabilities
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

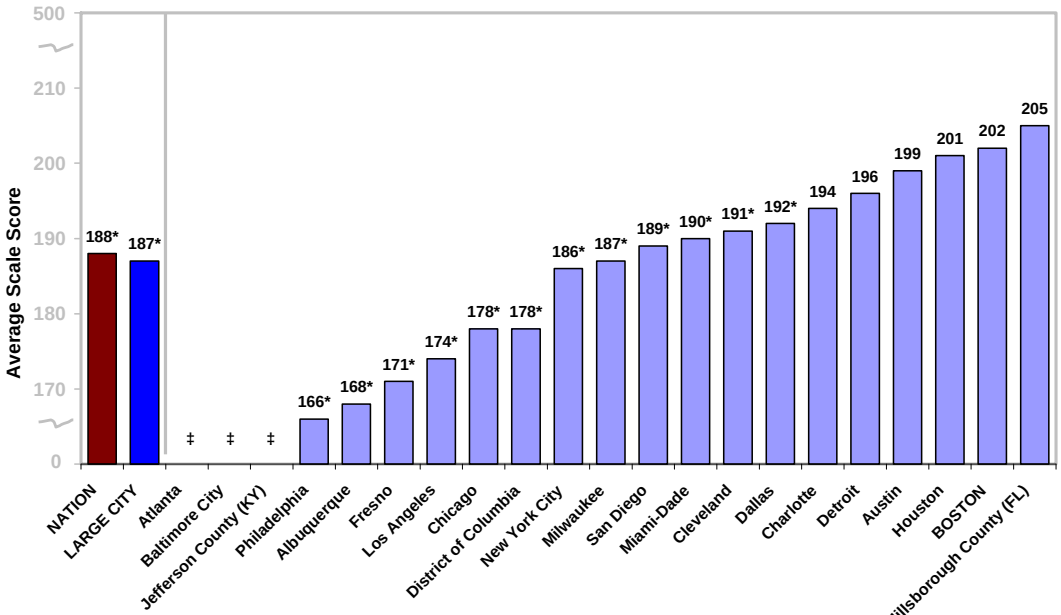


* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- In Grade 8, the average score for students with disabilities in Boston was not significantly different from the national average or Large Cities. Compared to other TUDA districts, only one district had a higher average.

English Language Learners

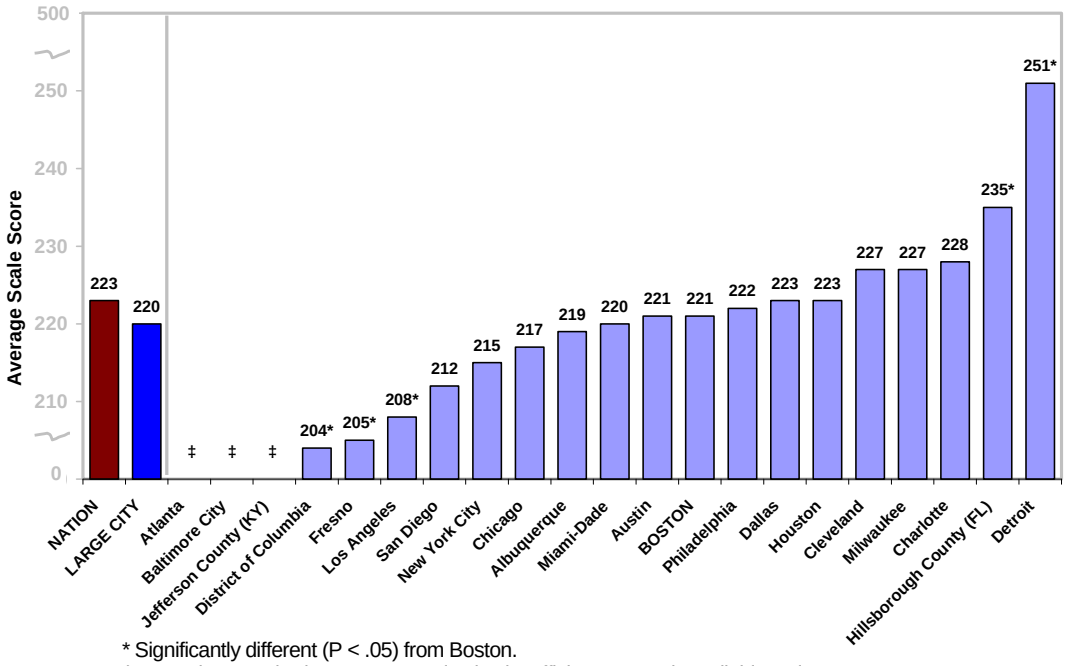
Grade 4 English Language Learners
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- Boston's 4th grade English Language Learners (ELLs) outperformed their peers across the Nation and in Large Cities. Compared to other TUDA districts, Boston's average score was statistically equal to the highest score.

Grade 8 English Language Learners
2011 Reading Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

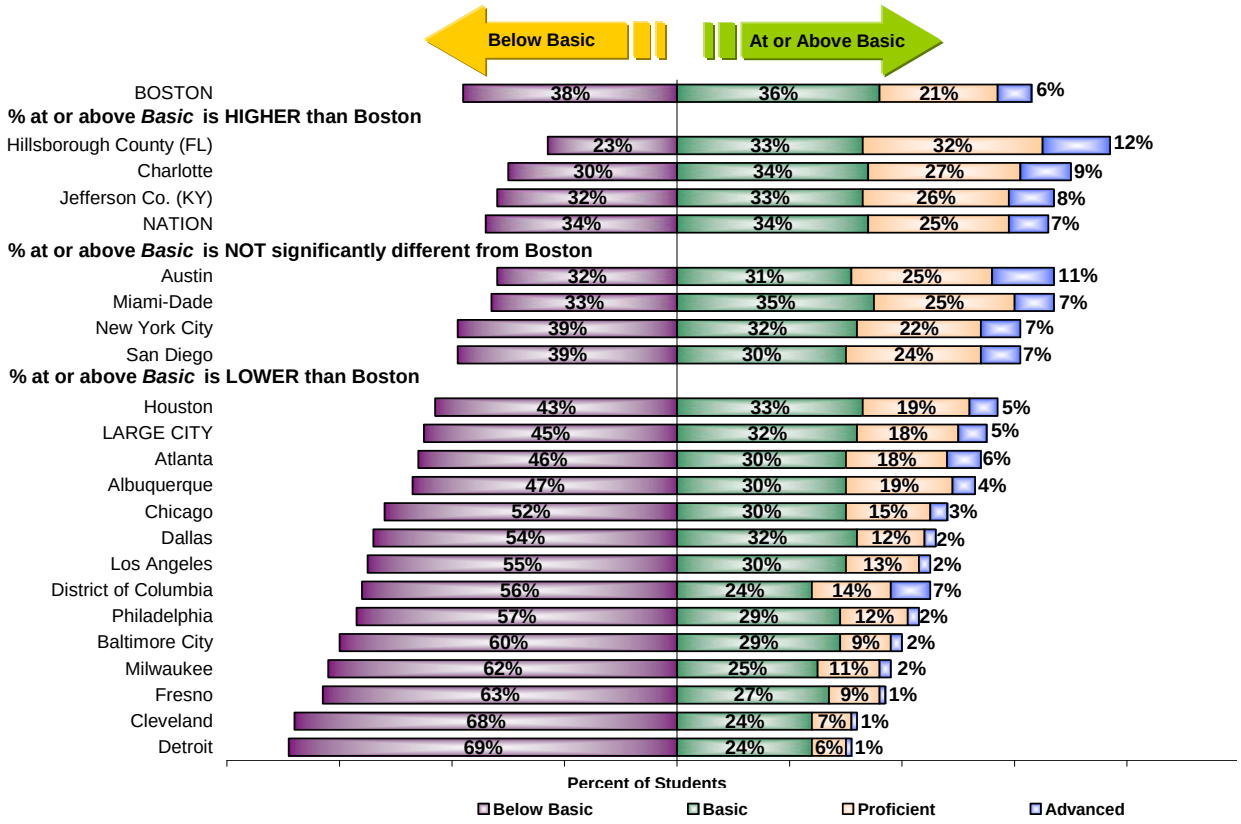


* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- The average score for ELL students in 8th grade was comparable to that of their peers in Large Cities and across the Nation. Boston's ELL average was statistically lower than just two districts (Hillsborough County and Detroit).

(5) Reading Performance by Achievement Level: Boston vs. Nation, Large Cities, and TUDA Districts

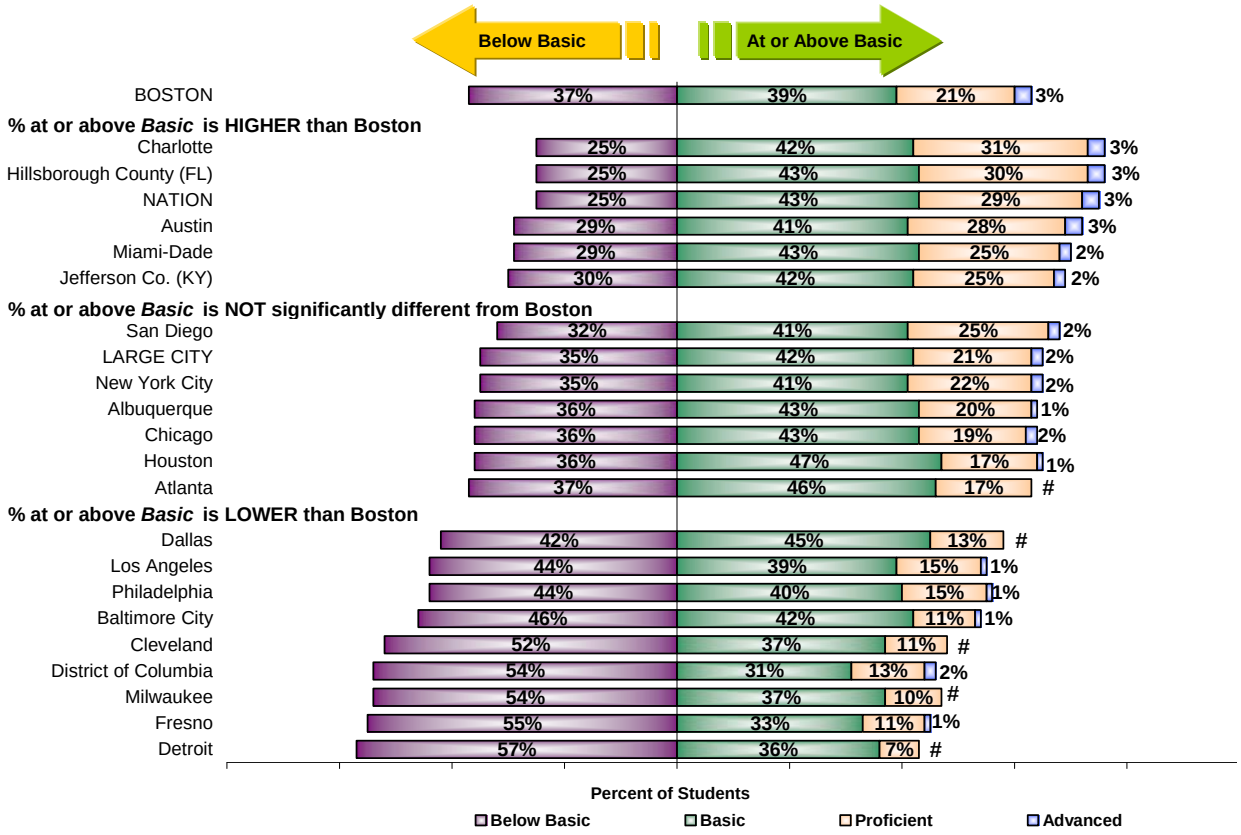
Grade 4 Reading Percentage of Students Scoring at or Above Basic:



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

- In 2011, 62% of Boston's 4th grade students scored at or above the basic level on the Reading assessment. This percentage was significantly higher than or equal to that in all but three other TUDA districts. Boston's performance was significantly lower than the national average (66%). However, a higher percentage of Boston students performed at the Basic level or above compared to students in Large Cities (55%).

Grade 8 Reading Percentage of Students Scoring at or Above Basic:



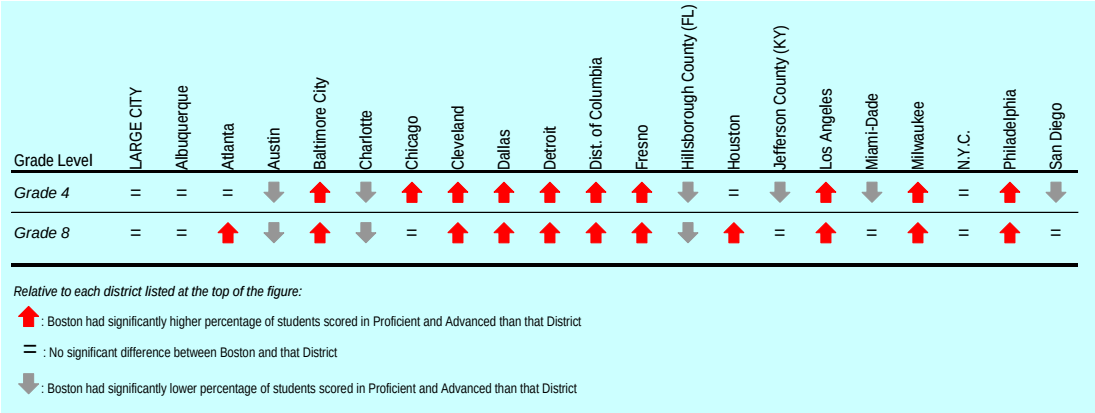
Estimate rounds to zero.
NOTE: Detail may not sum to totals because of rounding.

- In grade 8, the percentage of students in Boston who performed at or above Basic (63%) was significantly higher than or equal to 15 other TUDA districts and Large Cities (65%). Boston's percentage was significantly lower compared to the Nation (75%) and five other TUDA districts.

Reading Percentage of Students Scoring at or Above Proficient

2011 Performance

Percentage of Students Scoring at or Above Proficient in 2011 Reading: Boston vs. TUDA Districts



- In 2011, Boston's 4th grade proficient/advanced rate (26%) was significantly higher than that of ten TUDA districts. Boston's rate was about the same as that of Large Cities, and lower than that of five districts (Austin, Charlotte, Hillsborough, Jefferson, Miami-Dade and San Diego).
- Boston's 8th graders performed about the same as their peers in Large Cites with a proficient/advanced rate of 24%. Compared to all the other TUDA districts, Boston's performance was lower than just three districts (Austin, Charlotte and Hillsborough).

Performance Over Time: 2003 - 2011

Percentage of Students Scoring at or Above Proficient in Reading, 2003-2011

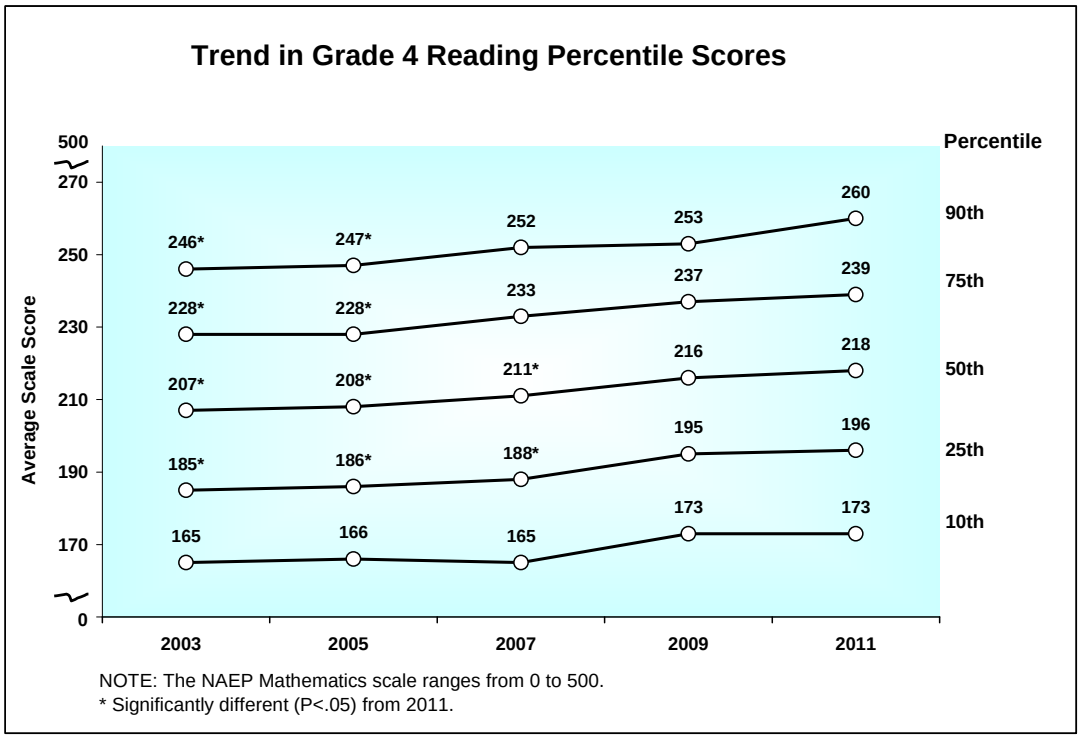
	Grade 4					Grade 8				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
LARGE CITY	*19***	*20***	*22***	*23*	*24*	*19***	*20***	*20***	*21*	*23*
Albuquerque	--	--	--	--	24	--	--	--	--	22
Atlanta	14**	17**	18**	22	24	11**	12**	13**	17	17*
Austin	--	28**	30	32	36*	--	27	28	30	30*
Baltimore	--	--	--	12	11*	--	--	--	10	12*
Boston	**16****	**16****	**20****	**24**	**26**	**22**	**23**	**22**	**23**	**24**
Charlotte	31	33	35	36	36*	30	29	29**	28**	34*
Chicago	14**	14	16	16	18*	15**	17	17	17	21
Cleveland	9	10	9	8	8*	10	10	11	10	11*
Dallas	--	--	--	--	14*	--	--	--	--	13*
Detroit	--	--	--	5	7*	--	--	--	7	7*
District of Columbia	10**	11**	14**	18	20*	10**	12**	12	14	15*
Fresno	--	--	--	12	11*	--	--	--	12	12*
Hillsborough County (FL)	--	--	--	--	44*	--	--	--	--	32*
Houston	18**	21	17**	19	24	14**	17	18	18	18*
Jefferson County	--	--	--	30	35*	--	--	--	26	27*
Los Angeles	11**	14	13	13	15*	11**	13**	12**	15	16*
Miami-Dade	--	--	--	31	32*	--	--	--	28	28*
Milwaukee	--	--	--	12	13*	--	--	--	12	10*
N.Y.C.	22**	22**	25**	29	29*	22	20	20	21	24
Philadelphia	--	--	--	11	13*	--	--	--	15	16*
San Diego	22**	22**	25**	29	31*	20**	23	23	25	27

* Significantly different (P < .05) from Large City in 2011.
** Significantly different (P < .05) from 2011.

- The percentage of students scoring at or above Proficient in reading in 2011 for Boston was comparable to that of Large Cities in both grades 4 and 8.
- In grade 4, Boston made significant improvements in the percentage of students performing at or above Proficient since 2003 (10-point gain for Boston, compared to a 5-point gain for Large Cities). However, the percentage of Boston's 8th graders scoring at or above Proficient in 2011 was about the same as that in the previous four assessment years; by contrast, the Large Cities rate increased by 4 points.

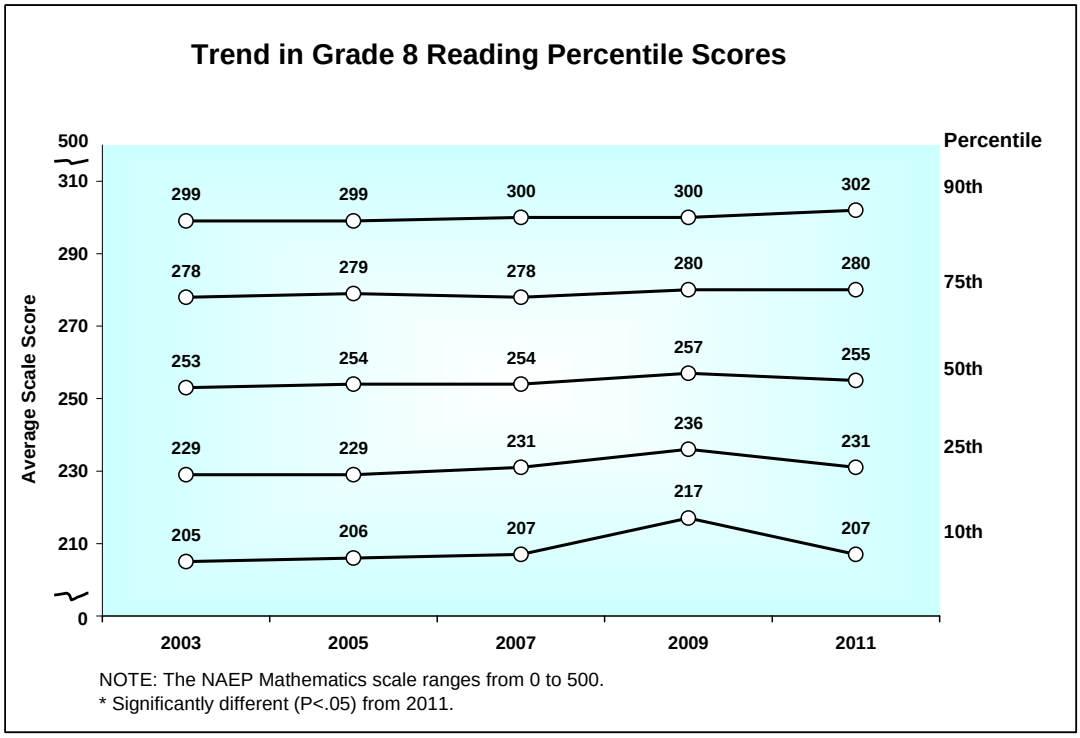
(6) Reading Performance by Percentile Rank

Grade 4



- Among Boston's 4th graders, significant improvements were observed since 2003 and 2005 for students at all quintiles, except for those in the lowest 10th percentile: here, the 8-point gain since 2003 is not statistically significant.

Grade 8



- For 8th graders, there have been no statistical gains for students at any quintile compared to 2003.

2011 NAEP MATHEMATICS

MATHEMATICS: DEMOGRAPHIC CONTEXT

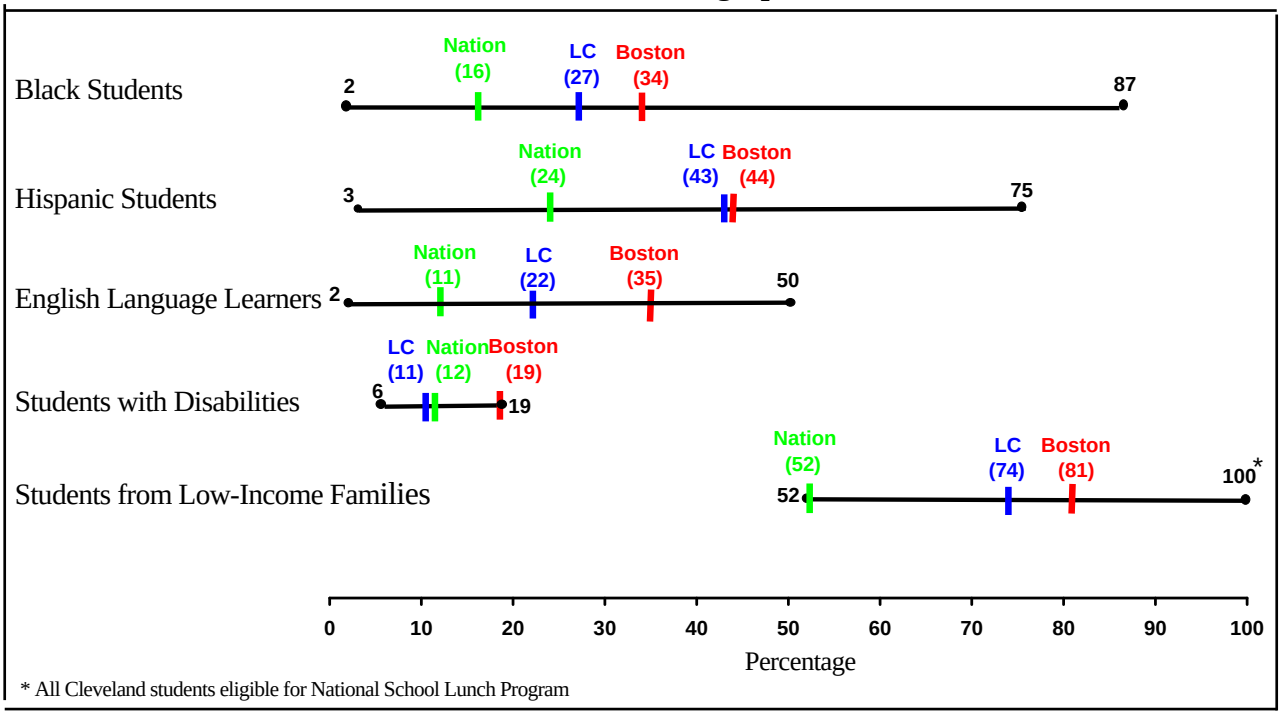
The charts below display the percentage of students who participated in the 2011 TUDA NAEP Math test by their racial/ethnic identification, disability, English Language Learner status, and Low-Income status. The charts display not only Boston's participation rates, but also the Nation's and Large Cities', as well as the TUDA minimums and maximums.

In both grades 4 and 8, Boston's percentages for Black and Hispanic students fall in the middle range of the other TUDA districts. However, about 80% of students in Boston receive a free/reduced-price lunch, far larger than the national average (about 50%) and higher than Large Cities (about 70%). Compared to other TUDA districts, the participation rates of English Language Learners are also very high for Boston. **Boston also has the highest participation rates for students with disabilities in grade 4 compared to other TUDA districts.** These differences are important to consider in comparing results across jurisdictions.

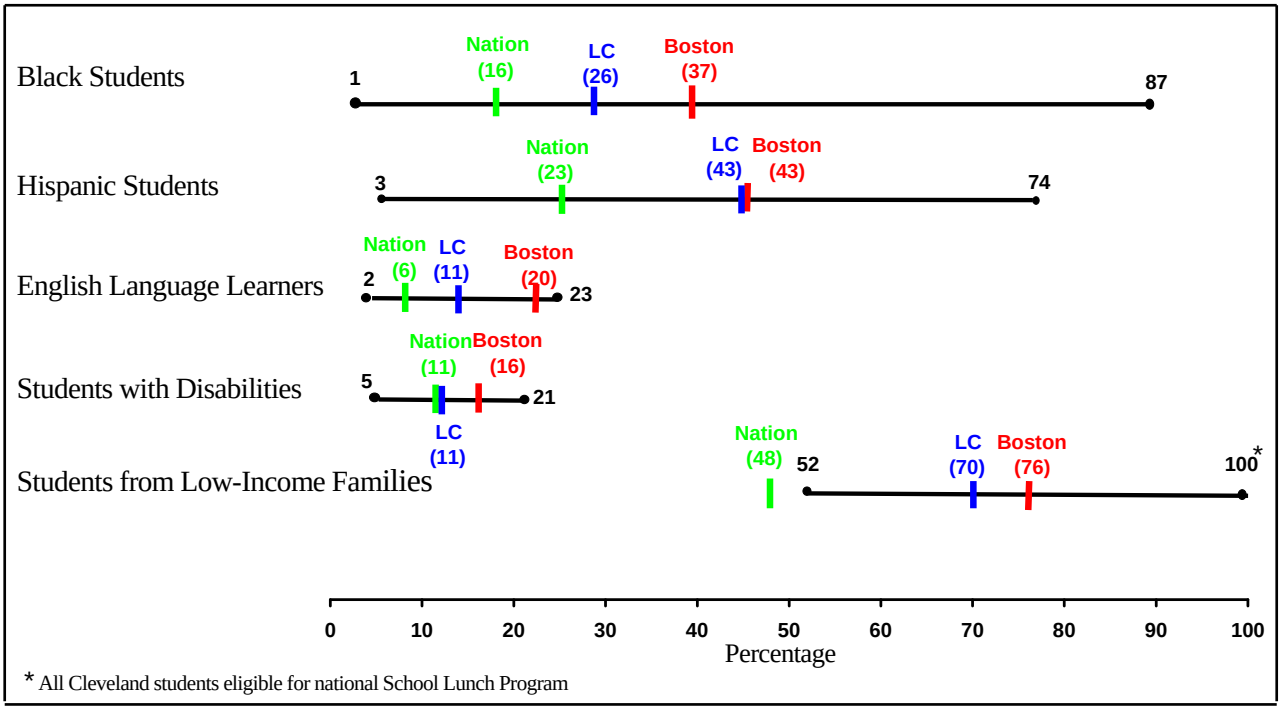
In addition, because results are based on samples rather than entire populations, examining statistical significance is essential in determining differences across groups.

Distribution of Selected Student Groups for TUDA Districts

Grade 4 Mathematics Demographic Characteristics:



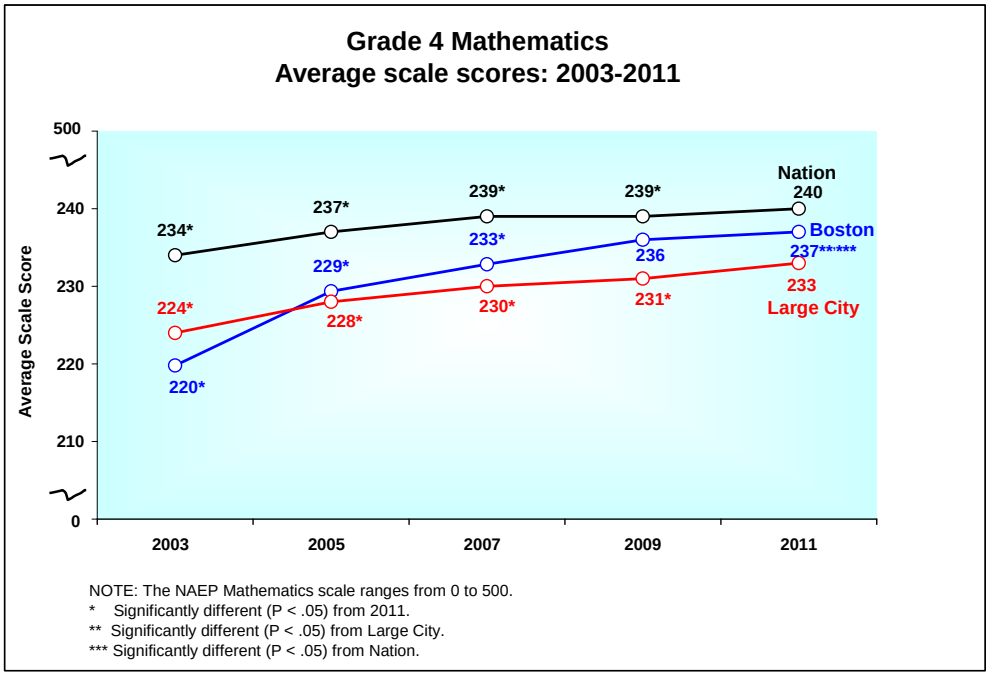
Grade 8 Mathematics Demographic Characteristics:



* All Cleveland students eligible for national School Lunch Program

(2) Average Mathematics Scale Scores Over Time: 2003 - 2011

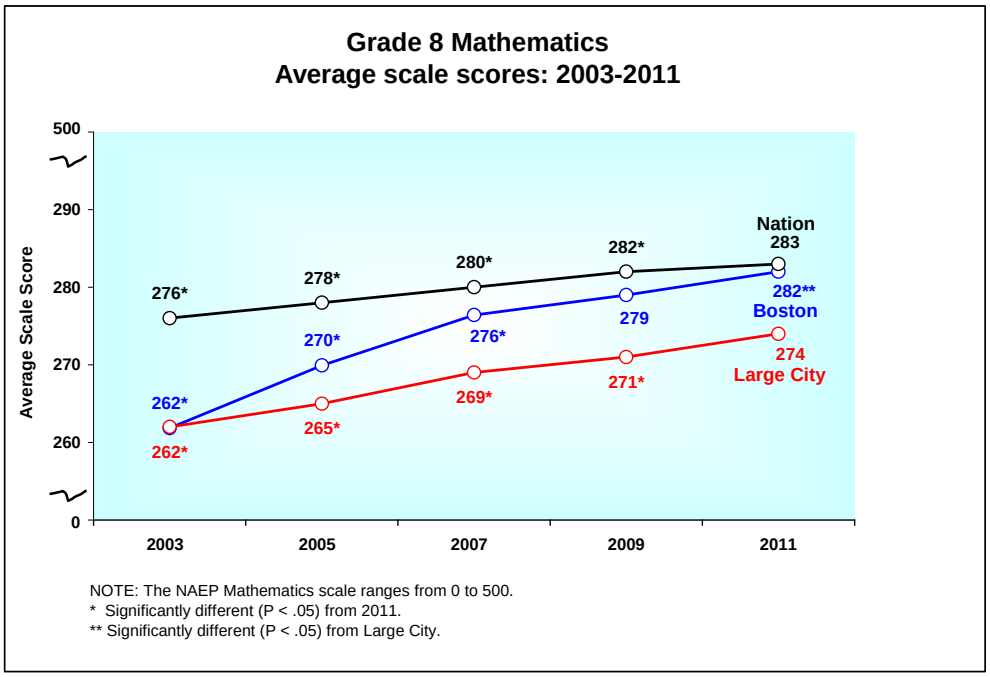
Grade 4



- Boston's average score in 2011 was **significantly higher than in the first three administrations** of the NAEP, beginning in 2003.
- **Boston has made an impressive gain since 2003, totaling 17 points and surpassing the 6-point gain nationally, as well as the 9-point gain experienced by Large Cities.**
- Although Boston's performance in 2011 was 3 points lower than the national average, it was **significantly better compared to Large Cities**[*].

[*] Large Cities include students from all cities in the nation with populations of 250,000 or more including the participating districts.

Grade 8



- In 2011, Boston's 8th grade students had an average score **significantly higher (8 points) than the average for Large Cities and not significantly different from the national average**.
- Boston's 8th grade average score in 2011 was significantly higher than in the first three administrations, with a 20-point gain since 2003 (compared to a 7-point increase nationally and a 12-point increase for Large Cities).
- Since 2003, the math performance of Boston's 8th graders has steadily increased, surpassing the large City gains and almost eliminating the gap with the Nation.

Large City vs TUDA Districts

2011 Average Scale Score Comparisons - Large City (LC) vs TUDA Districts

Grade Level	Albaquerque	Atlanta	Austin	Baltimore City	BOSTON	Charlotte	Chicago	Cleveland	Dallas	Detroit	Dist. of Columbia	Fresno	Hillsborough Cnty (FL)	Houston	Jefferson County (KY)	Los Angeles	Miami-Dade	Milwaukee	N.Y.C.	Philadelphia	San Diego
Grade 4	=	↓	↑	↓	↑	↑	↓	↓	=	↓	↓	↓	↑	↑	↑	↓	↑	↓	=	↓	↑
Grade 8	=	↓	↑	↓	↑	↑	↓	↓	=	↓	↓	↓	↑	↑	=	↓	=	↓	=	↓	↑

Relative to each district listed at the top of the figure:

↑ : That Distict had significantly (P < .05) higher average scale score than Large City

= : No significant difference between that District and Large City

↓ : That District had significantly (P < .05) lower average scale score than Large City

- Of the 21 participating TUDA districts, Boston was one of only six to score significantly higher than Large Cities in **both** grades 4 and 8.

Boston's scale scores for all students as well as for student subgroups are provided in Appendix D. Scale scores for all TUDA districts are provided in appendix E.

Boston vs. TUDA Districts

2011 Average Scale Score Comparisons - Boston vs TUDA Districts

Grade Level	LARGE CITY	Albaquerque	Atlanta	Austin	Baltimore City	Charlotte	Chicago	Cleveland	Dallas	Detroit	Dist. of Columbia	Fresno	Hillsborough Cnty (FL)	Houston	Jefferson County (KY)	Los Angeles	Miami-Dade	Milwaukee	N.Y.C.	Philadelphia	San Diego
Grade 4	↑	=	↑	↓	↑	↓	↑	↑	↑	↑	↑	↑	↓	=	=	↑	=	↑	=	↑	=
Grade 8	↑	↑	↑	↓	↑	↓	↑	↑	↑	↑	↑	↑	=	=	↑	↑	↑	↑	↑	↑	=

Relative to each district listed at the top of the figure:

↑ : Boston had significantly (P < .05) higher average scale score than that District

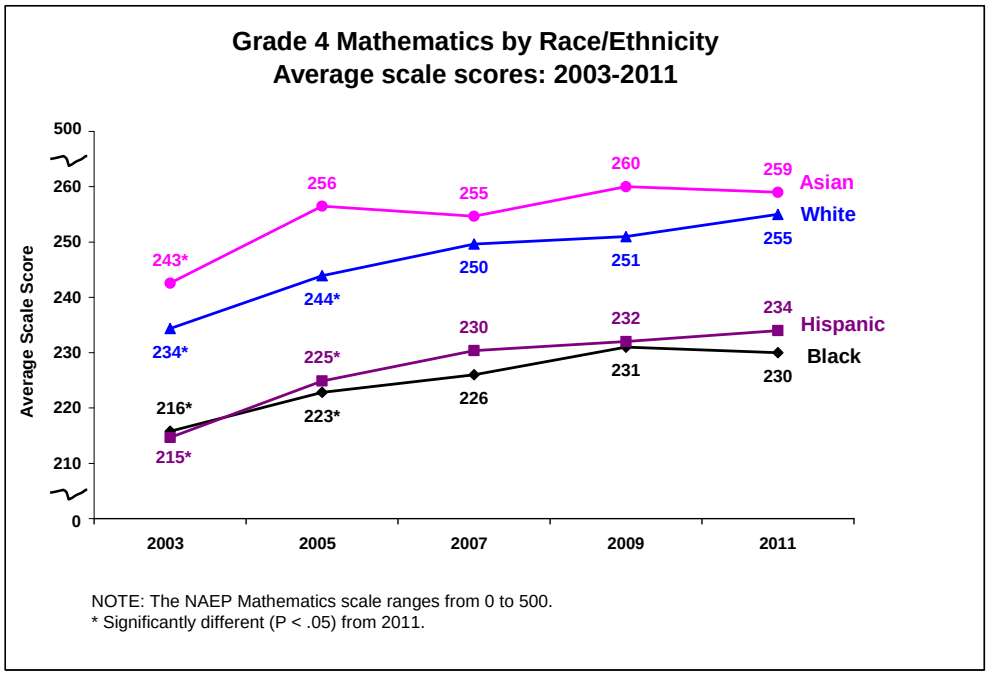
= : No significant difference between Boston and that District

↓ : Boston had significantly (P < .05)lower average scale score than that District

- In addition to its higher scores compared to Large Cities, Boston's performance stands out in comparison to other TUDA districts: in both grades 4 and 8, average scale scores were higher than or equal to all except three districts. Charlotte and Austin scored higher than Boston in both grades 4 and 8 Mathematics; Hillsborough scored higher in grade 4.

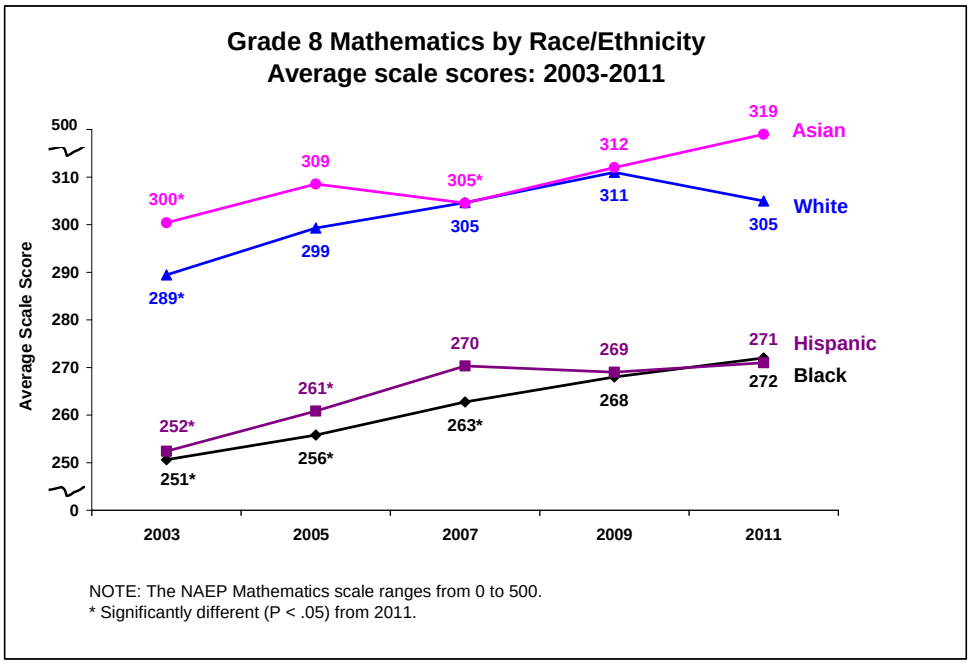
(3) Average Mathematics Scale Scores by Race/Ethnicity

Grade 4: 2003-2011



- From 2003 to 2011, students in all racial groups made statistically significant gains in their average scores on the 4th grade test. Black students saw a 14-point gain, while Asian, Hispanic, and White students experienced 16, 19, and 21-point gains respectively. The performance gaps between Asian/White and Hispanic/Black students remain unchanged.

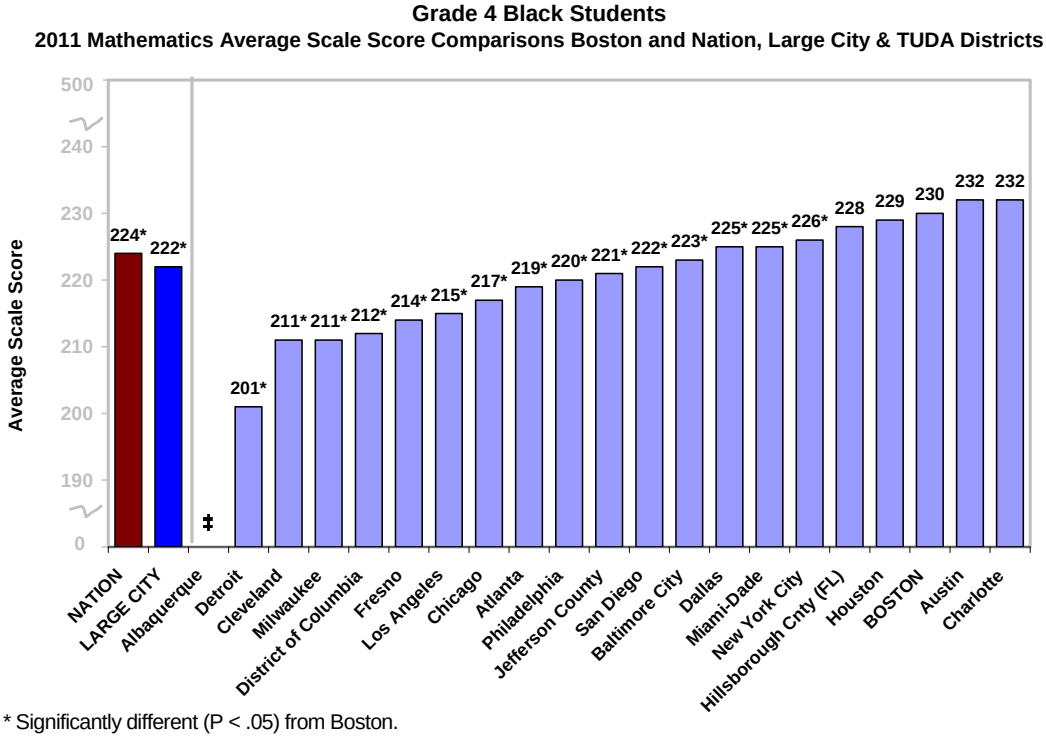
Grade 8: 2003-2011



- Gains made by Boston's 8th grade students between 2003 and 2011 were also statistically significant across all ethnic groups: improvements ranged from 16 points for White students, to 21 points for Black students.

Appendix F provides detailed information on the performance of students by racial group.

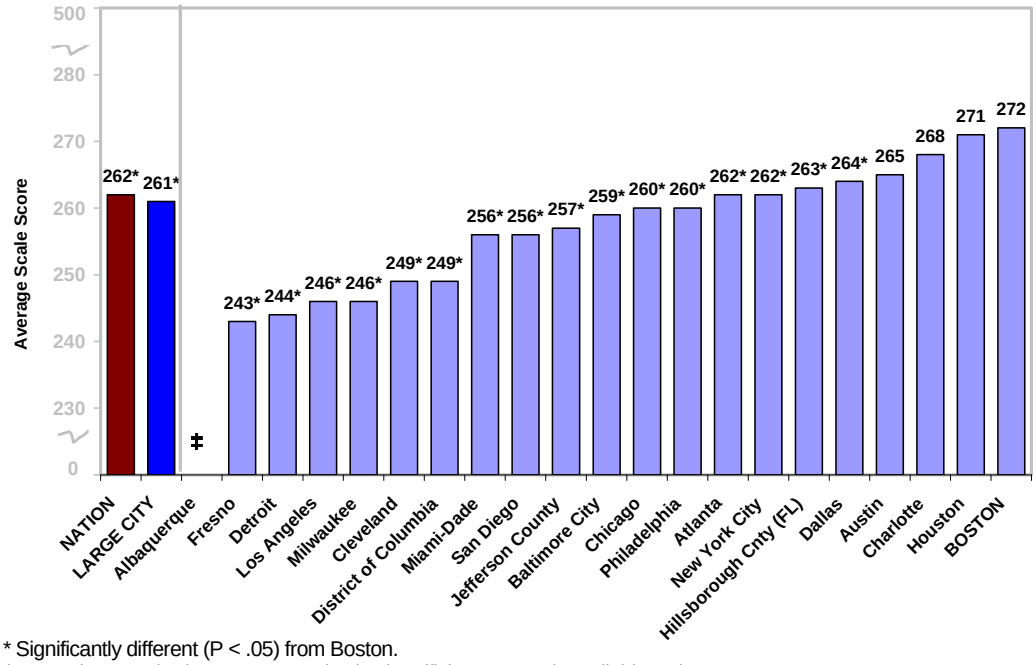
Boston's Black Students Compared to the Nation, Large Cities, and other TUDA Districts



* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- Despite continued disparity in the performance of Black students compared to their White and Asian peers, the district's Black students outperformed their peers across the nation: 4th graders in Boston had an average score of 230, compared to the national average of 224. Similarly, Black students in Boston had an average score 18 points higher than the average for Large Cities. Compared to the TUDA districts, Boston's black students performed better than 15 jurisdictions and were not significantly surpassed by any.

Grade 8 Black Students
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

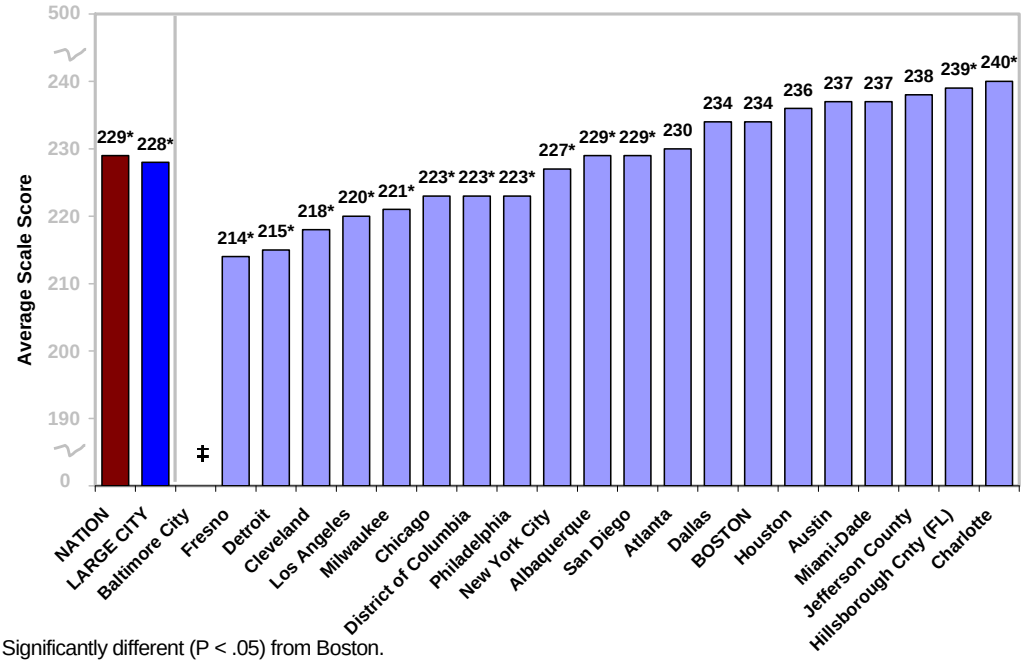


* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- In Grade 8, Boston's black students again outperformed their peers across the Nation and in Large Cities. Importantly, **Boston's Black students had the highest scale score of any TUDA district.**

Boston's Hispanic Students Compared to the Nation, Large Cities, and other TUDA Districts

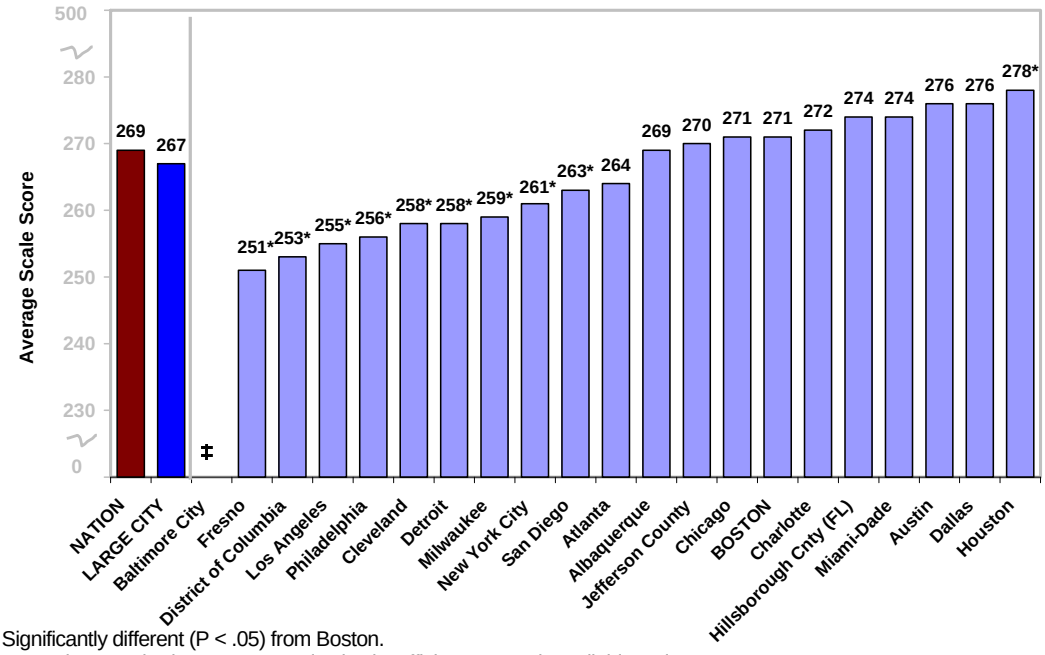
Grade 4 Hispanic Students
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- Boston's Hispanic students in 4th grade also had higher average scores (234) than Hispanic students across the Nation (229) and in Large Cities (228). Compared to other TUDA districts, Boston's Hispanic 4th graders performed as well as or significantly better than most other districts, with only Hillsborough and Charlotte showing significantly higher scores.

Grade 8 Hispanic Students
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



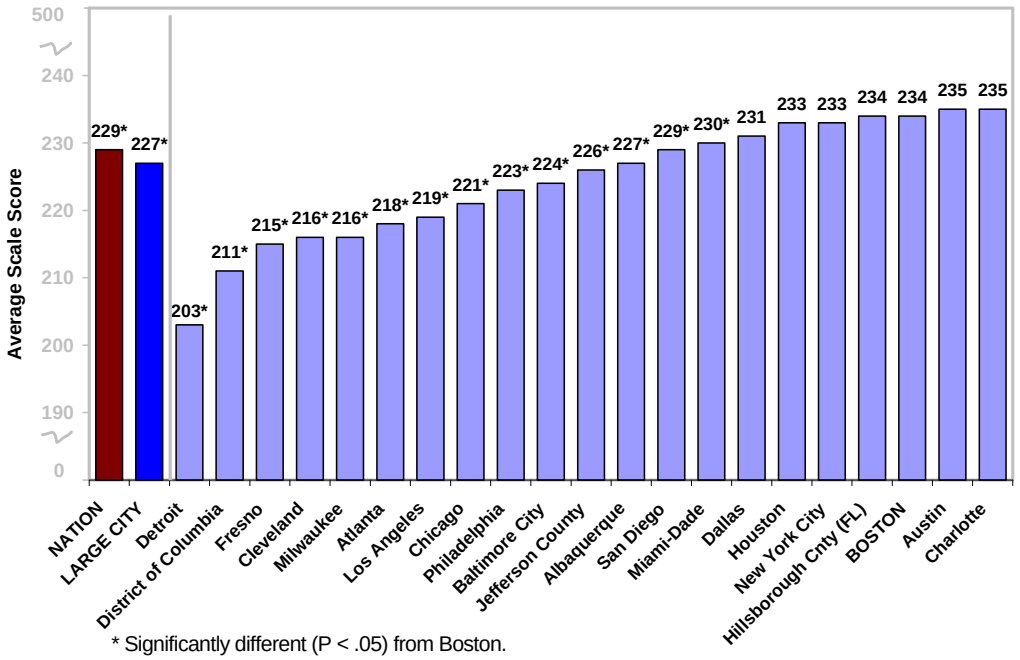
* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- In Grade 8, Boston's Hispanic students performed as well as their national peers and Hispanic students in Large Cities. Among TUDA districts, only Houston's Hispanic student group had a significantly higher average than Boston's.

(4) Average Mathematics Scale Scores for Other Student Groups

Students eligible for Free/Reduced Lunch

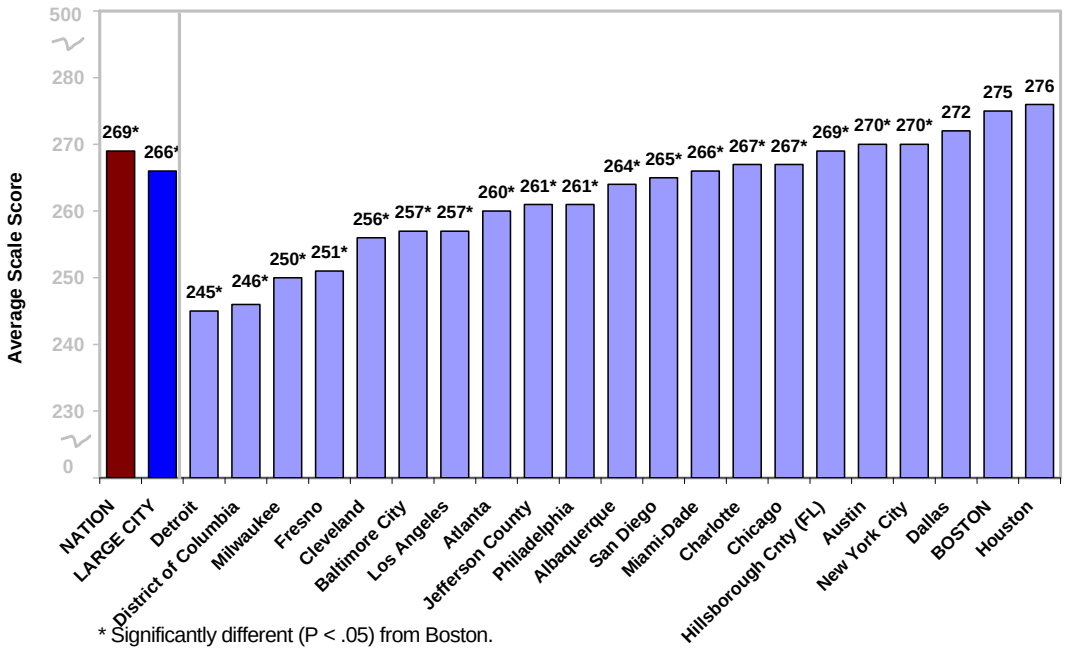
Grade 4 Low-Income Students
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.

- In grade 4, low-income students in Boston scored significantly higher than the Nation (by 5 points) and Large Cities (by 7 points). Boston's average was also the second highest (tied with Hillsborough) among the TUDA districts and not significantly different from Austin's and Charlotte's (both scored 235).

Grade 8 Low-Income Students
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

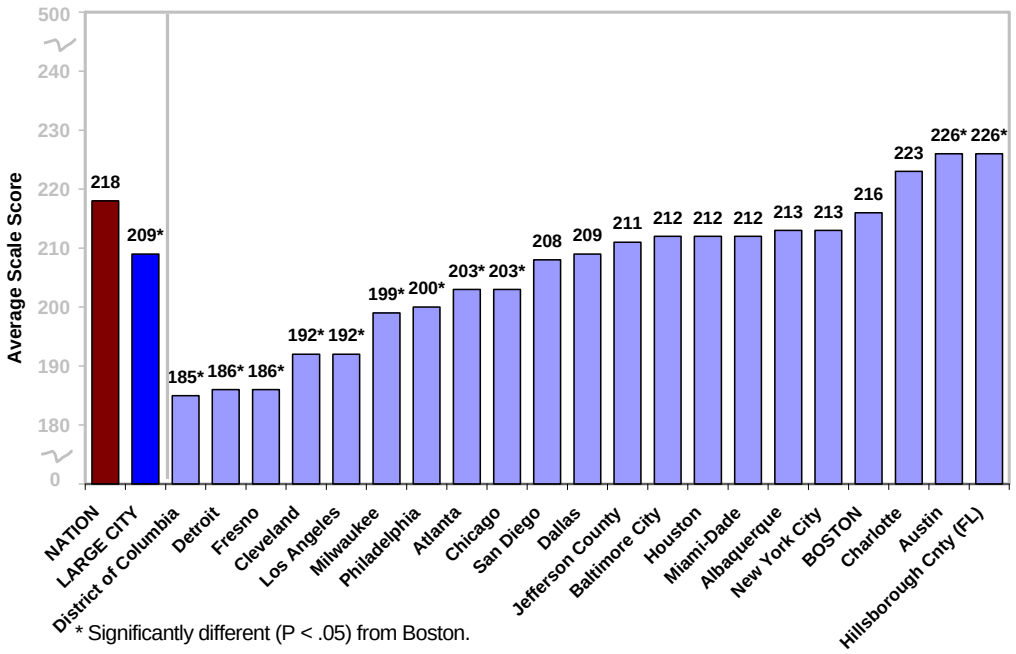


* Significantly different (P < .05) from Boston.

- Among 8th graders, the performance of Boston's low-income students was not only significantly higher than the Nation and the Large City average, but was also higher than all TUDA districts with only one exception (Houston's score was 1 point higher, although the difference was not statistically different).

Students with Disabilities

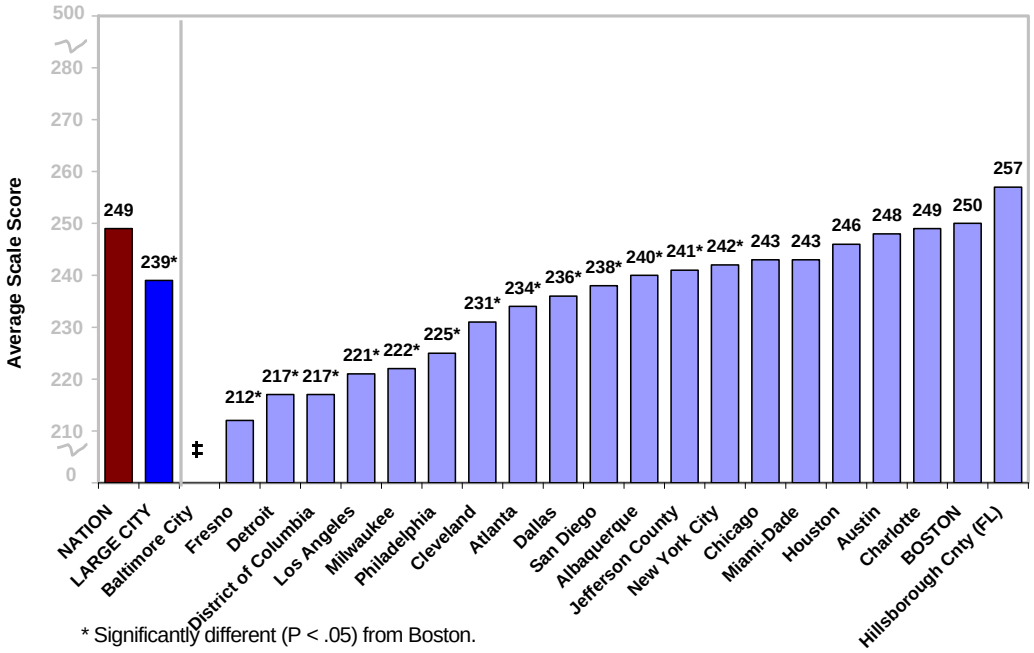
Grade 4 Students with Disabilities
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.

- In 4th grade, students with disabilities in Boston outperformed their peers in Large Cities. Their average score was not significantly different form the national average. Boston's special education students also performed better than most TUDA districts, scoring significantly lower than only two districts, Austin and Hillsborough.

Grade 8 Students with Disabilities
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

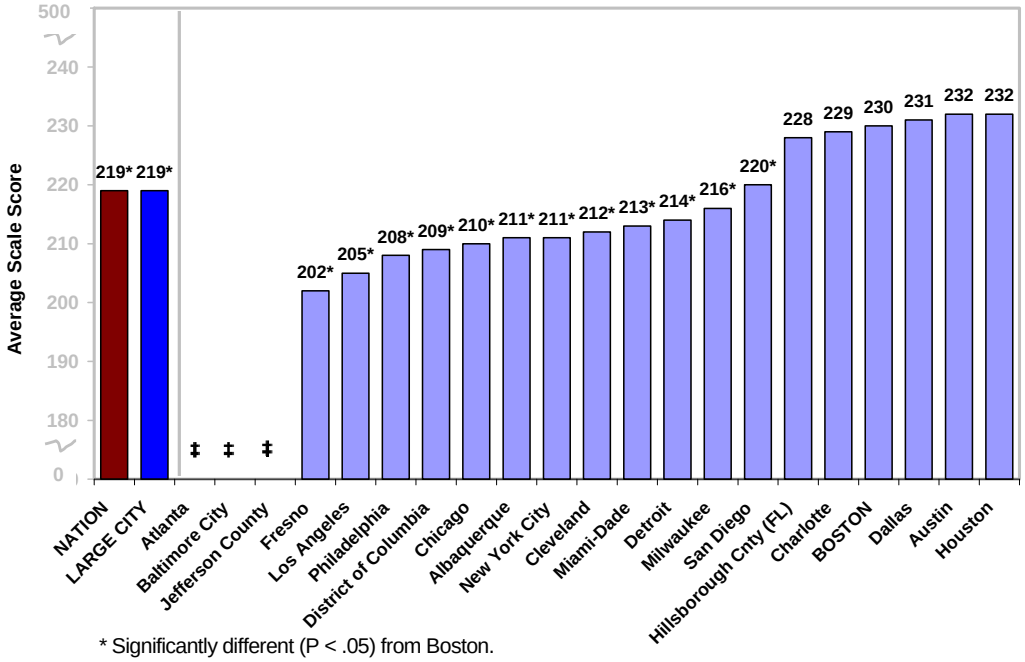


* Significantly different (P < .05) from Boston.

- In 8th grade, students with disabilities in Boston outperformed their peers in Large Cities. Their average score was not significantly different form the national average. Boston's average for special education students was also the second highest among the TUDA districts and not significantly different from Hillsborough's.

English Language Learners

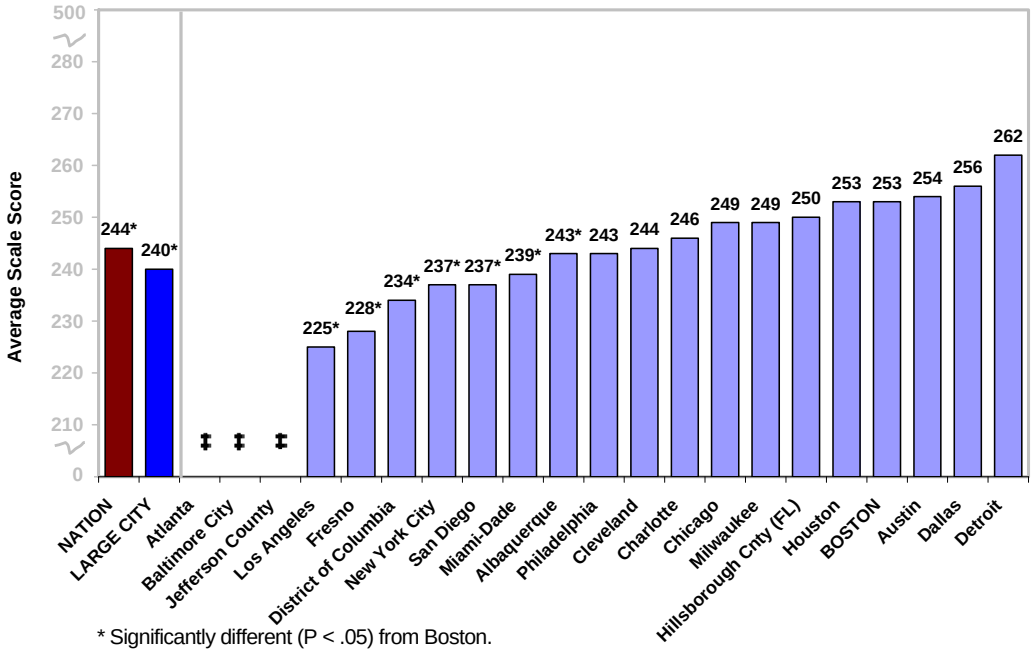
Grade 4 English Language Learners
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts



* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- Boston's English Language Learners (ELLs) had an average scale score in 4th grade higher than the national average and higher than their peers in Large Cities. Compared to other TUDA districts, none of the 18 districts with a sufficiently large ELL sample had significantly higher averages than Boston's.

Grade 8 English Language Learners
2011 Mathematics Average Scale Score Comparisons Boston and Nation, Large City & TUDA Districts

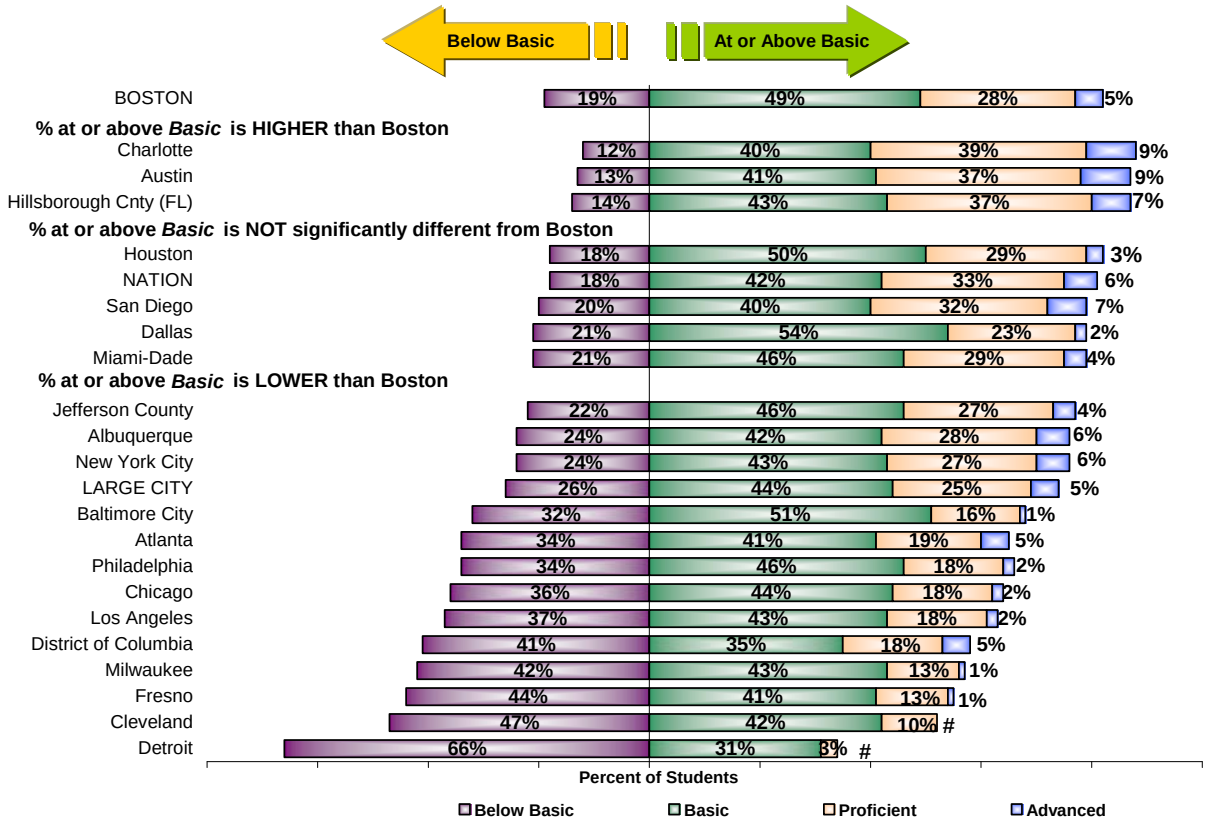


* Significantly different (P < .05) from Boston.
‡ Reporting standard not met. Sample size insufficient to permit a reliable estimate.

- ELL students in 8th grade had an average score that was significantly higher than that of their ELL peers across the nation and in the Large Cities. Boston's ELL average was statistically equivalent to the highest among TUDA districts.

(5) Mathematics Performance by Achievement Level: Boston vs. Nation, Large Cities, and TUDA Districts

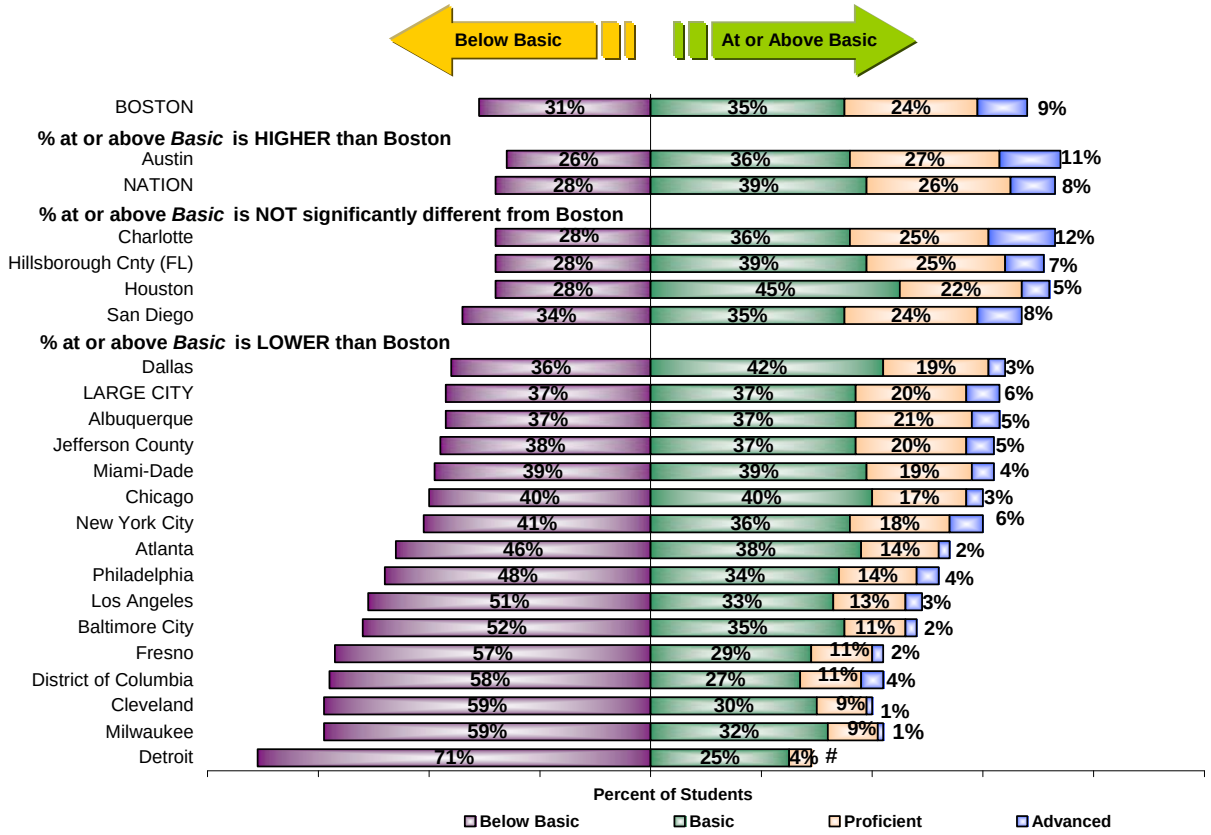
Grade 4 Mathematics Percentage of Students Scoring at or Above Basic:



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

- In 2011, 81% of Boston's 4th grade students scored at the basic level or above on the math assessment. This percentage was significantly higher than or equal to that in all but three other TUDA districts. Boston's performance was not significantly different from the Nation overall (82%). However, a higher percentage of Boston students performed at the Basic level or above compared to students in Large Cities (74%).

Grade 8 Mathematics Percentage of Students Scoring at or Above Basic:



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

- In grade 8, the percentage of students in Boston who performed at or above Basic (69%) was significantly higher compared to 15 other TUDA districts, as well as Large Cities (63%). Boston's rate was significantly lower only as compared to Austin (74%) and the Nation (72%).

Mathematics Percentage of Students Scoring at or Above Proficient

2011 Performance

Percentage of Students Scoring at or Above Proficient in 2011 Mathematics: Boston vs. TUDA Districts

- In 2011, Boston's 4th grade proficient/advanced rate (33%) was significantly higher than that of 11 TUDA districts. Boston's rate was about the same as that of Large Cities.
- Boston's 8th graders performed significantly better than students in Large Cities, with a proficient/advanced rate of 34%. Compared to all the other TUDA districts, Boston's performance was second only to Austin's.

Performance Over Time: 2003 - 2011

Percentage of Students Scoring at or Above Proficient in Mathematics, 2003-2011

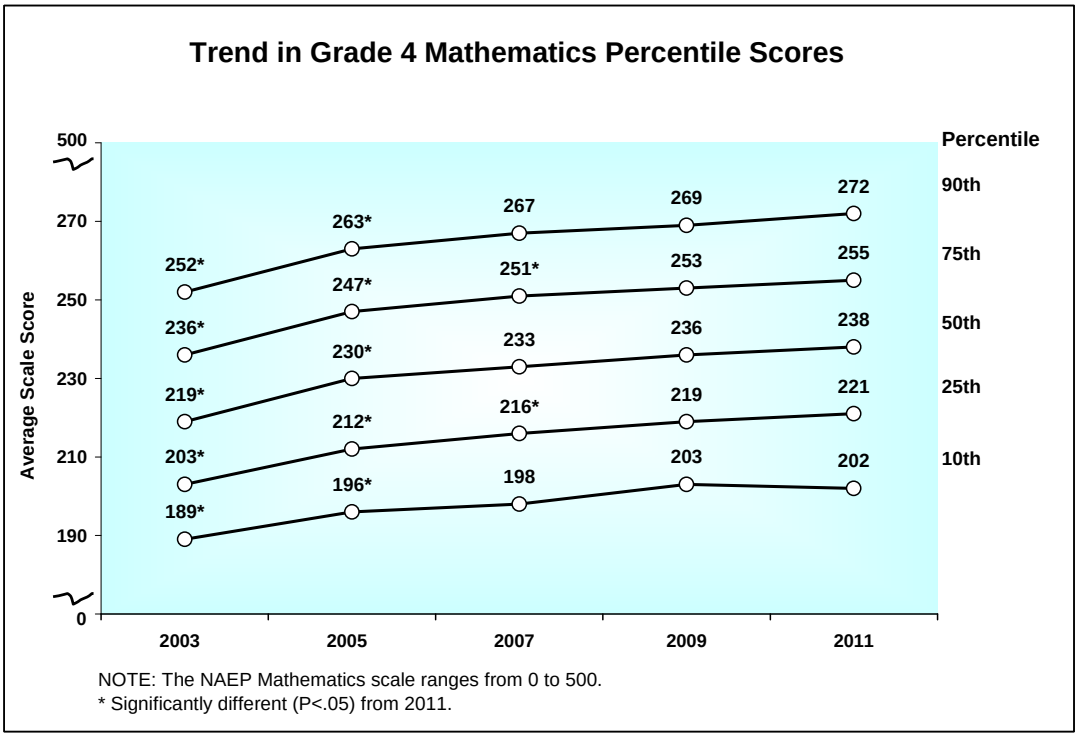
	Grade 4					Grade 8				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
LARGE CITY	20**	24**	28**	29	30	16**	*19***	*22***	*24***	*26*
Albaquerque	--	--	--	--	34	--	--	--	--	26
Atlanta	13**	17**	20**	21**	25*	6**	7**	11**	11**	16*
Austin	--	40**	40**	38**	46*	--	33**	34**	39	38*
Baltimore	--	--	--	13**	17*	--	--	--	10	13*
Boston	**12****	**22****	**27**	**31**	**33**	**17****	**23****	**27****	**31**	**34***
Charlotte	41**	44	44	45	48*	32**	33	34	33**	37*
Chicago	10**	13**	16**	18	20*	9**	11**	13**	15**	20*
Cleveland	10	13	10	8	11*	6**	6**	7	8	10*
Dallas					25	--	--	--	--	22*
Detroit	--	--	--	3	3*	--	--	--	4	4*
District of Columbia	7**	10**	14**	19**	23*	6**	7**	8**	12**	15*
Fresno	--	--	--	14	15*	--	--	--	15	13*
Hillsborough Cnty (FL)	--	--	--	--	43*	--	--	--	--	32*
Houston	18**	26**	28**	30	32	12**	16**	21**	24	27
Jefferson County	--	--	--	31	32	--	--	--	22	25
Los Angeles	13**	18	19	19	20*	7**	11**	14	13	16*
Miami-Dade	--	--	--	33	33	--	--	--	22	22*
Milwaukee	--	--	--	15	14*	--	--	--	7	10*
N.Y.C.	21**	26**	34	35	32	20	20	22	26	24
Philadelphia	--	--	--	16	20*	--	--	--	17	18*
San Diego	20**	29**	35	36	39*	18**	22**	24**	32	31*

* Significantly different (P < .05) from Large City in 2011.
** Significantly different (P < .05) from 2011.

- The percentage of students scoring at or above Proficient in mathematics in 2011 for Boston was higher than that for Large Cities in both grades (3 percentage points in grade 4 and 8 percentage points in grade 8); however, only the grade 8 performance was statistically significant.
- For both grades 4 and 8, Boston made significant improvements in the percentage of students performing at or above Proficient since 2003 and 2005. Boston also saw a significant improvement in grade 8 from 2007 to 2011, with a 7-point increase. Since 2003, the percentage of 4th graders who are proficient/advanced increased by 21 points, compared to 10 points for large cities; and the percentage proficient/advanced in 8th grade increased 17 points for Boston, compared to 10 points for Large Cities.

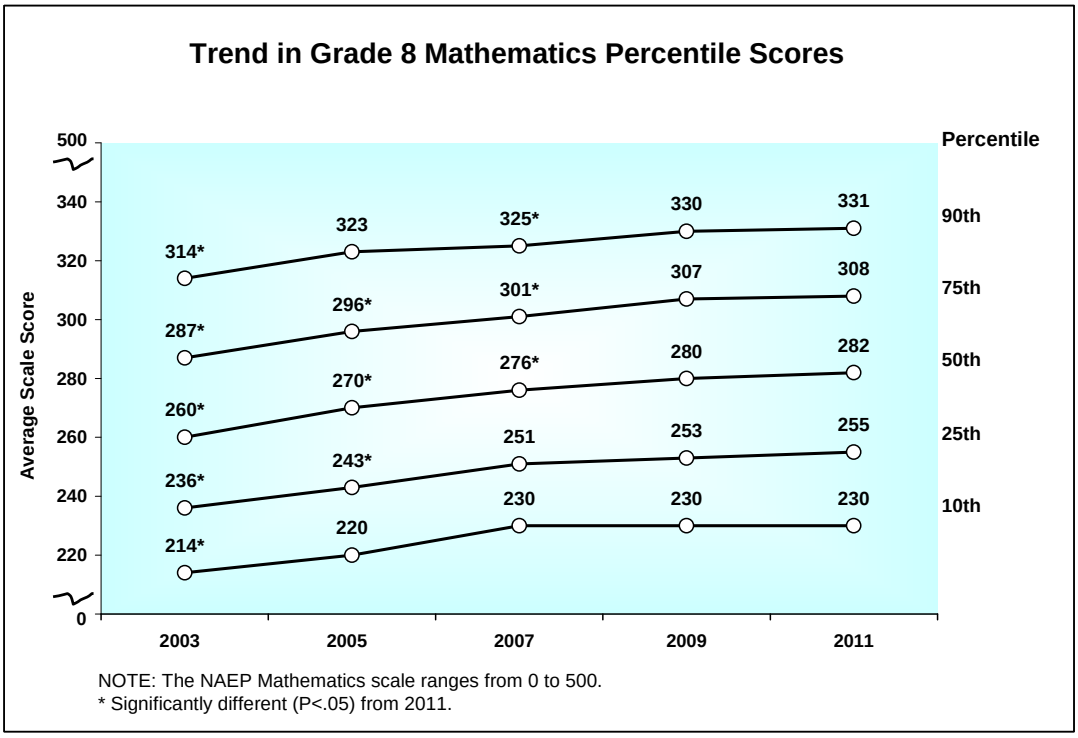
(6) Mathematics Performance by Percentile Rank

Grade 4



- Among Boston's 4th graders, significant improvements continued since 2003 and 2005 at all performance levels. Fourth graders at the 75th and 25th percentiles also saw significant gains since 2007, with a 4-point and a 5-point increase, respectively. Although there were improvements between 2009 and 2011 for students at all but the lowest quintile, the increases were not statistically significant.

Grade 8



- Among Boston's 8th graders, significant improvements continued since 2003 at all performance levels. Eighth graders at the middle (50th percentile) and high-performing levels (at the 75th and 90th percentile) also saw significant gains since 2007.

APPENDIX A: Assessment Framework

The content for each NAEP assessment is determined by the National Assessment Governing Board (NAGB). The framework, which incorporates ideas and input from subject area experts, school administrators, policymakers, teachers, parents, and others, documents the specific knowledge and skill areas to be measured, and sets guidelines for the types of texts and questions to be used, as well as how the questions should be designed and scored.

Reading

The 2011 NAEP reading assessment uses the same framework used in 2009. The reading framework includes two types of texts on the assessment: literary texts and informational texts. The framework also specifies that vocabulary knowledge will be assessed in the context of a passage. Vocabulary items function both as a measure of passage comprehension and as a test of readers' specific knowledge of the word's meaning as intended by the passage author. The framework includes three cognitive targets, or behaviors and skills, for items from both literary and informational texts: Locate/Recall, Integrate/Interpret, and Critique/Evaluate.

The 2009 NAEP Reading Framework replaced the previous reading framework that was used from 1992 through 2007. Compared to the previous framework, the 2009 reading framework includes more emphasis on literary and informational texts, a redefinition of reading cognitive processes, a new systematic assessment of vocabulary knowledge, and the addition of poetry to grade 4.

Results from special analyses determined the 2009 reading assessment results could be compared with those from earlier assessment years. A summary of these special analyses and an overview of the differences between the previous framework and the 2009 framework are available on the Web at http://nces.ed.gov/nationsreportcard/reading/trend_study.asp.

Mathematics

The 2011 NAEP mathematics framework, which defines the content and format for the 2011 assessment, only reflects changes in grade 12 from 2005; mathematics content objectives for grades 4 and 8 have not changed. Therefore, main NAEP trend lines from the early 1990s can continue at fourth and eighth grades for the 2011 assessment.

The mathematics framework calls for the assessment to include questions based on five mathematics content areas: 1) Number Properties and Operations; 2) Measurement; 3) Geometry; 4) Data Analysis, Statistics, and Probability; and 5) Algebra. In addition, the framework specifies that each question should measure one of three levels of mathematical complexity (refers to the cognitive demands of the item) – low, moderate, and high. By considering these two criteria (mathematical content and mathematical complexity) for each question, the framework ensures that NAEP assesses an appropriate balance of content along with a variety of ways of knowing and doing mathematics.

Accommodations

It is NAEP's intent to assess all selected students from the target population. Beginning in 2002, students with disabilities and English language learners who require accommodations have been permitted to use them in NAEP, unless a particular accommodation would alter the skills and knowledge being tested. For example, calculators are not permitted on non-calculator sections of the NAEP mathematics test for students who would otherwise require non-standard accommodations provided on state assessment. The table below shows the comparisons of frequently provided accommodations for Students with Disabilities (SD) and English Language Learners (ELL) between Massachusetts and the NAEP.

Comparisons of Frequently Provided Accommodations for Students with Disabilities (SD) and English Language Learners (ELL) MA vs. NAEP

	Reading				Math			
	MA		NAEP		MA		NAEP	
Accommodations	SD	ELL	SD	ELL	SD	ELL	SD	ELL
Takes test in a small group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Takes test one on one	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Directions only read in English	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Test Items Read aloud in English - occasional	Yes	Yes*	No	No	Yes	Yes*	Yes	No
Test Items Read aloud in English - most or all	Yes	Yes*	No	No	Yes	Yes*	Yes	No
Extended time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Breaks during testing	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Has test administered by a familiar person	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Responds orally to a scribe	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Magnification equipment	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Large print version of test	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Uses Template/Special Equipment/Preferential seating	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Cueing to stay on task	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Presentation or response in Braille	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Presentation in Sign Language	Yes	Yes*	Yes	No	Yes	Yes*	Yes	Yes
Response in Sign Language	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes
Bilingual dictionary without definitions	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
General directions read aloud in Spanish	No	No	Yes	Yes	No	No	Yes	Yes
Test items read aloud in Spanish	No	No	No	No	No	No	Yes	Yes
Spanish/English version of the test	No	No	No	No	No	No	Yes	Yes

* only for ELLS with disabilities

Population Tested

Results from the 2003, 2005, 2007, 2009, and 2011 Trial Urban District Assessment are reported for the participating districts for public-school students at grades 4 and 8. The TUDA assessment employed larger-than-usual samples within the districts, making reliable district-level data possible. The samples were also large enough to provide reliable estimates on subgroups within the districts, such as female students or Hispanic students. Because students were sampled, all analyses are examined for statistical significance.

In Boston, students from 80 schools at grade 4 and 40 schools at grade 8 participated in the 2011 NAEP assessments. A total of 2,900 students were assessed in mathematics (1,700 at grade 4 and 1,200 at grade 8), and a total of 2,800 students were assessed in Reading (1,700 at grade 4 and 1,100 at grade 8).

Appendix B

FOCUS On Children
Boston Public Schools

NAEP vs. MCAS

Introduction

Under the federal *No Child Left Behind Law* (NCLB) and state *Education Reform Law of 1993*, Boston Public School students are required to participate in two testing programs: the National Assessment for Educational Progress (NAEP) and the Massachusetts Comprehensive Assessment System (MCAS). The biennial NAEP Trial Urban School District Assessment (TUDA) provides important information for understanding the effectiveness of the BPS school system relative to other large urban school districts. By contrast, the annual MCAS test provides critical information about the academic performance of BPS compared to other Mass. Public schools, as well as a measure of how well BPS students have mastered the Mass. Curriculum standards.

This appendix provides a brief comparison of MCAS with NAEP, and serves as a guide for understanding and interpreting the test results.

Overview

NAEP

- The National Assessment of Educational Progress (NAEP), known as the Nation's Report Card, is a Congressionally-mandated assessment introduced in 1969. It includes state wide assessments since 1990, and the first Trial Urban School District Assessment (TUDA) since 2002. Based on policy set by the National Assessment Governing Board (NAGB), NAEP measures what students know and can do in key subject areas.

MCAS

- The Massachusetts Comprehensive Assessment System (MCAS), fulfilling requirements of the Education Reform Act of 1993, is the Commonwealth's statewide assessment program for public schools since 1998.

Requirements for Student Participation

Student Selection

NAEP

- Based on sampling, a representative sample from randomly selected schools must participate in NAEP testing. For Trial District Assessment, the target sample sizes per subject per grade is 1200-1400 students. About 60 students, 30 per subject, at each participating school are tested.

MCAS

- All Massachusetts public school students in the grades tested must take the MCAS tests.

Student Participation

NAEP

- Beginning in 2003, schools receiving Title I funding are required to participate in the biennial NAEP assessments in reading and mathematics at grades 4 & 8 if selected for the NAEP sample. Under NCLB, parental notification prior to testing is mandatory to inform parents of students who are sampled that their child's participation is voluntary.

MCAS

- Every public school student is mandated to take the test. For Class of 2003 through Class of 2009, passing grade 10 ELA and Math tests is a part of the graduation requirement. Beginning with the Class of 2010, students must either achieve *Proficient or Advanced* on both ELA and Math tests, or pass both tests and fulfill the requirements of an Educational Proficiency Plan (EPP). Also, students must pass one of the high school MCAS Science and Technology/Engineering (STE) tests: Biology, Chemistry, Introductory Physics, or Technology/Engineering.

Inclusions & Accommodations

NAEP

Includes students with disabilities and English Language Learners (ELL) students in the assessment.

- **ELL:** NAEP includes all ELL students who have received instruction in English for at least three years. ELL students who have received instruction in English for less than three years are included as well unless school staff judged them to be incapable of participating in the assessment in English. In the NAEP mathematics assessment, bilingual test booklets (English and Spanish) are provided where needed.
- **Students with Disabilities:** Based on their IEP, students with disabilities are tested with appropriate accommodations unless the student's IEP team judges that he or she cannot participate or if NAEP does not allow an accommodation that the student requires.

MCAS

Includes students with disabilities and English Language Learners (ELL) students in the assessment.

- **ELL**: Beginning in 2003, the new laws, *No Child Left Behind Law* as well as *Question 2*, the Massachusetts ballot initiative approved by voters in November 2002, require that all ELL students participate in state administered academic assessments, with the sole exception of ELL students in their first year of enrollment in U.S. schools. Schools have the option of testing first-year ELL students in ELA only.
- **Students with Disabilities:** The vast majority of students with disabilities take standard MCAS tests, either with or without accommodations as specified in their IEP plan. Only a very small number of students with the most significant disabilities take the MCAS Alternate Assessment.

Test Content/Instrument Design

Framework

NAEP

The content and design of NAEP assessments were constructed based on the Assessment Frameworks that were developed by the National Assessment Governing Board (NAGB).

- **Reading:** The 2009 NAEP Reading Framework. A newly developed framework that replaces the 1992-2007 Framework.
- **Math:** The 2009 NAEP Mathematic Framework (New framework for grade 12, content objectives for grades 4 & 8 remain the same as the 2005 framework.)

MCAS

The content knowledge and skills tested by MCAS were based on the learning standards in the Massachusetts Curriculum Framework for the content area.

- **English Language Arts:** Massachusetts English Language Arts Curriculum Framework, June 2001 and May 2004 Supplement
- **Math:** Massachusetts Mathematics Curriculum Framework, November 2000 and May 2004 Supplement

Content Standards Tested and Distribution of Test Items

NAEP

Reading Content Area **(Gr. 4; Gr. 8)**

- Literary (50%; 45%)
- Informational (50%, 55%)

Math Content Area **(Gr. 4; Gr. 8)**

- Number Properties/Operations (40%; 20%)
- Measurement (20%, 15%)
- Geometry (15%, 20%)
- Data Analysis/Statistics/Probability (10%, 15%)
- Algebra (15%, 30%)

MCAS

ELA Content Area **(Gr. 4; Gr. 8)**

- Language (8%, 12%)
- Literature (64%, 88%)
- Composition (28%, 0%)

Math Content Area **(Gr. 4; Gr. 8)**

- Number Sense and Operations (34%, 26%)
- Patterns, Relations, and Algebra (20%, 28%)
- Geometry (13%, 13%)
- Measurement (13%, 13%)
- Data analysis/Statistics/Probability (20%, 20%)

Test Construction

NAEP

- Matrix sampling, Long test short booklet, each student gets a small part of the test. Thus, no individual student scores.

MCAS

- Every student gets the same test booklet that contains both common items and matrix sampling items. All students receive scores based on common items only.

Type of Questions

NAEP

- **Reading/Math:** Multiple-Choice, Short constructed response, and extended constructed response questions.

MCAS

- **ELA Reading Comprehension**: Multiple-Choice, Open-response, short-response (Grade 3 only).
- **English Language Arts:** Multiple-Choice, Open-response, and Writing Prompts.
- **Math:** Multiple-Choice, short-answer, open-response items.

Test Questions release

NAEP

- For each subject, only selected test questions are released to the public. For current year and historical released test questions, please visit: http://nces.ed.gov/nationsreportcard/itmrls/

MCAS

- Prior to 2009, for each subject and test grade, all common items are released to the public. Beginning in 2009 and onward only approximately 50% of common test items in grades 3-8 are released each year. For current year and historical released test items, please visit: http://www.doe.mass.edu/mcas/testitems.html

Testing Administration

2011 NAEP

Same for National NAEP, State NAEP, and Trial Urban District Assessment (TUDA) NAEP

Testing Date: 1/24/2011 – 3/4/2011

Testing Time (per subject): 50 minutes

Test Grade:
- Reading - Grades 4 & 8
- Mathematics – Grades 4 & 8
- Science – Grade 8 (state only)

Test Administration: The NAEP Representative from NAEP data collection contractor is responsible for all assessment activities including coordinating, conducting, and sending test materials to the scoring facility.

Test Sequence: All tests are conducted simultaneously in the same classroom; some students take Reading, other students take either mathematics or Science test.

2011 MCAS

Testing Date:
- ELA Composition test: 3/22/2011 (make-up 3/31/2011)
- ELA Reading Comprehension (G3-8, & 10): 3/22/2011 – 4/4/2011
- Math: 5/10/2011 – 5/24/2011
- Science (Grades 5 & 8): 5/11/2011 – 5/24/2011; High School STE: 6/1/2011 - 6/2/11

Testing Time (per subject): Un-timed

Subjects & Test Grade:
- ELA Reading Comprehension – Grades 3, 5, 6, & 8
- English Language Arts – Grades 4, 7, & 10
- Mathematics – Grades 3-8 & 10
- Science & Technology/Engineering – Grades 5, 8, & 9/10

Test Administration: School teachers/personnel are responsible for all assessment activities.

Test Sequence: All students take the same test in the same classroom.

Scoring

NAEP

- Short constructed-response questions are scored according to a three-level rubric:
  Math: Correct, Partial, & incorrect.
  Reading: Evidence of full comprehension, Evidence of partial or surface comprehension, & Evidence of little or no comprehension
- The extended constructed-response questions are rated based on a four-level rubric :
  Math: Extended, Satisfactory, Partial, Minimal, & Incorrect.
  Reading: Extensive, Essential, Partial, & Unsatisfactory

MCAS

- Multiple-choice and short-answer questions are scored blank/0 or 1.
- Open-response questions are scored on a 0 to 4 scale based on the scoring rubrics. Grade 3 Math is scored using a 0 to 2 rubric.
- Student compositions are independently scored by two scorers on the following criteria: (1) a score of 1–6 in topic development, and (2) a score of 1-4 for the use of standard English writing conventions. Students receive the sum of the scores from each of the two readers.

Data Availability

NAEP

- No student-level results
- No school-level results
- No district-level results (except TUDA)
- Not designed to assess a specific curriculum

MCAS

- Student-level results
- School-level results
- District-level results
- Designed to measure the state's curriculum

Reporting

Performance Standard

NAEP

Three Achievement Levels:

- **Advanced:** Represents superior performance
- **Proficient:** Represents solid academic performance for each grade assessed
- **Basic:** Denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.

MCAS

Four Performance Levels:

- **Advanced:** Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matter, and provide sophisticated solutions to complex problems.
- **Proficient:** Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.
- **Needs Improvement:** Students at this level demonstrate a partial understanding of subject matter and solve some simple problems.
- **Warning/Failing:** Students at this level demonstrate a minimal understanding of subject matter and do not solve simple problems.

Scaled Score

NAEP

- **Range:** 0 – 500
- **Scaled Score Corresponding to Performance Level:** vary by subject and test grade

  Reading:

	Grade 4	*Grade 8*
Advanced	268 – 500	323 – 500
Proficient	238 – 267	281 – 322
Basic	208 – 237	243 – 280
*Below Basic**	0 – 207	0 – 242

  Mathematics:

	Grade 4	*Grade 8*
Advanced	282 – 500	333 – 500
Proficient	249 – 281	299 – 332
Basic	214 – 248	262 – 298
*Below Basic**	0 – 213	0 – 261

  ** Below Basic is not an Achievement level*

- Average scaled scores cannot be compared across grades.

MCAS

- **Range:** 200 – 280
- **Scaled Score Corresponding to Performance Level:** same for all subjects and test grade

Performance Level	*Scaled Score*
Advanced/Above Proficient	260 -- 280
Proficient	240 – 258
Needs Improvement	220 – 238
Warning/Failing	200 – 218

- Averages must be calculated from raw scores, then converted to the corresponding scaled score.

Interpreting Results

NAEP

- The NAEP results as reported as average scores, and percentages are ***estimates*** because they are based on samples rather than the entire population(s).
- Differences in scores must be statistically significant in order to report a change.

MCAS

- Comparisons of performance on subject area subscores across years must be made with caution because the number of items contributing to each subscore is relatively small and the difficulty of the items may very somewhat from year to year.

Additional Information

NAEP

The Nation's Report Card (NAEP) (NCES)
National Center for Education Statistics
1990 K Street, NW
Washington, DC 20006
Phone: (202) 502-7300
Web site:
http://nces.ed.gov/nationsreportcard/

MCAS

The Massachusetts Department of Elementary and Secondary Education
Student Assessment Services Unit
75 Pleasant Street
Malden, MA 02148-4906
Phone: (781) 338-3625
Web site: http://www.doe.mass.edu/MCAS

Appendix C

Selected Sample of 2011 NAEP Questions

Because of differences in curricular emphasis, the proportion of the assessment devoted to each content area varies by grade. The following are sample released questions from the 2011 NAEP assessments (three items per test grade and subject). Additional sample questions from the NAEP reading and mathematics assessments can be found in the NAEP Questions Tool (NQT) at http://ncesed.gov/nationsreportcard/itmrlsx/landing.aspx.

Grade 4 Reading:

Marian's Revolution

by Sudipta Bardhan-Quallen

By 1939, Marian Anderson had performed for presidents and kings. She had been praised for having "a voice ... one hears once in a hundred years." Despite her success, when Marian wanted to sing at Constitution Hall that year, she was banned from doing so. The owner of the hall, an organization called the Daughters of the American Revolution (DAR), felt that Marian couldn't be allowed to sing there because she was African American.

Chosen by Music

That wasn't the first time Marian had been turned away because she was black. When she was 18 years old, she applied to music school. The clerk at the desk rudely sent her home because of her race. Marian was shocked by the clerk's words. "I could not conceive of a person," Marian said, "surrounded as she was with the joy that is music without having some sense of its beauty and understanding rub off on her."

Marian Anderson sings to a crowd of 75,000 people at the Lincoln Memorial on April 10, 1939.

"I don't think I had much to say in choosing it. I think music chose me."
—Marian Anderson

Because of segregation—the practice of keeping blacks and whites separate—the early 1900s were a difficult time for a young black woman to begin a professional singing career. But Marian was determined to sing. "It was something that just had to be done," she remembered. "I don't think I had much to say in choosing it. I think music chose me."

In 1925, Marian won a voice contest in New York, and sang with the New York Philharmonic. Still, her chances to perform in the United States were limited. To build her career, Marian traveled to Europe in 1928, where she became very successful.

A World-Class Singer Faces Racism

By 1939, Marian was a world-class singer. She returned to the United States to continue her career. But back at home, she faced racism in many ways. Segregation was still common on trains and in hotels and restaurants. No amount of vocal talent could spare Marian from that.

Even concert halls were segregated, although usually that was limited to the audience. Because black performers often appeared on stage in segregated halls, Marian had no reason to think she would be turned away from Constitution Hall. She believed that musical skill would be the only factor that the DAR would consider.

At first, the DAR told Marian that the date she requested was not available. Then they told her that all of her alternate dates were booked. Eventually, the DAR upheld their policy that only white performers could appear in Constitution Hall.

A Voice for Civil Rights

When news of the DAR's policy got out, many people were outraged. First Lady Eleanor Roosevelt resigned from the DAR. In a letter, she wrote: "I am in complete

disagreement with the attitude taken in refusing Constitution Hall to a great artist .... You had an opportunity to lead in an enlightened way, and it seems to me your organization has failed."

Marian believed strongly in the civil rights movement. She knew firsthand the pain that racism caused. She understood that the way the controversy with the DAR was resolved would be a milestone for civil rights.

Despite public outcry, the DAR would not back down and let Marian sing. With Mrs. Roosevelt's support, the Secretary of the Interior arranged a special concert for Marian, to be held at the Lincoln Memorial. Seventy-five thousand people attended. In many ways, Marian's concert was considered to be America's first civil rights rally. That night, she took a stand against discrimination and for equality. The first words she sang were: "My country, 'tis of thee, sweet land of liberty, of thee I sing."

The Open-Hearted Way

Marian realized that equality in the United States would be achieved when every person was willing to stand up for what is right. As a public figure, she felt a responsibility to set an example. After the 1939 incident, she did her part by turning down concerts for segregated audiences.

"The minute a person whose word means a great deal dares to take the openhearted and courageous way," she said, "many others follow."

As Marian's career progressed, America changed. She performed in many prestigious locations, including Constitution Hall, where she sang after the DAR changed its policies. By 1954, segregation was declared unconstitutional. The Civil Rights Act was signed into law in 1964, the year Marian retired from performing. By then, many of the barriers she'd had to fight through were disappearing. Marian's farewell tour began in front of an admiring crowd at Constitution Hall.

Eleanor Roosevelt honors singer Marian Anderson.

Sample #1

4. Why is "A Voice for Civil Rights" a good heading for the section that follows it on pages 3–4? Use information from the article to support your answer.

_____

_____

_____

- **Question Description:** Marian: Evaluate effectiveness of heading
- **Block & Number:** Block R10 Question #4
- **Type of Question:** Short Constructed Response
- **Item Difficulty: Hard (30.68% Correct – National data)**
- **Content Area (2009 and on):** Informational
- **Cognitive Target (2009 and on):** Critique/Evaluate
- **Key/Scoring Guide:**

Full Comprehension

Responses at this level explain why the heading is a good one for the section that follows it and use information from the article as support.

- "A Voice for Civil Rights" is a good heading because Marian's concert was considered to be America's first civil rights rally.
- I think this was a good title because it was about a singer that fought for freedom to sing.
- It is a good heading because Marian was singing and fighting for justice so everyone gets treated equally.
- "A Voice for Civil Rights" is a good heading because she sang for civil rights and no segregation.
- This is a good heading for the section because the first lady Eleanor Roosevelt wrote a letter to the DAR that states that she disagrees with their policies of segregation.

Partial Comprehension

a) Responses at this level provide some information about Marian Anderson/Eleanor Roosevelt related to civil rights OR the civil rights movement, but they do not explain why the heading is a good one for the section that follows.

- Marian believed strongly in the civil rights movement. She knew firsthand the pain that racism caused.
- "A Voice for Civil Rights" is a good heading because Marian had a great voice and Eleanor made it so she could sing.
- It's a good heading because Marian couldn't get in without the civil rights help.
- When news of the DAR's policy got out, many people were outraged.

OR

b) Responses explain why the heading is a good one for the section that follows it, but they fail to support the explanation with information from the article.

- Because she's a singer and she wants civil rights for everyone.
- Marian was singing for the civil rights.
- I think it is a good heading because it talked about Marian's voice and civil rights.

Little or No Comprehension

Responses at this level provide incorrect information, irrelevant details, or personal opinions. Responses may simply repeat the question.

- She thinks that music chose her. And she won the voice contest.
- Because civil rights means anybody can do it if they feel like it.
- Because Marian was the first lady of the USA.
- Marian has a beautiful voice.

- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Full Comprehension Response)

Jurisdiction	Little/No Comprehension Row Pct.	Partial Comprehension Row Pct.	Full Comprehension Row Pct.	Omitted Row Pct.	Off task Row Pct.
Jefferson County (KY)	36	44	15	4	1
Miami-Dade	42	41	13	4	#
Atlanta	45	41	12	1	1
Austin	41	36	12	10	#
Charlotte	42	42	12	4	1
Dallas	47	30	12	10	#
Hillsborough County	32	53	12	3	#
Houston	45	37	11	7	#
Baltimore City	46	40	10	3	1
Cleveland	51	32	10	6	1
New York City	42	44	10	3	#
BOSTON	**39**	**46**	**9**	**6**	**1**
Chicago	50	36	9	4	1
Philadelphia	45	39	9	7	#
San Diego	46	36	9	8	1
Albuquerque	52	38	7	3	#
District of Columbia (DCPS)	46	42	7	2	2
Fresno	53	30	7	9	2
Detroit	53	37	6	4	#
Los Angeles	58	34	5	3	#
Milwaukee	55	36	5	2	1

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Reading scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented, are illegible, or cannot otherwise be scored.

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

Sample #2

5. Why did Eleanor Roosevelt resign from the DAR?
   A. Because she did not agree with one of its decisions
   B. Because she wanted to be in charge of its concerts
   C. Because she was too busy being First Lady of the United States
   D. Because she had been a member for too many years

- **Question Description:** Marian: Make inference about an action
- **Block & Number:** Block R10 Question #5
- **Type of Question:** Multiple Choice
- **Item Difficulty:** Easy (71.39% Correct – National data)
- **Content Area (2009 and on):** Informational
- **Cognitive Target (2009 and on):** Locate/Recall

- **Key/Scoring Guide:** The correct answer is A.
- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Correct - A)

Jurisdiction	A * Row Pct.	B Row Pct.	C Row Pct.	D Row Pct.	Omitted Row Pct.
Jefferson County (KY)	76	7	8	6	3
BOSTON	**74**	**7**	**10**	**8**	**1**
Charlotte	73	9	8	9	1
Hillsborough County	71	10	10	7	1
Austin	70	10	10	8	2
Albuquerque	69	7	14	9	1
New York City	69	11	9	9	1
San Diego	69	9	10	10	2
Houston	68	9	12	10	2
Atlanta	65	9	13	12	1
Miami-Dade	65	12	11	10	2
District of Columbia (DCPS)	63	9	13	12	3
Dallas	60	13	15	10	1
Philadelphia	60	10	13	14	3
Chicago	57	13	14	14	1
Los Angeles	54	14	18	13	1
Baltimore City	51	20	16	11	1
Cleveland	48	16	23	11	2
Detroit	48	15	19	16	3
Milwaukee	48	16	18	16	2
Fresno	45	20	19	14	2

‡ Reporting standards not met.

* Indicates correct response.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Reading scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.

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

Sample #3

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer

_____

_____

_____

- **Question Description:** Marian: Explain a connection with support
- **Block & Number:** Block R10 Question #6
- **Type of Question:** Extended Constructed Response
- **Item Difficulty:** Medium (41.13% Correct – National data)
- **Content Area (2009 and on):** Informational
- **Cognitive Target (2009 and on):** Integrate/Interpret
- **Key/Scoring Guide:**

Extensive

Responses at this level explain why Marian Anderson's career was important to the development of the civil rights movement and use information from the article as support.

- Marian Anderson's career was important to the development of the movement because her concert at the Lincoln Memorial was considered by many to be the first civil rights rally.
- It was important because if Marian Anderson sang it could be a legal right for other blacks to do things. Winning in Washington could have made a big change.
- Marian Anderson's career was important to the development of the civil rights movement in the United States because she was a great singer that many people liked. People loved her singing, but some people didn't like that she was African American. So, some people wouldn't let her sing, but she soon didn't perform for crowds that were segregated, and after a while people stopped segregation.

Essential

a) Responses at this level mention a connection between Marian Anderson and the civil rights movement and use information from the article as support but do not discuss the importance of her career to the movement.

- Marian's career was important because she fought a battle with Constitution Hall.
- Marian Anderson believed blacks and whites should be able to sing in the same places, such as Constitution Hall.
- Marian's career was important because she changed America by singing "My country tis of thee and sweet land of liberty, of thee I sing" at the Lincoln Memorial.

OR

b) Responses mention a connection between Marian Anderson's career and the civil rights movement but do not support the connection with information from the article.

- Marian stood up for blacks and their rights, and the things she did helped make sure there would be less discrimination in the future.
- It is important because if one black girl can achieve so much then other female and male black citizens can too. And just because they are black that does not mean that they can be treated differently.
- She wanted people to know that blacks can sing in the same place.
- Her career stopped a lot of segregation.

Partial

Responses at this level mention details from the article relating to Marian Anderson's career or to civil rights, but they do not explain the importance of Anderson's career to the civil rights movement.

- Although she was black, by 1939 Marian Anderson had performed for presidents and kings.
- There was lots of discrimination at that time.
- Marian wanted to be a singer.
- Blacks should have the same rights as white people.
- Because she loved to sing. She sang for the president and king. She had a concert at the Lincoln memorial.

Unsatisfactory

Responses at this level provide incorrect information, irrelevant details, or personal opinions. Responses may simply repeat the question.

- Marian was the first lady of the U.S.A.
- She used to have lots of friends.
- I think Marian is a good person.

- I think Marian Anderson's career was important to the development of the civil rights movement in the United States.

Extensive - Student Response

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Marian Anderson's career was important to the development of the civil rights movement in the United states because she was a great singer that many people liked. People loved her singing, but some people didn't like that she was African American. So, some people wouldn't let her sing, but she soon didn't preform for crowds that were segragated, and after awhile people stoped segragation

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Marian concert was consider to be Americas first civil right rally

Scorer Comments:
Both responses provide information from the article to explain why Anderson's career was important to the development of the civil rights movement. The first response focuses on segregation; the second focuses on her concert.

Essential - Student Response

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Marian Andersons career was important to the development of the civil rights movement in the United States because she changed America by singing "My country, tis of thee and sweet land of liberty, of thee I sing" and Eleanor Roosevelt honored her

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Marian Andersons career was important to the developement of the civil right for the United States because she belived that black people could do what other people could do. She did what she wanted to do, and because of that people got the courge to do what they belived was right. Marian made a diffrence for civil rights. She changed the rules and made them into rules we needed.

Scorer Comments:
The first response provides information from the article about the concert and Eleanor Roosevelt to show a connection between Anderson's career and the civil rights movement, but it does not discuss the importance of her career to the movement. The second response mentions a connection between Anderson's career and the civil rights movement, but the connection is general because it fails to provide details from the article as support.

Partial - Student Response

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Marian Anderson's career was important because she sang for many important people.

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

The civil Right Act was signed into law in 1964 the year. Marin retired from performing.

Scorer Comments:
The first response mentions a detail from the article about Anderson's career, but it does not explain the importance of her career to the civil rights movement. The second response includes a detail connecting the civil rights movement to Anderson's career, but the importance of the connection is not explained.

Unsatisfactory - Student Response

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Well because if she didn't do it there wouldn't be no order.

6. Explain why Marian Anderson's career was important to the development of the civil rights movement in the United States. Use information from the article to support your answer.

Marian Anderson was imporant to the development because she wanted to have rights for civil rights.

Scorer Comments:
Neither response answers the question. The first response is personal opinion. The second is too vague to receive credit.

- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts
(Sorted by % Extensive Response)

Jurisdiction	Unsatisfactory Row Pct.	Partial Row Pct.	Essential Row Pct.	Extensive Row Pct.	Omitted Row Pct.	Off task Row Pct.
Jefferson County (KY)	12	33	43	6	6	#
Austin	15	34	38	5	7	1
Hillsborough County	9	29	52	5	4	#
Miami-Dade	14	34	40	5	7	#
New York City	14	35	39	5	7	#
BOSTON	**13**	**34**	**41**	**4**	**7**	**1**
Dallas	11	41	28	4	14	1
District of Columbia (DCPS)	17	40	35	4	4	1
Atlanta	10	41	42	3	4	#
Chicago	15	39	36	3	5	1
Cleveland	20	43	24	3	9	1
Houston	14	35	37	3	10	#
Albuquerque	17	37	40	2	4	#
Baltimore City	18	37	34	2	8	1
Charlotte	13	38	42	2	4	1
Detroit	22	41	26	2	8	1
Fresno	15	47	23	2	10	2
Los Angeles	22	44	26	2	6	1
Philadelphia	25	32	31	2	8	1
San Diego	15	38	33	2	12	1
Milwaukee	23	45	25	#	5	1

Rounds to zero.
NOTE: DCPS = District of Columbia Public Schools. The NAEP Reading scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented, are illegible, or cannot otherwise be scored.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics,
National Assessment of Educational Progress (NAEP), 2011 Reading Assessment.

Grade 8 Reading:

1920: Women Get the Vote

by Sam Roberts

The 19th Amendment was ratified in 1920, after decades of campaigning by the women's suffrage movement.

When John Adams and his fellow patriots were mulling independence from England in the spring of 1776, Abigail Adams famously urged her husband to "remember the ladies and be more generous and favorable to them than your ancestors." Otherwise, she warned, "we are determined to foment a rebellion, and will not hold ourselves bound by any laws in which we have no voice or representation."

That summer, the Declaration of Independence proclaimed that all men are created equal but said nothing of women's equality. It would take another 144 years before the U.S. Constitution was amended, giving women the right to vote in every state.

That 19th Amendment says simply: "The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex." It took effect after a dramatic ratification battle in Tennessee in which a 24-year-old legislator cast the deciding vote.

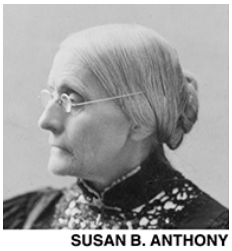
The amendment was a long time coming. At various times, women could run for public office in some places, but could rarely vote. (As far back as 1776, New Jersey allowed women property owners to vote, but rescinded that right three decades later.)

More than 20,000 marchers took part in this 1915 parade in New York City in support of women's suffrage.

Courtesy of Library of Congress #LC-USZ62-50393

ELIZABETH CADY STANTON

Courtesy of Library of Congress #LC-USZ62-28195



SUSAN B. ANTHONY

Courtesy of Library of Congress #LC-USZ62-111423

"WOMANIFESTO"

The campaign for women's rights began in earnest in 1848 at a Women's Rights convention in Seneca Falls, N.Y., organized by 32-year-old Elizabeth Cady Stanton and other advocates. Stanton had drafted a "Womanifesto" patterned on the Declaration of Independence, but the one resolution that shocked even some of her supporters was a demand for equal voting rights, also known as universal suffrage. "I saw clearly," Stanton later wrote, "women often enlisted in the fight for voting rights too.

WYOMING IS FIRST

They staged demonstrations, engaged in civil disobedience, began legal challenges, and pressed their case state by state. In 1869, the Wyoming Territory gave women the vote, with the first permanent suffrage law in the nation. ("It made sense that a place like Wyoming would embrace women's rights," Gail Collins of *The New York Times* wrote in her book *America's Women*. "With very few women around, there was no danger that they could impose their will on the male majority.")

In 1878, a constitutional amendment was

recalled, "that the power to make the laws was the right through which all other rights could be secured."

Stanton was joined in her campaign by Susan B. Anthony, Sojourner Truth, Lucretia Mott, and other crusaders who would become icons of the women's movement. Some were militant. Many were met with verbal abuse and even violence. Already active in the antislavery movement and temperance campaigns (which urged abstinence from alcohol), introduced in Congress. The legislation languished for nine years. In 1887, the full Senate considered the amendment for the first time and defeated it by about 2-to-1.

But the suffrage movement was slowly gaining support. With more and more women graduating from high school, going to college, and working outside the home, many Americans began asking: Why couldn't women vote too?

Plenty of opposition existed, according to Collins: Democrats feared women would vote for more socially progressive Republicans. The liquor industry, afraid of prohibition, also opposed women's suffrage, as did many people in the South, where blacks had been largely disenfranchised since Reconstruction.

In 1918, after much cajoling and picketing by suffragists, President Woodrow Wilson changed his mind and backed the amendment. The next year, both houses of Congress voted to amend the Constitution. Suffrage advocates predicted quick ratification by the states. (By 1919, 28 states permitted women to vote, at least for President.) Within a little more than a year, 35 of the required 36 states had voted for ratification.

The last stand for anti-suffragists was in Tennessee in the summer of 1920. Their showdown in the State Legislature became known as the "War of the Roses." (Pro-amendment forces sported yellow roses; the antis wore red.)

After two roll calls, the vote was still tied, 48-48. On the third, Harry T. Burn, a Republican and, at 24, the youngest member of the legislature. switched sides. He was wearing a red rose but voted for ratification because he had received a letter from his mother that read, in part: "Hurrah and vote for suffrage! Don't keep them in doubt!"

Burn said later: "I know that a mother's advice is always safest for her boy to follow and my mother wanted me to vote for ratification. I appreciated the fact that an opportunity such as seldom comes to mortal man-to free 17,000,000 women from political slavery-was mine."

GRADUAL CHANGE

In 1920, women across America had the right to vote in a presidential election. (In the South, black women and men would be kept off voter rolls in large numbers until 1965, after passage of the Voting Rights Act.)

But newly enfranchised women voted in much smaller numbers than men. "Women who were adults at that time had been socialized to believe that voting was socially inappropriate for women," says Susan J. Carroll, senior scholar at the Center for American Women and Politics.

The political and social change sought by suffragists came gradually and not without fits and starts. An Equal Rights Amendment, stipulating equal treatment of the sexes under the law, was passed by Congress and sent to the states in 1972, but later failed after being ratified by only 35 of the necessary 38 states.

In 1980, however, women surpassed men for the first time in turnout for a presidential election. Since then, there has also been a substantial rise in the number of women running for and holding political office.

VC176436
From *THE NEW YORK TIMES UPFRONT* magazine, September 5, 2005 issue.

Sample #1

1. What is the main purpose of the article?

   A. To describe the events leading to the passage of the 19th Amendment
   B. To identify the states that first supported women's voting rights
   C. To discuss the most important leaders of the suffragist movement in the 1800s
   E. To explain why the Equal Rights Amendment has not been ratified

- **Question Description:** Women Vote: Recognize main purpose of article

- **Block & Number:** Block R11 Question #1
- **Type of Question:** Multiple Choice
- **Item Difficulty:** Easy (63.8% Correct – National data)
- **Content Area (2009 and on):** Informational
- **Cognitive Target (2009 and on):** Integrate/Interpret
- **Correct Response: The correct answer is A.**
- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Correct - A)

Jurisdiction	A * Row Pct.	B Row Pct.	C Row Pct.	D Row Pct.	Omitted Row Pct.
Austin	69	18	6	7	#
Charlotte	65	18	8	8	#
Miami-Dade	63	18	11	8	1
New York City	63	17	13	6	1
BOSTON	**60**	**24**	**10**	**5**	**1**
Jefferson County (KY)	59	21	14	6	#
Houston	58	25	10	7	#
Dallas	55	23	11	11	1
Hillsborough County	55	27	9	8	#
Albuquerque	54	29	11	6	#
Atlanta	54	17	17	11	#
Chicago	53	25	13	8	#
San Diego	53	29	10	8	#
Philadelphia	50	34	10	6	#
Detroit	48	30	14	8	#
Baltimore City	46	35	10	8	#
Los Angeles	44	35	9	11	#
Milwaukee	44	32	11	12	#
District of Columbia (DCPS)	41	38	12	9	#
Cleveland	39	37	9	16	#
Fresno	32	36	19	13	#

Rounds to zero.

* Indicates correct response.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Reading scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.

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

Sample #2

2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

_____

_____

_____

- **Question Description:** Women Vote: Evaluate author's craft
- **Block & Number:** Block R11 Question #2
- **Type of Question:** Short Constructed Response
- **Difficulty:** Medium (51.34% Correct – National Data)
- **Content Area (2009 and on):** Informational

- **Cognitive Target (2009 and on):** Critique and Evaluate
- **Key/Scoring Guide:**

Full Comprehension

Responses at this level explain an opinion about whether the statements by Abigail Adams are an effective way to begin the article by making a specific connection between the beginning paragraph and the rest of the article or by demonstrating a more general understanding of how the beginning relates to what follows.

- I think it is a good way to begin the article because it shows that even in 1776 Abigail Adams wanted equal rights for women, and yet it was ignored.
- I do think it is a good way to start the article because it explains the very beginning of the women's rights movement.
- Yes, because it gets you set up for what you are about to read. It starts out talking about fighting for independence, which is close to what the article is actually going to talk about.
- Yes, because it shows that women in this country were very determined to be equal to men....
- No, they should start when women wanted to vote in 1848.

Partial Comprehension

a) Responses at this level provide a text-based generalization to explain whether the Adams' statements are an effective way to begin the article. They do not demonstrate understanding of how the beginning relates to the rest of the article.

- I think it is because the events lead up to a start of the article.
- Yes, because it gives you what someone famous said about women's equality and it tells you what the article would be mainly about.
- Yes, because it sets the tone of the article and makes it clear about what we will be reading.
- Yes, because it grabbed my attention because it was an historical quote.

OR

b) Responses interpret Abigail Adams's statements, but they do not explain why the statements are or are not an effective way to begin the article. These responses may or may not be expressed as an opinion.

- I think that it is a good way to begin it because it's talking about the rights of independence.
- No, not really because all Abigail is saying is that women don't have the opportunity to vote yet.
- She wanted independence for women.
- The statements by Abigail Adams was an effective way to begin the article. She was standing up for what she believed in and she warned the people that she would rebel.

Little or No Comprehension

Responses at this level provide irrelevant details or unsupported personal opinions or may simply repeat the question. Or, responses simply repeat what Abigail Adams said without interpreting her statements.

- No, it makes everything confusing.
- I don't think so because it sounds boring.
- Yes, Abigail made a good statement and it was a good introduction.
- Maybe because they should have had a little part about the battles of Lexington and Concord.

- Yes, because she urged with her husband to "Remember the ladies and be more generous and favorable to them and their ancestors."

Full Comprehension - Student Response 2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

I think the statement about Abigail Adams makes an excellent start to the article. This simple statement allows the reader to trace the suffrage movement through history. It shows when women first promised to fight for the vote.

2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

Yes. because, it shows the main idea of the story. And it shows the determination of women to get the right to vote.

Scorer Comments:
Both responses offer an opinion about whether the statements in the first paragraph are an effective way to begin the article. The first response points out the historical progression of women's suffrage. The second response emphasizes a main idea of the article.

Partial Comprehension - Student Response

2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

the statements by abigail Adams, was an effective way to begins the article. She was standing up for what she believed in and she warned the people that she would rebel.

2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

I think the statements were pretty good, because it tells the readers' beforehand what the passage will be about.

Scorer Comments:
Both responses show partial understanding. The first response indicates an overall comprehension of the Adams statement, but there is no explanation about the effectiveness of beginning the article in this way. The second response expresses an opinion about the effectiveness of the first paragraph, but there is no supporting information from the article.

Little or No Comprehension - Student Response

2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

yes because everyone should have equal voting rights.

2. Do you think the statements by Abigail Adams in the first paragraph are an effective way to begin the article? Explain why or why not using information from the article.

NO Because it doesnt go into detail enough.

Scorer Comments:
Neither response answers the question correctly. The first response is an unsupported personal opinion. The second response describes a feature of writing in general, not a feature of strong or weak introductions.

- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Full Comprehension Response)

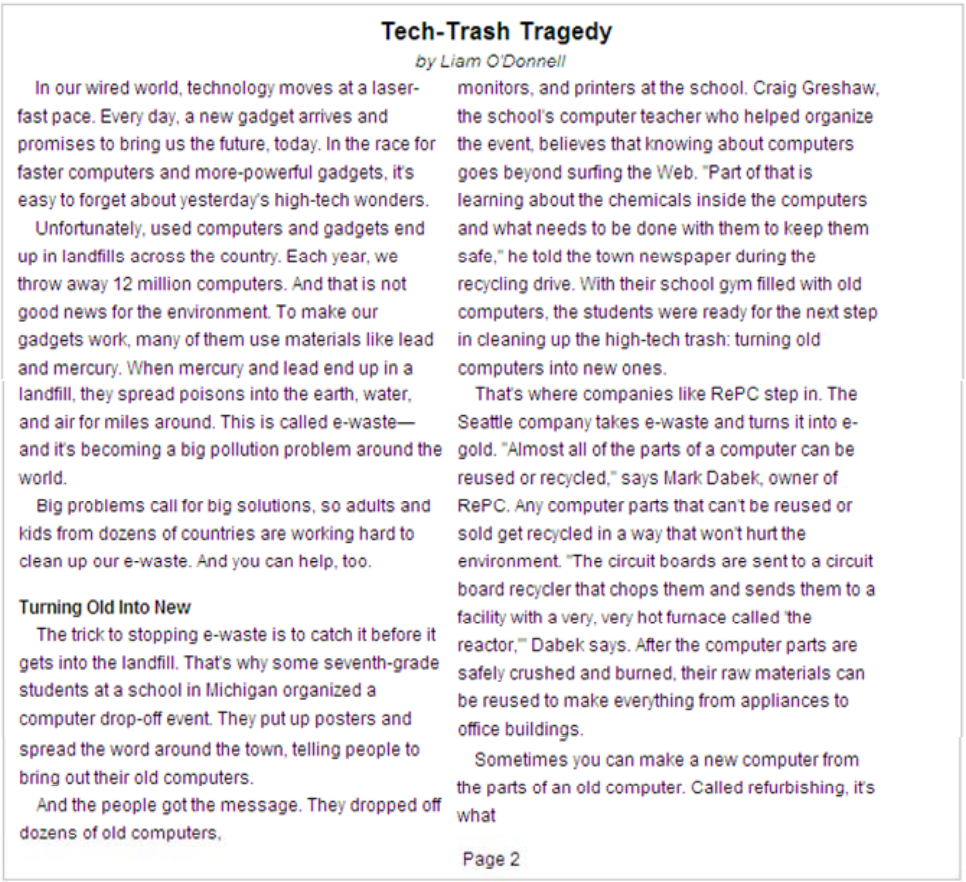
Jurisdiction	Little/No Comprehension Row Pct.	Partial Comprehension Row Pct.	Full Comprehension Row Pct.	Omitted Row Pct.	Off task Row Pct.
Austin	19	49	31	2	#
Hillsborough County	19	50	29	2	#
New York City	22	51	23	4	#
Miami-Dade	25	50	22	2	#
Charlotte	20	58	21	2	#
Atlanta	25	53	20	2	#
Jefferson County (KY)	25	54	20	1	#
Los Angeles	28	49	20	4	#
BOSTON	**19**	**58**	**19**	**4**	**#**
Chicago	26	54	18	2	#
Cleveland	37	41	18	3	1
Fresno	31	45	18	5	#
San Diego	28	49	18	4	1
Baltimore City	28	47	17	8	#
Albuquerque	22	59	16	1	1
Houston	28	51	16	5	1
Philadelphia	29	50	16	4	#
District of Columbia (DCPS)	32	48	15	5	#
Milwaukee	39	44	15	2	1
Detroit	29	53	12	5	#
Dallas	37	46	11	5	1

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Reading scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented, are illegible, or cannot otherwise be scored.

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

Sample #3



Tech-Trash Tragedy

by Liam O'Donnell

In our wired world, technology moves at a laser-fast pace. Every day, a new gadget arrives and promises to bring us the future, today. In the race for faster computers and more-powerful gadgets, it's easy to forget about yesterday's high-tech wonders.

Unfortunately, used computers and gadgets end up in landfills across the country. Each year, we throw away 12 million computers. And that is not good news for the environment. To make our gadgets work, many of them use materials like lead and mercury. When mercury and lead end up in a landfill, they spread poisons into the earth, water, and air for miles around. This is called e-waste—and it's becoming a big pollution problem around the world.

Big problems call for big solutions, so adults and kids from dozens of countries are working hard to clean up our e-waste. And you can help, too.

Turning Old Into New

The trick to stopping e-waste is to catch it before it gets into the landfill. That's why some seventh-grade students at a school in Michigan organized a computer drop-off event. They put up posters and spread the word around the town, telling people to bring out their old computers.

And the people got the message. They dropped off dozens of old computers, monitors, and printers at the school. Craig Greshaw, the school's computer teacher who helped organize the event, believes that knowing about computers goes beyond surfing the Web. "Part of that is learning about the chemicals inside the computers and what needs to be done with them to keep them safe," he told the town newspaper during the recycling drive. With their school gym filled with old computers, the students were ready for the next step in cleaning up the high-tech trash: turning old computers into new ones.

That's where companies like RePC step in. The Seattle company takes e-waste and turns it into e-gold. "Almost all of the parts of a computer can be reused or recycled," says Mark Dabek, owner of RePC. Any computer parts that can't be reused or sold get recycled in a way that won't hurt the environment. "The circuit boards are sent to a circuit board recycler that chops them and sends them to a facility with a very, very hot furnace called 'the reactor,'" Dabek says. After the computer parts are safely crushed and burned, their raw materials can be reused to make everything from appliances to office buildings.

Sometimes you can make a new computer from the parts of an old computer. Called refurbishing, it's what

Page 2

Out with the old and in with the new! Look how it piles up!

the tech whizzes at RePC do best. Buying a refurbished computer is a lot cheaper than buying a new one. But who wants a computer made up of old parts?

A lot of people, actually. Places like schools and community centers are often short on cash, but need computers to help them get things done. Robert Sterling, a computer teacher at a high school in California, uses computers donated from local businesses to motivate students and teach them about recycling. "If kids learn to recycle everything," says Sterling, "they will set a good example for some of the older people who are not in the habit yet of recycling every day."

Recycling old computers is big business, and there are many other companies like RePC across the country. Many big charities have computer-recycling programs too, but be sure to call them first before you drop off any equipment.

Computers aren't the only technology that can be reused. Last year, schools in New Mexico gave old cell phones a new lease on life while also helping to raise money for charity. The students collected eleven garbage bags of old cell phones, sold them to a cell phone refurbishing company, donated the money to charity, and helped keep the environment clean—all at the same time.

Building a Greener Future

Some computer makers are tackling tech trash by designing more environmentally responsible products. More new computers are made with recycled plastic and use less electricity. Many also have no lead in their circuits,

which makes them less damaging to the environment. The same goes for those new flat monitors. Not only do they look cool, but they also use less-harmful chemicals.

Computers are an important part of our wired world. It's up to us to make sure that they don't pollute our planet. Talking to others about e-waste is a great way to start tackling the problem. Speak to your teacher about organizing a computer collection drive at your school. Next time your baseball team is raising money, try collecting old cell phones. By working together for a clean future, we can make e-waste a thing of the past.

From *ODYSSEY'S* September 2004 issue:
Wired, Wired Word, © 2004, Carus Publishing Company, published by Cobblestone Publishing, 30 Grove Street, Suite C, Peterborough, NH 03458. All Rights Reserved.
Used by permission of the publisher.

7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.

_____

_____

_____

- **Question Description: Tech-Trash:** Provide evidence to support an evaluation
- **Block & Number:** Block R13 Question #7
- **Type of Question:** Extended Constructed Response

- **Difficulty:** Medium (59.27% Correct- National Data)
- **Content Area (2009 and on):** Informational
- **Cognitive Target (2009 and on): Critique/Evaluate**
- **Key/Scoring Guide:**

Extensive

Responses at this level provide an opinion about whether the problem of tech trash will be difficult to solve and explain the answer using two references to the article.

- I don't think the problem of tech trash will be difficult to solve at all. I think if all the people hear how harmful tech trash can be to their own health they will understand and be helpful recycling their old computers. Now that companies are building computers less likely to harm the environment the general public will understand and do their best to help.
- I believe tech trash will take a while to solve. First, the highly damaging chemicals inside today's technology have been going into landfills for a long time. Second, is because of people's involvement. Not a lot of people are going to willingly take the time to recycle their technology.

Essential

Responses at this level provide an opinion about whether the problem of tech trash will be difficult to solve and explain the answer using one reference to the article.

- Yes, it will be because the author says we're throwing away 12 million computers.
- No, I don't think tech trash will be difficult to solve because I feel that people will be more likely to buy a recycled, cheaper computer than a new expensive one.

Partial

a) Responses at this level provide information from the article related to the question but do not connect this information to an opinion.
   - We throw away 12 million computers a year.
   - RePC is helping turn e-waste into e-gold.

OR

b) Responses provide an opinion but refer generally to the article.
   - No, because it's quite easy to collect things (old) to make into new things.
   - Tech trash is not difficult to solve because all you have to do is recycle as much as possible.
   - If everyone gets involved, then it will not be as complicated because more people are helping.
   - It will be hard to solve, because you have to spread the word around to so many people.
   - No, because if all people start fighting e-waste by not throwing away old computers then there won't be a problem to solve.

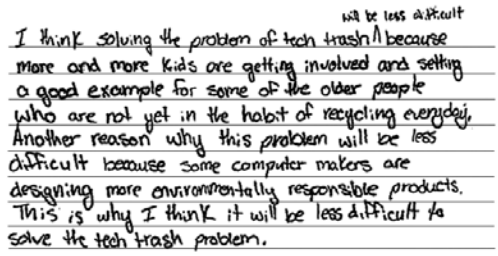
Unsatisfactory

Responses at this level provide incorrect information, irrelevant details, or unsupported personal opinions. Responses may simply repeat the question.

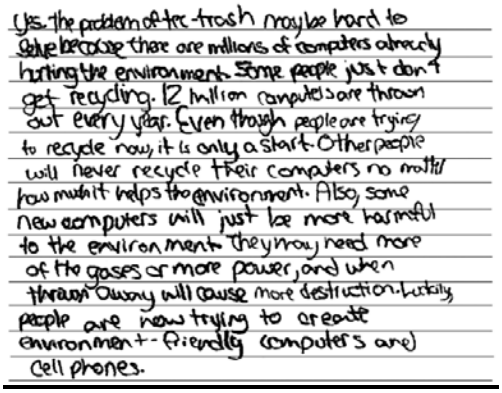
- I think no because we should recycle most trash.
- Well for some people it will be difficult but for some it will be easy.
- Yes, because people don't listen.
- I think yes, because people don't care about the environment.

Extensive - Student Response

7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



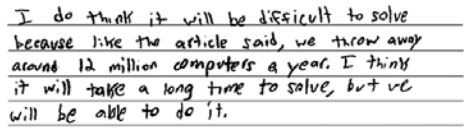
7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



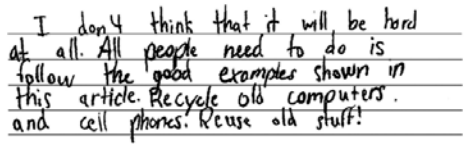
Scorer Comments:
Both responses provide opinions about whether the tech-trash problem will be difficult to solve and support the opinion by using two references to the article. The first response takes a positive stand; the second response provides a negative opinion. Both responses support the opinions with two appropriate references.

Essential - Student Response

7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



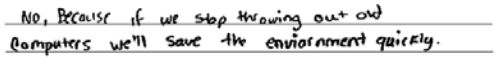
7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



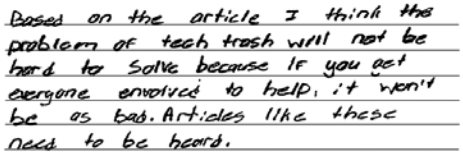
Scorer Comments:
Both responses give opinions about the tech-trash problem and support the opinion with one reference to the article. The first response indicates that the problem will be difficult to solve. The second response gives one reference to the text supporting the idea that the problem is not a difficult one.

Partial - Student Response

7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



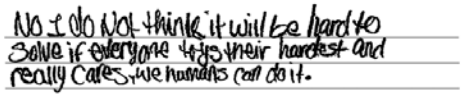
7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



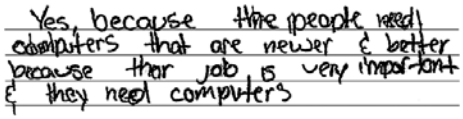
Scorer Comments:
Both responses provide opinions about solving the tech-trash problem and support the opinions with general references to the article. More specific references would be needed to obtain a higher score.

Unsatisfactory - Student Response

7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



7. Based on what you have read in this article, do you think the problem of tech trash will be difficult to solve? Explain your answer using two references to the article.



Scorer Comments:
The first response provides a characterization of the nature of people that is not text-based. The second response provides only irrelevant details

- ## Jurisdiction Data

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Extensive Response)

Jurisdiction	Unsatisfactory Row Pct.	Partial Row Pct.	Essential Row Pct.	Extensive Row Pct.	Omitted Row Pct.	Off task Row Pct.
Charlotte	10	28	23	36	3	#
BOSTON	**7**	**19**	**33**	**32**	**9**	**#**
Hillsborough County	7	29	30	32	2	#
Jefferson County (KY)	14	27	28	30	1	#
New York City	7	28	29	30	6	#
San Diego	10	26	30	30	3	1
Miami-Dade	9	29	26	29	7	#
Los Angeles	12	31	26	26	5	#
Austin	11	28	30	25	5	#
Chicago	12	29	26	25	6	1
Philadelphia	13	26	28	24	8	1
Detroit	21	30	21	22	7	1
Albuquerque	15	36	26	21	1	#
District of Columbia (DCPS)	16	27	25	21	10	1
Atlanta	15	30	30	19	5	#
Houston	12	34	24	19	12	#
Cleveland	13	38	28	18	3	#
Dallas	16	35	24	15	10	1
Fresno	16	37	27	14	4	2
Baltimore City	10	33	31	13	12	1
Milwaukee	14	45	27	11	1	1

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Reading scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented, are illegible, or cannot otherwise be scored.

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

Grade 4 Mathematics:

Sample #1

15. Each of the 18 students in Mr. Hall's class has p pencils. Which expression represents the total number of pencils that Mr. Hall's class has?

A. $18 + p$
B. $18 - p$
C. $18 \times p$
D. $18 \div p$

- **Question Description:** Identify expression that models scenario
- **Block & Number:** Block M12 Question #15
- **Type of Question:** Multiple Choice
- **Item Difficulty:** Hard (34.73% Correct – National data)
- **Content Area:** Algebra
- **Complexity (2005 and on):** Low
- **Key/Scoring Guide:** The correct answer is C.
- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Correct - C)

Jurisdiction	A Row Pct.	B Row Pct.	C* Row Pct.	D Row Pct.	Omitted Row Pct.
Hillsborough County	24	7	51	17	1
Miami-Dade	20	5	45	28	2
Austin	22	6	44	28	1
Dallas	23	6	42	29	1
Charlotte	22	6	42	28	2
Houston	23	6	41	28	2
San Diego	27	7	40	25	1
BOSTON	**32**	**6**	**35**	**26**	**1**
Atlanta	34	8	35	23	1
Albuquerque	40	9	35	15	2
New York City	37	6	34	21	1
Los Angeles	34	9	33	24	1
Jefferson County (KY)	37	8	33	20	2
Philadelphia	39	12	32	15	1
Baltimore City	43	9	32	14	2
Chicago	41	10	30	17	2
Detroit	37	11	29	22	2
District of Columbia (DCPS)	37	10	28	21	5
Milwaukee	43	14	27	15	1
Fresno	37	10	27	24	2
Cleveland	42	8	25	22	3

‡ Reporting standards not met.
† Not applicable.
* Indicates correct response.
NOTE: DCPS = District of Columbia Public Schools. The NAEP Mathematics scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Mathematics Assessment.

Sample #2

12. Mr. Jones picked a number greater than 100.

He told Gloria to divide the number by 18.

He told Edward to divide the number by 15.

Whose answer is greater?

⬭ Gloria's ⬭ Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

- **Question Description:** Describe the effect of division on size of whole numbers
- **Block & Number:** Block M9 Question #12
- **Type of Question:** Short Constructed Response
- **Item Difficulty:** Hard (21.47% Correct – National data)
- **Content Area:** Number properties and operations
- **Complexity (2005 and on):** High
- **Key/Scoring Guide:**

Solution:

Correct oval: Edward's

Explanation:

Dividing by a smaller number gives a greater answer.
OR
Dividing by a larger number gives a smaller answer.
OR
A smaller number goes into another number more times.

Score & Description

Correct
Correct oval filled in and acceptable explanation

Partial 1
No oval filled in but acceptable explanation given

Partial 2
Correct oval filled in but explanation only consists of one or more examples without generalizing

Partial 3
Correct oval filled in with incomplete or partially correct explanation

Incorrect 1
Correct oval filled in with incorrect explanation, no explanation, or no example

Incorrect 2
Other incorrect responses

Correct - Student Response

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.

Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

the smaller number you divide a number by, the larger the answer.

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

Gloria has a bigger #, so she has a smaller # as answer.

Scorer Comments:
These answers are correct. In each response, the correct oval is selected and an acceptable explanation is given.

Partial 1 - Student Response

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ○ Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

Because 15 is smaller than 18 so it will take more number to make the answer.

Scorer Comments:
This response is partially correct, as neither oval is selected, but an explanation supporting the correct oval is supplied.

Partial 2 - Student Response

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

I picked Edward's anser because when I divided 100/18 I got 5 R 10. When I divided 100/15 I got 6 R 10.

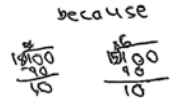
12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.

He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

because



Scorer Comments:
These responses are partially correct. In each response, the correct oval was selected and examples were given, but there was no generalization concluding that division by a smaller number yields a larger answer.

Partial 3 - Student Response

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

The reason is because your divide
by a less number.

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

Because 15 is less than 18 right

Scorer Comments:
These responses are partially correct. In each response, the correct oval is selected and an incomplete explanation is given.

Incorrect 1 - Student Response

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

Because it is even.

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ● Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

Scorer Comments:
These responses are incorrect. Each has the correct oval filled in. In the first response an incorrect explanation is given. There is no explanation given in the second response.

Incorrect 2 - Student Response

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

● Gloria's ○ Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

because 18 is greater than 15

12. Mr. Jones picked a number greater than 100.
He told Gloria to divide the number by 18.
He told Edward to divide the number by 15.
Whose answer is greater?

○ Gloria's ○ Edward's

Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

18⟌100 15⟌100

Scorer Comments:
These responses are incorrect. In the first response, the incorrect oval is filled in and the explanation is incorrect. In the second response, neither oval is filled in and the explanation given is insufficient.

- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Correct)

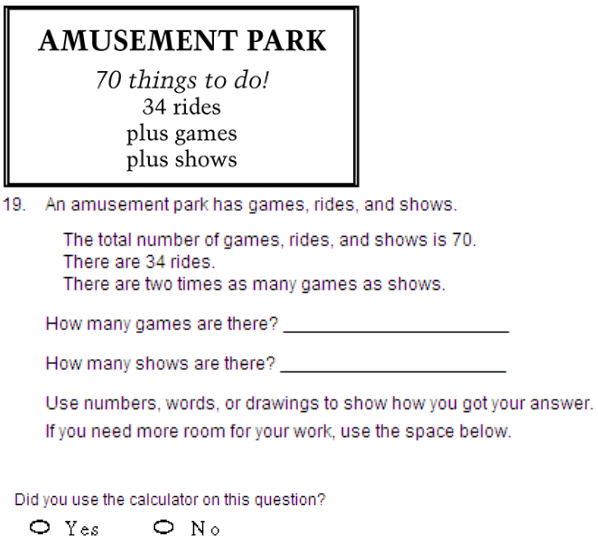
Jurisdiction	Incorrect 2 Row Pct.	Incorrect 1 Row Pct.	Partial 3 Row Pct.	Partial 2 Row Pct.	Partial 1 Row Pct.	Correct Row Pct.	Omitted Row Pct.	Off task Row Pct.
Charlotte	40	24	13	3	#	19	1	#
Hillsborough County	39	26	12	5	#	18	1	#
Albuquerque	42	21	17	3	#	17	1	#
Austin	40	28	10	3	#	17	1	#
San Diego	47	25	10	2	#	15	2	#
Jefferson County (KY)	53	21	9	1	#	13	2	#
New York City	44	28	12	2	#	12	1	#
BOSTON	**51**	**24**	**8**	**4**	**#**	**10**	**3**	**#**
District of Columbia (DCPS)	57	23	9	#	#	10	2	#
Los Angeles	52	27	8	1	#	10	2	#
Atlanta	58	21	8	3	#	9	1	#
Chicago	54	27	7	#	#	9	2	#
Philadelphia	53	27	8	2	#	9	1	#
Houston	52	25	8	4	#	8	2	1
Miami-Dade	52	31	6	3	#	8	#	#
Dallas	53	26	9	3	#	6	2	2
Fresno	54	29	5	3	#	6	1	#
Milwaukee	64	18	11	1	#	6	#	#
Baltimore City	58	29	5	2	#	5	1	#
Cleveland	58	32	4	1	#	5	1	#
Detroit	64	27	4	#	#	3	2	#

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Mathematics scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented, are illegible, or cannot otherwise be scored.

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

Sample #3



AMUSEMENT PARK

70 things to do!
34 rides
plus games
plus shows

19. An amusement park has games, rides, and shows.

The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? _____

How many shows are there? _____

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

Did you use the calculator on this question?

○ Yes ○ No

- **Question Description:** Solve arithmetic problem using multiple operations (calculator available)
- **Block & Number:** Block M8 Question #19
- **Type of Question:** Extended Constructed Response
- **Item Difficulty:** Hard (15.33% Correct – National data)
- **Content Area:** Number properties and operations
- **Complexity (2005 and on):** Moderate
- **Key/Scoring Guide:**

Solution:

Sample Correct Response:

70-34=36 so there are 36 shows and games.

The number of games is twice the number of shows; there must be 24 games and 12 shows.

Score & Description

Extended

24 games and 12 shows with correct explanation or work

Satisfactory

Has subtraction error but has games and shows in correct ratio (2:1)
OR
Has 12 games and 24 shows with work
OR
Has 24 games and 12 shows with no work

Partial

Finds 36, and has ratio of 2 to 1 (but not 24 to 12) and sum of games and shows is less than 36
OR

Has 36 games and 18 shows with or without work
OR
Has 72 games and 36 shows with or without work
OR
Shows a process that reflects understanding of the question, but does not find the correct ratio

Minimal

Finds 36 by subtraction or adding on to 34 to get 70
OR
Number of games plus number of shows is 36
OR
Has games and shows in a two to one ratio but nothing else correct

Incorrect

Incorrect response

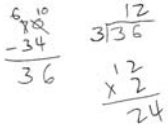
Extended - Student Response

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 24

How many shows are there? 12

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.



19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 24

How many shows are there? 12

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

70-34=36 so 36÷3=12 thats the num ber of shows there ar then you subtractive

Scorer Comments:
These extended responses provide correct numerical answers for both parts and give correct explanations showing how the answers were obtained.

Satisfactory - Student Response

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 24

How many shows are there? 12

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 12

How many shows are there? 24

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

You do 70-34=36. The you estimate what number and 2 times as much as the number plus 34 equals 70. So I got 12+24+34=70.

Scorer Comments:

These responses are scored as satisfactory. In the first response, correct numerical answers were provided but no explanation was given for the answers. In the second response, a correct procedure was used to arrive at the correct numerical responses, but the numbers were attributed to the wrong categories.

Partial - Student Response

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 18

How many shows are there? 9

$$\begin{array}{r} 6\,^{1}\!\not{0}^{10} \\ -\ 34 \\ \hline 36 \end{array}$$

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

I used a calculator and paper.

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 72

How many shows are there? 36

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

I minused 70 - 34 which equaled 36 was the answer for how many shows I had I added that up twice to get how many games there were 72

Scorer Comments:

These responses are partially correct. The first response correctly indicates that there are 36 games and shows and the numerical answers are in the correct ratio, but they do not add to 36. The second response has 72 games and 36 shows with work shown.

Minimal - Student Response

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 15

How many shows are there? 21

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

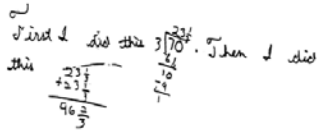
You subtracted 70-34=36 then you make 2 numbers that you can put.

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? $46\frac{2}{3}$

How many shows are there? $23\frac{1}{3}$

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.



Scorer Comments:
These responses are minimally correct. The first response correctly indicates that there are 36 games and shows, but the numerical answers are not in the ratio of 2 to 1. The second response correctly gives numerical answers in the ratio of 2 to 1, but that do not add to 36.

Incorrect - Student Response

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 36

How many shows are there? 12

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

calculator

19. An amusement park has games, rides, and shows.
The total number of games, rides, and shows is 70.
There are 34 rides.
There are two times as many games as shows.

How many games are there? 70

How many shows are there? 70

Use numbers, words, or drawings to show how you got your answer.
If you need more room for your work, use the space below.

add

Scorer Comments:
These responses are incorrect. The numerical answers do not add to 36 and they are not in the ratio of 2 to 1. The explanations provided do not demonstrate understanding of the question.

▪ Jurisdiction Data

Percentage of Students in Each Response Category by TUDA Districts
(Sorted by % Extended Response)

Jurisdiction	Incorrect Row Pct.	Minimial Row Pct.	Partial Row Pct.	Satisfactory Row Pct.	Extended Row Pct.	Omitted Row Pct.	Off task Row Pct.
Charlotte	44	27	1	5	12	9	#
Austin	54	23	2	2	9	9	1
Hillsborough County	57	20	3	2	9	8	#
Albuquerque	59	24	3	#	5	10	#
Dallas	65	23	1	1	5	6	#
BOSTON	**47**	**23**	**1**	**2**	**4**	**22**	**1**
Atlanta	60	18	3	1	4	15	#
Jefferson County (KY)	58	20	1	1	4	15	#
New York City	60	26	2	1	4	6	1
Philadelphia	64	16	1	1	4	13	1
Baltimore City	65	18	3	1	3	11	#
District of Columbia (DCPS)	62	17	2	3	3	13	1
Fresno	70	14	1	1	3	11	#
Houston	60	22	2	#	3	11	1
Los Angeles	62	18	2	1	3	13	1
Miami-Dade	58	26	2	2	3	8	1
Milwaukee	64	17	1	2	3	13	1
Chicago	63	23	1	1	2	9	#
San Diego	56	27	3	1	2	10	1
Cleveland	65	20	2	2	#	11	#
Detroit	81	10	#	#	#	9	#

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Mathematics scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented, are illegible, or cannot otherwise be scored.

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

Grade 8 Mathematics:

Sample #1

17. If $a > 0$ and $b < 0$, which of the following must be true?

A. $ab > 0$

B. $a - b > 0$

C. $b - a > 0$

D. $a + b > 0$

E. $a + b < 0$

- **Question Description:** Recognize effect of sign on operations
- **Block & Number:** Block M12 Question #17
- **Type of Question:** Multiple Choice
- **Item Difficulty:** Hard (28.48% Correct – National data)
- **Content Area:** Algebra
- **Complexity (2005 and on):** Moderate
- **Key/Scoring Guide:** The correct answer is B
- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts (Sorted by % Correct - B)

Jurisdiction	A Row Pct.	B* Row Pct.	C Row Pct.	D Row Pct.	E Row Pct.	Omitted Row Pct.
Charlotte	16	37	8	25	13	#
BOSTON	**14**	**33**	**9**	**28**	**16**	**#**
San Diego	16	32	10	30	12	#
Hillsborough County	19	30	6	31	14	#
Miami-Dade	19	28	9	32	12	#
Jefferson County (KY)	16	27	7	30	20	#
New York City	20	27	10	29	14	#
Austin	19	26	10	26	18	1
Houston	21	26	9	29	14	#
Baltimore City	20	25	9	33	13	#
Albuquerque	16	24	9	34	17	#
Fresno	20	24	9	32	14	#
Los Angeles	22	24	8	26	19	#
Milwaukee	25	24	8	26	16	1
Atlanta	20	22	9	37	12	#
Cleveland	20	22	10	33	14	#
District of Columbia (DCPS)	22	22	12	27	17	#
Chicago	21	21	9	32	18	#
Detroit	26	19	12	29	15	#
Philadelphia	22	19	10	35	15	#
Dallas	19	16	9	33	22	#

Rounds to zero.

* Indicates correct response.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.

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

Sample #2

9. Bags of Healthy Snack Mix are packed into small and large cartons. The small cartons contain 12 bags each. The large cartons contain 18 bags each.

Meg claimed that she packed a total of 150 bags of Healthy Snack Mix into 2 small cartons and 7 large cartons.

Could Meg have packed the cartons the way she claimed?

◯ Yes ◯ No

Show the computations you used to arrive at your answer.

- **Question Description:** Verify solution to a story problem (calculator available)
- **Block & Number:** Block M8 Question #9
- **Type of Question:** Short Constructed Response
- **Item Difficulty:** Easy (64.1% Correct – National data)
- **Content Area:** Number properties and operations
- **Complexity (2005 and on):** Moderate
- **Key/Scoring Guide:**

Solution:

Sample Correct Response:

Correct oval: Yes

Solution:

$2(12) + 7(18) = 150$

$24 + 126 = 150$

NOTE(S): A correct solution must show one or more of the following.

A "set-up" for the solution (i.e., $2 \cdot 12 + 7 \cdot 18$)

$24 + 126 = 150$

Both $2 \cdot 12 = 24$ and $7 \cdot 18 = 126$

A correct pictorial representation

A solution that shows only $2 \cdot 12 = 24$ or $7 \cdot 18 = 126$ is incomplete.

A solution that shows only $24 + 126$ is incomplete.

Score & Description

Correct 1
Correct oval filled in with correct solution

Correct 2
Neither oval filled in with correct solution

Partial 1
Correct oval filled in with incomplete or partially correct solution

Partial 2
Incorrect oval filled in with correct process (with or without only one computational error)

Incorrect 1
Correct oval filled in with incorrect or no solution

Incorrect 2
Other incorrect responses

- **Jurisdiction Data**

Percentage of Students in Each Response Category by TUDA Districts
(Sorted by % Correct 1)

Jurisdiction	Incorrect 2 Row Pct.	Incorrect 1 Row Pct.	Partial 2 Row Pct.	Partial 1 Row Pct.	Correct 2 Row Pct.	Correct 1 Row Pct.	Omitted Row Pct.	Off task Row Pct.
Jefferson County (KY)	17	14	1	3	#	63	1	#
Austin	16	16	4	3	#	60	2	#
Chicago	24	10	3	2	#	60	1	#
Albuquerque	16	18	4	1	#	59	2	#
BOSTON	**17**	**12**	**4**	**3**	**#**	**58**	**5**	**#**
Charlotte	22	13	4	2	1	58	#	#
Hillsborough County	19	16	3	2	1	58	1	#
Dallas	19	15	5	5	#	52	3	#
Miami-Dade	22	18	3	4	1	52	1	#
New York City	25	13	5	2	#	52	2	#
Houston	23	16	5	3	#	51	2	#
Los Angeles	24	15	6	2	#	51	2	#
San Diego	19	18	6	4	#	51	2	#
Milwaukee	25	17	2	3	1	49	2	#
Philadelphia	24	19	4	4	#	47	1	1
District of Columbia (DCPS)	24	19	2	3	#	46	5	#
Baltimore City	30	18	3	1	#	44	4	#
Atlanta	28	19	5	3	#	43	2	#
Cleveland	28	24	3	2	#	40	2	1
Detroit	33	21	3	1	#	39	2	#
Fresno	26	30	5	1	#	36	#	#

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Mathematics scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented,

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

Sample #3

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: _____ cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $_____

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

- **Question Description:** Solve multi-step problem involving volume (calculator available)
- **Block & Number:** Block M9 Question #15
- **Type of Question:** Extended Constructed Response
- **Item Difficulty:** Hard (30.09% Correct – National data)
- **Content Area:** Measurement

- **Complexity (2005 and on):** Moderate
- **Key/Scoring Guide:**

Solution:

Sample Correct Response:

(a) Answer: 40 cubic feet

Solution: $(8)(10)(0.5) = 40$

(b) Answer: $195

Solution: $(\$4)(40) + \$35 = \$195$

Score & Description

Part A

Correct
Answer of 40 with correct work

Partial 1
Answer of 40 with incomplete, partially correct, incorrect, or no work

Partial 2
Answer is not 40, but correct process is shown

Partial 3
Answer of 480 (does not convert 6 inches to 0.5 foot)

Incorrect
Incorrect response

Part B

Correct 1
Answer of 195 with correct work

Correct 2
Answer is consistent with response to part (a) with correct work

Partial 1
Answer of 195 with incomplete, partially correct, incorrect, or no work

Partial 2
Answer is consistent with response to part (a) with incorrect work or no work

Partial 3
Correct process is shown, but answer from part (a) not used

Incorrect
Incorrect response

Composite Score:

Student response received one of five possible composite scores (Extended, Satisfactory, Partial, Minimal, or Incorrect) based on the student's combined performance on Parts A, and B of the item. For example, a student response of Correct for Part A, and Partial 2 for Part B received a composite score of Satisfactory.

Composite Score	Part A	Part B
Extended	Correct	Correct 1
	Correct	Correct 2
Satisfactory	Correct	Partial 1
	Correct	Partial 2
	Partial 1	Correct 1
	Partial 1	Correct 2
	Partial 1	Partial 1
	Partial 1	Partial 2
Partial	Correct	Partial 3
	Correct	Incorrect
	Partial 2	Correct 1
	Partial 2	Correct 2
	Partial 2	Partial 1
	Partial 2	Partial 2
	Partial 3	Correct 1
	Partial 3	Correct 2
	Partial 3	Partial 1
	Partial 3	Partial 2
	Incorrect	Correct 1
	Incorrect	Correct 2
Minimal	Partial 1	Partial 3
	Partial 1	Incorrect
	Partial 2	Partial 3
	Partial 3	Partial 3
	Incorrect	Partial 1
	Incorrect	Partial 2
Incorrect	Partial 2	Incorrect
	Partial 3	Incorrect
	Incorrect	Partial 3
	Incorrect	Incorrect

Extended - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

    (a) What is the volume of sand needed, in cubic feet, to fill the space?

    Answer: 40 cubic feet

    Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

    8 x 10 x .5

    (b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

    Answer: $ 195

    Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

    $4 x 40 + $35

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 40 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

Logic, 6in. is = ½ ft. 8 x 10 =
80, 80 x ½ = 40. Logic! People should use it more often!

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 195

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

4 x 40 = + 35
in calculator

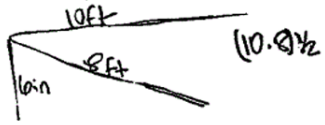
Scorer Comments:
The responses for part (a) are correct. They give an answer of 40 cubic feet with correct work. The responses for part (b) are correct. They give an answer of $195 with correct work.
Satisfactory - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 40 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.



(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 195

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

Satisfactory - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 40 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 195

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

40•4 = 160 + 35 = 195

Satisfactory - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 40 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 195

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

Scorer Comments:
In the first response, part (a) is correct. It gives an answer of 40 cubic feet with correct work. The response for part (b) is partially correct. It gives an answer of $195 with no work. In the second response, part (a) is partially correct. It gives an answer of 40 cubic feet with no work. The response for part (b) is correct. It gives an answer of $195 with correct work. In the third response, part (a) is partially correct. It gives an answer of 40 cubic feet with no work. The response for part (b) is partially correct. It gives an answer of $195 with no work.

Partial - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 120 cubic feet

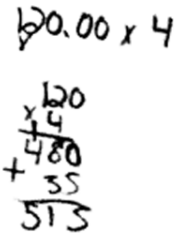
Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

10 × 8 = 80
.5 × 80 = 120.0

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 515

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.



Partial - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 480 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 1,995

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

Scorer Comments:

In the first response, part (a) is partially correct. It shows a correct process but contains a calculation error resulting in an answer of 120 cubic feet. The response for part (b) is correct. It is consistent with the answer in part (a) with work that supports that answer. In the second response, part (a) is partially correct. It does not convert the depth of 6 inches to feet. The response for part (b) is partially correct. It is consistent with the answer in part (a) but does not show the work leading to the answer.

Minimal - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 48 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 277

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

48 x 1 +35=

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 80 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

8·10=80

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 335

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

80·4=325+35=335

Scorer Comments:

The first response for part (a) is incorrect. It gives an answer of 48 cubic feet without showing work. The first response for part (b) is partially correct. It gives an answer consistent with part (a) with an incorrect process. In the second response, the answer for part (a) is incorrect. It gives an answer of 80 cubic feet with incorrect work. The response for part (b) is partially correct. It gives an answer consistent with part (a) with an incorrect process.

Incorrect - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 480 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

8x10x6=480

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 140

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

480÷4+35=140

Incorrect - Student Response

15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: _____ cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 67

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

Incorrect - Student Response

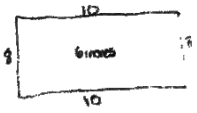
15. In order to prepare a piece of ground for building a brick patio, a rectangle measuring 8 feet by 10 feet must be marked off. Then the dirt within the rectangle must be dug out to a depth of 6 inches. Finally, the resulting space must be filled with sand.

(a) What is the volume of sand needed, in cubic feet, to fill the space?

Answer: 54 cubic feet

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

9x6



(b) Sand costs $4 per cubic foot. What is the total cost of the sand needed to fill this space, including a $35 delivery charge?

Answer: $ 285.00

Show your work. If you used your calculator, show the numbers and operations that you used to get your answer.

4x80-35=285

Scorer Comments:

In the first response, part (a) is partially correct. It does not convert the depth of 6 inches to feet. The response for part (b) is incorrect. It shows an answer of 140 with incorrect work. In the second response, part (a) is blank. The response for part (b) is partially correct. It shows a correct process, but the answer from part (a) is not used. In the third response, part (a) is incorrect. The answer provided and the work shown are both incorrect. The response to part (b) is incorrect. The answer provided and the work shown are both incorrect and are not consistent with the answer to part (a).

▪ Jurisdiction Data

Percentage of Students in Each Response Category by TUDA Districts
(Sorted by % Extended Response)

Jurisdiction	Incorrect Row Pct.	Minimal Row Pct.	Partial Row Pct.	Satisfactory Row Pct.	Extended Row Pct.	Omitted Row Pct.	Off task Row Pct.
Austin	30	4	45	2	8	11	1
BOSTON	**39**	**5**	**38**	**#**	**7**	**12**	**#**
Jefferson County (KY)	39	2	45	#	7	6	#
Charlotte	41	7	40	1	6	5	#
Hillsborough County	42	7	39	2	6	5	#
Albuquerque	37	7	43	1	5	7	1
San Diego	38	4	40	3	5	10	#
Chicago	47	5	39	1	3	5	#
Dallas	41	9	27	1	3	19	1
Los Angeles	45	9	27	#	3	15	#
Miami-Dade	48	5	33	1	3	9	#
Baltimore City	52	7	26	1	2	11	#
Houston	46	5	28	1	2	17	#
New York City	46	6	30	1	2	13	#
Philadelphia	44	3	37	#	2	13	1
Cleveland	57	7	25	1	1	9	#
District of Columbia (DCPS)	55	5	25	#	1	14	#
Fresno	62	7	17	1	1	12	#
Milwaukee	57	9	23	#	1	9	#
Atlanta	55	8	26	#	#	10	#
Detroit	60	7	22	#	#	10	#

Rounds to zero.

NOTE: DCPS = District of Columbia Public Schools. The NAEP Mathematics scale ranges from 0 to 500.
Some apparent differences between estimates may not be statistically significant.
Off task applies to responses that do not address the question presented,

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

(Intentionally left blank)

Appendix D

2011 NAEP Results by Student Group: Grade 4
Scale Scores and Percents of Students at Each Achievement Level

	Boston					Large Cities				
	Scale Score	Percent of Students			% Students Assessed	Scale Score	Percent of Students			% Students Assessed
		Proficient & above	*Basic* & above	Below *Basic*			*Proficient* & above	*Basic* & above	Below *Basic*	
READING										
All Students	**217**	**26**	**62**	**38**	**100**	**211**	**24**	**55**	**45**	**100**
Student Status										
Students with Disabilities	189	7	26	74	17	177	8	23	77	11
English Language Learners	202	10	45	55	35	187	6	28	72	21
Gender										
Female	220	30	67	33	50	215	26	59	41	50
Male	213	23	58	42	50	207	21	52	48	50
Race/Ethnicity										
African American / Black	211	17	56	44	35	202	14	45	55	27
Asian / Pacific Islander	226	37	70	30	8	224	38	70	30	8
Hispanic	214	23	59	41	43	203	16	47	53	42
White	241	57	86	14	12	232	47	78	22	20
Free/Reduced-Price Lunch										
Eligible	212	21	58	42	80	204	16	48	52	73
MATHEMATICS										
All Students	**237**	**33**	**81**	**19**	**100**	**233**	**30**	**74**	**26**	**100**
Student Status										
Students with Disabilities	216	8	55	45	19	209	12	44	56	11
English Language Learners	230	22	77	23	35	219	14	58	42	22
Gender										
Female	238	33	83	17	50	233	29	74	26	49
Male	236	32	80	20	50	233	31	75	25	51
Race/Ethnicity										
African American / Black	230	21	76	24	34	222	16	63	37	27
Asian / Pacific Islander	259	69	95	5	8	249	52	86	14	8
Hispanic	234	26	80	20	44	228	23	71	29	43
White	255	63	93	7	12	251	55	91	9	20
Free/Reduced-Price Lunch										
Eligible	234	27	80	20	81	227	22	69	31	74

 # Estimate rounds to zero.

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

2011 NAEP Results by Student Group: Grade 8

Scale Scores and Percent of Students at Each Achievement Level

	Boston					Large Cities				
	Scale Score	Percent of Students			% Students Assessed	Scale Score	Percent of Students			% Students Assessed
		Proficient & above	*Basic* & above	Below *Basic*			*Proficient* & above	*Basic* & above	Below *Basic*	
READING										
All Students	**255**	**24**	**63**	**37**	**100**	**255**	**23**	**65**	**35**	**100**
Student Status										
Students with Disabilities	227	5	29	71	16	221	5	28	72	10
English Language Learners	221	3	25	75	16	220	2	25	75	11
Gender										
Female	260	29	69	31	50	259	26	69	31	50
Male	249	19	58	42	50	251	20	61	39	50
Race/Ethnicity										
African American / Black	246	14	56	44	38	245	13	55	45	27
Asian / Pacific Islander	280	50	87	13	10	270	41	79	21	8
Hispanic	245	15	55	45	35	249	16	60	40	43
White	281	55	85	15	15	273	43	83	17	20
Free/Reduced-Price Lunch										
Eligible	249	17	58	42	75	248	16	59	41	70
MATHEMATICS										
All Students	**282**	**34**	**69**	**31**	**100**	**274**	**26**	**63**	**37**	**100**
Student Status										
Students with Disabilities	250	7	32	68	16	239	6	26	74	11
English Language Learners	253	11	39	61	20	240	5	26	74	11
Gender										
Female	283	34	70	30	50	274	26	64	36	50
Male	280	33	68	32	50	274	26	62	38	50
Race/Ethnicity										
African American / Black	272	21	61	39	37	261	13	49	51	26
Asian / Pacific Islander	319	71	93	7	11	296	49	82	18	8
Hispanic	271	24	62	38	36	267	19	58	42	43
White	305	61	88	12	15	295	48	83	17	20
Free/Reduced-Price Lunch										
Eligible	275	26	65	35	76	266	18	55	45	70

*Estimate rounds to zero.*

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

APPENDIX E: Summary of Scale Score Comparisons

2011 NAEP Average Scale Scores by Subject and Grade level for Large City and TUDA Districts

Subject / Grade Level	LARGE CITY*	Albuquerque**	Atlanta	Austin	Baltimore City	BOSTON	Charlotte	Chicago	Cleveland	Dallas**	Detroit	District of Columbia (DCPS)	Fresno	Hillsborough County (FL)**	Houston	Jefferson County (KY)	Los Angeles	Miami-Dade	Milwaukee	New York City	Philadelphia	San Diego
Reading Grade 4	211	209	212	224	200	**217**	224	203	193	204	191	201	194	231	213	223	201	221	195	216	199	215
Reading Grade 8	255	254	253	261	246	**255**	265	253	240	248	237	237	238	264	252	260	246	260	238	254	247	256
Math Grade 4	233	235	228	245	226	**237**	247	224	216	233	203	222	218	243	237	235	223	236	220	234	225	239
Math Grade 8	274	275	266	287	261	**282**	285	270	256	274	246	255	256	282	279	274	261	272	254	272	265	278

* Large City (LC): Nation-wide schools in cities with a population of 250,000 or more as defined by National Center for Education Sattistics (NCES)

** Distict participate in TUDA for the first time in 2011.

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Appendix F

Grade 4 Reading: 2002 - 2011

Table A-12. Average scores and achievement-level results in NAEP reading for fourth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2002-11

Race/ethnicity and jurisdiction	Average scale score						Percentage of students: At or above *Basic*						Percentage of students: At or above *Proficient*					
	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011
White																		
Nation	227***	227***	228***	230	229	230*	74***	74***	75***	77	77	77	39***	39***	39***	42	41	42*
Large city[1]	224***	226***	228***	231	233	232**	70***	72***	74***	78	79	78	37***	39***	40***	44	47	47**
Albuquerque	—	—	—	—	—	231	—	—	—	—	—	77	—	—	—	—	—	44
Atlanta	250	250	253	253	253	251*,**	86	91	95	95	93	95*,**	67	68	74	71	76	71*,**
Austin	—	—	239***	244	245	249*,**	—	—	86	90	91	92*,**	—	—	54***	63	64	68*,**
Baltimore City	—	—	—	—	220	221*,**	—	—	—	—	64	61*	—	—	—	—	32	34*
Boston	—	225***	230***	230	231	241*,**	—	69***	79	76	77	86**	—	37***	40***	42	46	57*,**
Charlotte	—	237***	240	244	243	244*,**	—	83***	86	89	89	91*,**	—	52	55	61	59	60*,**
Chicago	221	224	225	227	228	229	64***	70	70	74	74	77	35	37	39	40	41	44
Cleveland	—	208	209	215	209	209*,**	—	51	54	61	53	52*,**	—	17	17	22	17	18*,**
Dallas	—	—	—	—	—	237	—	—	—	—	—	83	—	—	—	—	—	51
Detroit	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
District of Columbia (DCPS)	248	254	252	258	257	255*,**	91	90	92	96	95	93*,**	66	70	70	74	75	73*,**
Fresno	—	—	—	—	217	216*,**	—	—	—	—	66	64*,**	—	—	—	—	29	26*,**
Hillsborough County (FL)	—	—	—	—	—	242*,**	—	—	—	—	—	88*,**	—	—	—	—	—	59*,**
Houston	233	235	245	241	243	243*,**	79	82	88	86	91	88*,**	45	48	61	58	59	62*,**
Jefferson County (KY)	—	—	—	—	230	230	—	—	—	—	75	78	—	—	—	—	42	43
Los Angeles	223	217	229	228	222	225	70	60***	71	79	70	75	38	28	43	37	35	36
Miami-Dade	—	—	—	—	238	240**	—	—	—	—	86	84	—	—	—	—	51	54**
Milwaukee	—	—	—	—	223	216*,**	—	—	—	—	71	61*,**	—	—	—	—	34	31*,**
New York City	226	231	226	232	235	235	71	77	75	77	81	80	35	45	36	45	49	51
Philadelphia	—	—	—	—	215	217*,**	—	—	—	—	60	64*,**	—	—	—	—	28	27*,**
San Diego	—	231	226***	234	236	240*,**	—	79	69***	80	85	84*,**	—	43	39***	49	51	57*,**
Black																		
Nation	198***	197***	199***	203***	204	205*	39***	39***	41***	46***	47	49*	12***	12***	12***	14***	15	16*
Large city[1]	192***	193***	196***	199***	201	202**	33***	35***	38***	41***	44	45**	9***	10***	11***	12***	13	14**
Albuquerque	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Atlanta	192***	191***	194***	200	201	203	32***	31***	33***	40	42	44**	8***	8***	10	10	13	14
Austin	—	—	200***	201	211	215*	—	—	43	41	53	62*	—	—	12***	11	18	26
Baltimore City	—	—	—	—	200	198**	—	—	—	—	39	37*,**	—	—	—	—	10	9*,**
Boston	—	202***	203***	204	212	211*,**	—	43***	45***	48	57	56*,**	—	11***	11***	13	18	17
Charlotte	—	205	206	206	211	211*,**	—	48***	49	49	57	56*,**	—	14	16	15	19	18
Chicago	185***	193	190	193	194	197*,**	25***	33	31***	34	36	40*,**	5***	10	7	10	10	11**
Cleveland	—	191	193	192	189	187*,**	—	30	32	30	28	26*,**	—	7	7	5	5	5*,**
Dallas	—	—	—	—	—	204	—	—	—	—	—	45	—	—	—	—	—	11**
Detroit	—	—	—	—	186	190*,**	—	—	—	—	25	30*,**	—	—	—	—	5	6*,**
District of Columbia (DCPS)	188	184***	187***	192	195***	191*,**	28***	27***	29***	33	38	34*,**	7***	7***	8	9	11	11**
Fresno	—	—	—	—	193	191*,**	—	—	—	—	35	32*,**	—	—	—	—	8	8**
Hillsborough County (FL)	—	—	—	—	—	218*,**	—	—	—	—	—	66*,**	—	—	—	—	—	26*,**
Houston	200	201	207	205	210	207*	40	43	49	48	53	49	12	12	16	14	16	14
Jefferson County (KY)	—	—	—	—	203	208*	—	—	—	—	46	50	—	—	—	—	12	18
Los Angeles	186	187	187	196	195	196	25	30	28	37	35	39	6	8	9	13	12	9
Miami-Dade	—	—	—	—	205	210*,**	—	—	—	—	48	54*	—	—	—	—	13	18
Milwaukee	—	—	—	—	187	187*,**	—	—	—	—	29	29*,**	—	—	—	—	6	7*,**
New York City	197***	201***	206	206	208	209*,**	37***	43	49	51	52	53*	9***	13	16	15	17	20*
Philadelphia	—	—	—	—	191	195*,**	—	—	—	—	34	37*,**	—	—	—	—	8	9**
San Diego	—	196	198	199	206	205	—	38	43	44	51	49	—	9	13	12	18	17

See notes at end of table.

Grade 4 Reading: 2002 - 2011 (Continued)

Table A-12. Average scores and achievement-level results in NAEP reading for fourth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2002-11—Continued

Race/ethnicity and jurisdiction	Average scale score						Percentage of students: At or above *Basic*						Percentage of students: At or above *Proficient*					
	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011
Hispanic																		
Nation	199***	199***	201***	204	204	205*	43***	43***	44***	49	48	50*	14***	14***	15***	17	16	18*
Large city[1]	197***	197***	198***	199***	202	203**	38***	40***	40***	44	45	47**	12***	13***	13***	14	14	16**
Albuquerque	—	—	—	—	—	201**	—	—	—	—	—	44**	—	—	—	—	—	16
Atlanta	‡	‡	‡	‡	‡	215*,**	‡	‡	‡	‡	‡	60	‡	‡	‡	‡	‡	23
Austin	—	—	207	206	208	210*	—	—	51	51	53	54	—	—	17	16	17	19
Baltimore City	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Boston	—	201***	200***	204***	209	214*,**	—	42***	42***	47***	55	59*,**	—	12***	10***	14***	17	23*,**
Charlotte	—	202	209	207	212	212*,**	—	46	54	51	60	57	—	15	19	18	23	22
Chicago	193***	196	201	201	203	201**	33***	39	43	45	47	47	9***	12	15	14	15	16
Cleveland	—	201	201	200	200	196**	—	44	44	39	41	36*,**	—	14	14	8	11	9**
Dallas	—	—	—	—	—	200**	—	—	—	—	—	43**	—	—	—	—	—	11*,**
Detroit	—	—	—	—	190	199	—	—	—	—	31	39	—	—	—	—	6	10
District of Columbia (DCPS)	193***	187***	193***	206	207	204	34***	29***	37	55	50	50	8***	8***	12	15	17	21
Fresno	—	—	—	—	194	190*,**	—	—	—	—	36	33*,**	—	—	—	—	9	8*,**
Hillsborough County (FL)	—	—	—	—	—	223*,**	—	—	—	—	—	69*,**	—	—	—	—	—	33*,**
Houston	203	203	203	200***	206	209*,**	45***	44***	44***	43***	49	53*	14	15	13	12***	14	20
Jefferson County (KY)	—	—	—	—	‡	221*,**	—	—	—	—	‡	69*,**	—	—	—	—	‡	30
Los Angeles	185***	189***	190***	190***	193	196*,**	26***	30***	31***	33***	35	40*,**	7***	7***	9	8	8	11*,**
Miami-Dade	—	—	—	—	224	222*,**	—	—	—	—	72	69*,**	—	—	—	—	34	34*,**
Milwaukee	—	—	—	—	198	198**	—	—	—	—	40	41*,**	—	—	—	—	11	13
New York City	201	205	207	203	208	207*	42	47	51	46	53	52	15	16	15	16	20	19
Philadelphia	—	—	—	—	187	191*,**	—	—	—	—	33	39**	—	—	—	—	5	10**
San Diego	—	195	196	196	193	201	—	37	38	40	38	46	—	12	11***	13	11	17

See notes at end of table.

Table A-12. Average scores and achievement-level results in NAEP reading for fourth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2002-11—Continued

Race/ethnicity and jurisdiction	Average scale score						Percentage of students: At or above *Basic*						Percentage of students: At or above *Proficient*					
	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011
Asian/Pacific Islander																		
Nation	223***	225***	227***	231	234	234*	69***	69***	72***	76	79	79*	36***	37***	40***	45	48	49*
Large city[1]	220	223	223	228	228	224**	64	66	67	72	73	70**	32	35	35	40	42	38**
Albuquerque	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Atlanta	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Austin	—	—	‡	236	‡	‡	—	—	‡	78	‡	‡	—	—	‡	56	‡	‡
Baltimore City	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Boston	—	223	224	229	231	226	—	71	68	74	80	70	—	29	33	45	43	37
Charlotte	—	218	‡	235	233	233	—	61	‡	77	77	78	—	31	‡	48	40	50
Chicago	‡	‡	‡	237	232	227**	‡	‡	‡	82	78	74	‡	‡	‡	51	46	39
Cleveland	—	‡	‡	‡	‡	‡	—	‡	‡	‡	‡	‡	—	‡	‡	‡	‡	‡
Dallas	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Detroit	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
District of Columbia (DCPS)	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Fresno	—	—	—	—	194	195*,**	—	—	—	—	37	39*,**	—	—	—	—	11	11*,**
Hillsborough County (FL)	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Houston	‡	‡	‡	231	240	245*	‡	‡	‡	77	86	90	‡	‡	‡	47	52	65*
Jefferson County (KY)	—	—	—	—	‡	256*,**	—	—	—	—	‡	94	—	—	—	—	‡	74*,**
Los Angeles	218	218	223	219	220	225	70	61	66	66	68	76	26	28	37	31	33	36
Miami-Dade	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Milwaukee	—	—	—	—	214	206*,**	—	—	—	—	62	45*,**	—	—	—	—	20	16*,**
New York City	235	227	235	230	235	230	78	72	79	75	82	76	50	39	47	43	50	43
Philadelphia	—	—	—	—	214	212**	—	—	—	—	61	59**	—	—	—	—	25	28**
San Diego	—	222	222	223	227	224**	—	66	69	70	75	72	—	33	32	35	41	40**

— Not available. District did not participate.
‡ Reporting standards not met.
* Significantly different ($p < .05$) from large city in 2011.
** Significantly different ($p < .05$) from the nation in 2011.
*** Significantly different ($p < .05$) from 2011.
[1] Large city includes students from all cities in the nation with populations of 250,000 or more including the participating districts.
NOTE: Beginning in 2009, results for charter schools are excluded from the TUDA results if they are not included in the school district's Adequate Yearly Progress (AYP) report to the U.S. Department of Education. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. 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), various years, 2002-11 Reading Assessments.

Grade 8 Reading: 2002 - 2011

Table A-13. Average scores and achievement-level results in NAEP reading for eighth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2002–11

Race/ethnicity and jurisdiction	Average scale score						Percentage of students: At or above *Basic*						Percentage of students: At or above *Proficient*					
	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011
White																		
Nation	271***	270***	269***	270***	271***	272	83	82***	81***	83***	83	84	39***	39***	37***	38***	39***	41
Large city[1]	270	268***	270***	271	272	273	80	79***	81	82	83	83	40	37***	38	39	42	43
Albuquerque	—	—	—	—	—	271	—	—	—	—	—	83	—	—	—	—	—	40
Atlanta	275	‡	‡	‡	292	287*,**	84	‡	‡	‡	98	96	47	‡	‡	‡	70	65*,**
Austin	—	—	279	284	282	285*,**	—	—	86***	91	90	94*,**	—	—	50	58	55	59*,**
Baltimore City	—	—	—	—	‡	267	—	—	—	—	‡	76	—	—	—	—	‡	34
Boston	—	273	274	275	282	281	—	79	81	80	89	85	—	44	46	48	55	55**
Charlotte	—	278	278	279	276	283*,**	—	88	87	88	87	91*,**	—	49	49	52	48	56*,**
Chicago	266	265	270	266	272	271	75	79	81	77	84	80	31	30	41	38	40	41
Cleveland	—	250	255	262	258	260*,**	—	62	66	80	72	73*,**	—	14	20	26	23	25*,**
Dallas	—	—	—	—	—	276	—	—	—	—	—	87	—	—	—	—	—	46
Detroit	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
District of Columbia (DCPS)	‡	‡	301	‡	‡	290*,**	‡	‡	94	‡	‡	94*,**	‡	‡	74	‡	‡	63*,**
Fresno	—	—	—	—	263	257*,**	—	—	—	—	74	66*,**	—	—	—	—	32	29*,**
Hillsborough County (FL)	—	—	—	—	—	276	—	—	—	—	—	86	—	—	—	—	—	45
Houston	279	270***	280	281	280	283*,**	87	80***	89	89	90	92*,**	47	40***	53	52	52	56*,**
Jefferson County (KY)	—	—	—	—	267	269	—	—	—	—	77	80	—	—	—	—	34	36
Los Angeles	264	266	261	272	271	273	73	76	69***	81	83	83	33	36	31	41	38	41
Miami-Dade	—	—	—	—	273	275	—	—	—	—	81	83	—	—	—	—	43	44
Milwaukee	—	—	—	—	265	255*,**	—	—	—	—	78	67*,**	—	—	—	—	33	26*,**
New York City	‡	270	269	270	271	271	‡	79	80	80	81	82	‡	42	38	41	41	38
Philadelphia	—	—	—	—	266	264	—	—	—	—	76	71*,**	—	—	—	—	33	37
San Diego	—	269	273	271	273	275	—	79	82	82	82	85	—	37	44	42	43	46
Black																		
Nation	244***	244***	242***	244***	245***	248*	54***	53***	51***	54***	56***	58*	13	12***	11***	12***	13***	14
Large city[1]	240***	241***	240***	240***	243	245**	49***	49***	48***	49***	53	55**	10	10***	10	10***	11	13
Albuquerque	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Atlanta	233***	237***	237***	242***	246	249*	39***	44***	43***	50***	57	60	5***	8***	9***	9***	12	12
Austin	—	—	242	238	247	246	—	—	52	46	57	54	—	—	10	10	14	12
Baltimore City	—	—	—	—	243	242**	—	—	—	—	52	50**	—	—	—	—	9	8**
Boston	—	245	244	250	248	246	—	53	52	60	57	56	—	14	13	16	14	14
Charlotte	—	247***	244***	246***	249	253*,**	—	55***	55***	56***	60	65*,**	—	14	13	14	15	18
Chicago	245	243	240	240	243	245	57	52	50	50	53	55	10	10	10	9	11	13
Cleveland	—	238	236	243***	239	234*,**	—	45	44	51***	48	40*,**	—	8	8	7	7	7*,**
Dallas	—	—	—	—	—	244	—	—	—	—	—	51	—	—	—	—	—	9
Detroit	—	—	—	—	232	235*,**	—	—	—	—	40	41*,**	—	—	—	—	7	7*,**
District of Columbia (DCPS)	238***	236***	235***	238***	235	231*,**	46***	45	42	45***	43	40*,**	8	8	9	9	9	10**
Fresno	—	—	—	—	232	230*,**	—	—	—	—	37	36*,**	—	—	—	—	8	9
Hillsborough County (FL)	—	—	—	—	—	247	—	—	—	—	—	56	—	—	—	—	—	12
Houston	247	244	242	249	243	247	60	53	53	62	56	58	15	12	11	12	11	12
Jefferson County (KY)	—	—	—	—	245	245	—	—	—	—	54	53	—	—	—	—	13	12
Los Angeles	236	233	234	229***	239	242	43	41	40	38	48	51	8	7	8	6***	11	15
Miami-Dade	—	—	—	—	250	246	—	—	—	—	61	55	—	—	—	—	17	13
Milwaukee	—	—	—	—	233	232*,**	—	—	—	—	41	38*,**	—	—	—	—	6	6*,**
New York City	‡	245	241	240	246	248	‡	56	49	50	56	59	‡	13	10	11	12	16
Philadelphia	—	—	—	—	241	244	—	—	—	—	48	54	—	—	—	—	9	13
San Diego	—	235	242	240	239	238	—	46	53	48	49	50	—	7	12	10	8	11

See notes at end of table.

Grade 8 Reading: 2002 - 2011 (Continued)

Table A-13. Average scores and achievement-level results in NAEP reading for eighth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2002-11—Continued

Race/ethnicity and jurisdiction	Average scale score						Percentage of students: At or above *Basic*						Percentage of students: At or above *Proficient*					
	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011
Hispanic																		
Nation	245***	244***	245***	246***	248***	251*	56***	54***	55***	57***	59***	63*	14***	14***	14***	14***	16***	18*
Large city[1]	242***	241***	243***	243***	245***	249**	52***	51***	53***	53***	56	60**	12***	12***	13***	12***	14	16**
Albuquerque	—	—	—	—	—	248	—	—	—	—	—	57**	—	—	—	—	—	14
Atlanta	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Austin	—	—	243	244	251	251	—	—	52***	55	62	63	—	—	13	15	18	18
Baltimore City	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Boston	—	245	248	241	251	245**	—	54	57	52	64	55**	—	14	16	10	13	15
Charlotte	—	244***	248	251	254	256*	—	52	58	65	64	68	—	14	19	20	18	24*
Chicago	248	249***	251	255	249	255*,**	61	61	62	69	59	68*,**	12***	15	16	20	17	21*
Cleveland	—	‡	248	249	237	241**	—	‡	57	58	45	50**	—	‡	10	16	11	9**
Dallas	—	—	—	—	—	246**	—	—	—	—	—	58**	—	—	—	—	—	12*,**
Detroit	—	—	—	—	232	244	—	—	—	—	38	55	—	—	—	—	6	12
District of Columbia (DCPS)	240	240	247***	249***	249***	232*,**	53	51	59***	56	62***	43*,**	11	11	18	19	22	14
Fresno	—	—	—	—	235	234*,**	—	—	—	—	44	42*,**	—	—	—	—	8	9*,**
Hillsborough County (FL)	—	—	—	—	—	258*,**	—	—	—	—	—	70*	—	—	—	—	—	24*
Houston	243***	242***	245***	246	250	249	52	51***	56	57	63	62	13	10	12	13	15	13*,**
Jefferson County (KY)	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Los Angeles	230***	228***	235***	236***	239	241*,**	36***	37***	43***	45	50	50*,**	5***	6***	9	8***	11	11*,**
Miami-Dade	—	—	—	—	261	262*,**	—	—	—	—	75	74*,**	—	—	—	—	29	30*,**
Milwaukee	—	—	—	—	249	243**	—	—	—	—	62	53**	—	—	—	—	15	11
New York City	‡	247	247	241	243	246	‡	57	57	51	53	57	‡	17	14	13	13	17
Philadelphia	—	—	—	—	241	239*,**	—	—	—	—	51	46*,**	—	—	—	—	9	9*,**
San Diego	—	238	241	235	242	245	—	46	50	45***	53	57	—	9	12	11	14	15

See notes at end of table.

Table A-13. Average scores and achievement-level results in NAEP reading for eighth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2002-11—Continued

Race/ethnicity and jurisdiction	Average scale score						Percentage of students: At or above *Basic*						Percentage of students: At or above *Proficient*					
	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011	2002	2003	2005	2007	2009	2011
Asian/Pacific Islander																		
Nation	265***	268***	270***	269***	273	275*	75***	78***	79***	79	82	82	34***	38***	39***	40***	44	46
Large city[1]	256***	260***	266***	263	268	270**	65***	69***	76	74	77	79	26***	30***	35	34	38	41
Albuquerque	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Atlanta	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Austin	—	—	‡	‡	‡	‡	—	—	‡	‡	‡	‡	—	—	‡	‡	‡	‡
Baltimore City	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Boston	—	274	280	275	276	280*	—	83	85	81	89	87	—	44	55	46	45	50
Charlotte	—	‡	‡	‡	‡	264	—	‡	‡	‡	‡	72	—	‡	‡	‡	‡	37
Chicago	‡	268	277	‡	‡	264	‡	78	88	‡	‡	74	‡	35	44	‡	‡	38
Cleveland	—	‡	‡	‡	‡	‡	—	‡	‡	‡	‡	‡	—	‡	‡	‡	‡	‡
Dallas	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Detroit	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
District of Columbia (DCPS)	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Fresno	—	—	—	—	241	241*,**	—	—	—	—	48	48*,**	—	—	—	—	10	12*,**
Hillsborough County (FL)	—	—	—	—	—	‡	—	—	—	—	—	‡	—	—	—	—	—	‡
Houston	‡	‡	‡	289	‡	277	‡	‡	‡	91	‡	84	‡	‡	‡	61	‡	55
Jefferson County (KY)	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Los Angeles	259	255	262	264	265	267	73	64	73	76	76	77	26	27	30	32	35	38
Miami-Dade	—	—	—	—	‡	‡	—	—	—	—	‡	‡	—	—	—	—	‡	‡
Milwaukee	—	—	—	—	‡	248*,**	—	—	—	—	‡	61	—	—	—	—	‡	16*,**
New York City	‡	264	271	268	270	273	‡	72	80	79	79	81	‡	35	42	37	40	46
Philadelphia	—	—	—	—	270	258*,**	—	—	—	—	78	67	—	—	—	—	39	28**
San Diego	—	260	265	265	264	267	—	71	76	78	77	78	—	27	31	35	32	38

— Not available. District did not participate.
‡ Reporting standards not met.
* Significantly different ($p < .05$) from large city in 2011.
** Significantly different ($p < .05$) from the nation in 2011.
*** Significantly different ($p < .05$) from 2011.
[1] Large city includes students from all cities in the nation with populations of 250,000 or more including the participating districts.
NOTE: Beginning in 2009, results for charter schools are excluded from the TUDA results if they are not included in the school district's Adequate Yearly Progress (AYP) report to the U.S. Department of Education. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. 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), various years, 2002-11 Reading Assessments.

Table A-12. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2003–11

Race/ethnicity and jurisdiction	Average scale score					Percentage of students: At or above *Basic*					At or above *Proficient*				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
White															
Nation	243***	246***	248***	248***	249*	87***	89***	91	90	91	42***	47***	51	50***	52*
Large city[1]	243***	247***	249	250	251**	86***	88***	90	90	91	42***	50***	54	55	55**
Albuquerque	—	—	—	—	254**	—	—	—	—	92	—	—	—	—	61**
Atlanta	258	263***	266	266	269*,**	89	96	99	98	98*,**	70	72***	81	79	84*,**
Austin	—	262	263	262	266*,**	—	99	98	97	99	—	75	76	74	80*,**
Baltimore City	—	—	—	240	244*	—	—	—	84	86	—	—	—	34	44
Boston	234***	244***	250	251	255*,**	77***	88	93	92	93	32***	43***	52	52	63**
Charlotte	257***	261	261	263	264*,**	96	97	98	97	97*,**	66***	70	72	72	76*,**
Chicago	235***	243	244	242	246	82	88	84	83	86	31***	43	47	44	52
Cleveland	233	233	233	228	232*,**	80	81	80	73	76*,**	27	25	25	17	28*,**
Dallas	—	—	—	—	258	—	—	—	—	97*,**	—	—	—	—	67
Detroit	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
District of Columbia (DCPS)	262***	266***	262***	270	272*,**	97	99	91***	99	99*,**	71***	78	73***	81	85*,**
Fresno	—	—	—	237	238*,**	—	—	—	79	80*,**	—	—	—	36	39*,**
Hillsborough County (FL)	—	—	—	—	253**	—	—	—	—	95**	—	—	—	—	59**
Houston	254	262	263	260	259*,**	96	97	96	99	96*,**	63	73	76	71	68*,**
Jefferson County (KY)	—	—	—	243	243*,**	—	—	—	84	87*,**	—	—	—	44	41*,**
Los Angeles	241	247	247	245	243*,**	83	87	90	87	86	44	49	50	45	45*
Miami-Dade	—	—	—	253	255**	—	—	—	96	96	—	—	—	61	60
Milwaukee	—	—	—	242	239*,**	—	—	—	86	81*,**	—	—	—	42	38*,**
New York City	244	245	249	254	248	88	87	91	94	87	42	46	53	58	50
Philadelphia	—	—	—	239	243*	—	—	—	80	84	—	—	—	37	43
San Diego	243***	249***	252	255	258*,**	87***	94	90	94	95*,**	41***	50***	59	62	66*,**
Black															
Nation	216***	220***	222***	222***	224*	54***	60***	63***	63***	66*	10***	13***	15***	15***	17*
Large city[1]	212***	217***	219***	219***	222**	47***	55***	58***	59***	63**	8***	11***	13	14	16**
Albuquerque	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Atlanta	211***	215***	217	218	219*,**	45***	51***	55	57	58*,**	7***	9***	11	11	11*,**
Austin	—	228	226	226	232*,**	—	74	68	71	78*	—	18	17	13	22
Baltimore City	—	—	—	220	223	—	—	—	61	66	—	—	—	10	14
Boston	216***	223***	226	231	230*,**	55***	65***	71	78	76*,**	6***	13***	18	23	21
Charlotte	229	230	230	231	232*,**	73	74	75	75	80*,**	20	21	23	24	24*,**
Chicago	207***	208***	213	212	217*,**	39***	41***	48	48	55*,**	4***	6***	8	9	13
Cleveland	210	215	210	209	211*,**	44	52	45	44	46*,**	5	8	5	5	6*,**
Dallas	—	—	—	—	225	—	—	—	—	70	—	—	—	—	13
Detroit	—	—	—	199	201*,**	—	—	—	29	31*,**	—	—	—	3	2*,**
District of Columbia (DCPS)	202***	207***	209***	212	212*,**	33***	41***	45***	49	50*,**	4***	5***	8***	9	12*,**
Fresno	—	—	—	213	214*,**	—	—	—	46	49*,**	—	—	—	12	11
Hillsborough County (FL)	—	—	—	—	228*	—	—	—	—	70	—	—	—	—	20
Houston	221***	224***	225	227	229*,**	62***	67	69	72	75*,**	12***	14	16	17	20
Jefferson County (KY)	—	—	—	216***	221	—	—	—	54	62	—	—	—	11	13
Los Angeles	208	209	216	209	215*,**	42	42	54	41	53	6	9	13	10	11
Miami-Dade	—	—	—	222	225	—	—	—	64	67	—	—	—	12	17
Milwaukee	—	—	—	211	211*,**	—	—	—	46	47*,**	—	—	—	7	6*,**
New York City	219***	222	227	227	226*	58***	63	72	70	69*	12***	14	20	21	19
Philadelphia	—	—	—	216	220*,**	—	—	—	54	60**	—	—	—	10	12*,**
San Diego	216***	221	222	222	222	54	60	65	64	65	8	15	21	15	17

See notes at end of table.

Table A-12. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2003-11—Continued

Race/ethnicity and jurisdiction	Average scale score					Percentage of students: At or above *Basic*					Percentage of students: At or above *Proficient*				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
Hispanic															
Nation	221***	225***	227***	227***	229	62***	67***	69***	70	72	15***	19***	22***	21***	24
Large city[1]	219***	223***	224***	226	228	59***	64***	66***	69	71	13***	17***	21	21	23
Albuquerque	—	—	—	—	229	—	—	—	—	70	—	—	—	—	24
Atlanta	‡	‡	223	222	230	‡	‡	60	66	71	‡	‡	16	16	27
Austin	—	234	233	233	237*,**	—	80	78	79	82*,**	—	27	26	25	32*,**
Baltimore City	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Boston	215***	225***	230	232	234*,**	51***	70***	76	77	80*,**	7***	14***	23	24	26
Charlotte	233***	234***	234	235	240*,**	80	81	80	82	87*,**	26	27	26	27	38*,**
Chicago	217***	217	219	226	223*,**	55***	55***	60	70	65*,**	10***	13	16	18	17*,**
Cleveland	220	224	215	217	218*,**	58	68	53	56	58*,**	14	18	10	13	11*,**
Dallas	—	—	—	—	234*,**	—	—	—	—	81*,**	—	—	—	—	26
Detroit	—	—	—	206	215*,**	—	—	—	39	53*,**	—	—	—	5	7*,**
District of Columbia (DCPS)	205***	215***	220	227	223**	39***	51***	57	69	63*,**	7***	11***	19	25	22
Fresno	—	—	—	216	214*,**	—	—	—	55	51*,**	—	—	—	10	10*,**
Hillsborough County (FL)	—	—	—	—	239*,**	—	—	—	—	85*,**	—	—	—	—	37*,**
Houston	226***	232***	234	235	236*,**	70***	78	82	83	82*,**	15***	23***	25	28	30*,**
Jefferson County (KY)	—	—	—	226***	238*,**	—	—	—	65	83*,**	—	—	—	23	36
Los Angeles	211***	216***	217	218	220*,**	46***	53***	55	58	59*,**	7***	13	14	14	15*,**
Miami-Dade	—	—	—	239	237*,**	—	—	—	84	81*,**	—	—	—	35	35*,**
Milwaukee	—	—	—	226	221*,**	—	—	—	71	60*,**	—	—	—	16	14*,**
New York City	220***	226	230	230	227	60***	70	74	74	70	13***	18	26	24	22
Philadelphia	—	—	—	221	223*,**	—	—	—	60	64	—	—	—	15	16**
San Diego	216***	222***	223***	224	229	53***	63***	64***	66	72	9***	16***	21	19	24

See notes at end of table.

Table A-12. Average scores and achievement-level results in NAEP mathematics for fourth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2003-11—Continued

Race/ethnicity and jurisdiction	Average scale score					Percentage of students: At or above *Basic*					Percentage of students: At or above *Proficient*				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
Asian/Pacific Islander															
Nation	246***	251***	254	255	256*	87***	89	91	91	91*	48***	54***	59	61	62*
Large city[1]	246	247	251	253	249**	86	87	89	90	86**	47	49	57	58	52**
Albuquerque	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Atlanta	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Austin	—	‡	268	‡	‡	—	‡	99	‡	‡	—	‡	83	‡	‡
Baltimore City	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Boston	243***	256	255	260	259*	87***	98	91	94	95*	43***	65	61	65	69*
Charlotte	252	256	263	257	258	90	96	98	91	93	60	62	75	63	65
Chicago	‡	‡	249	255	247**	‡	‡	92	96	87	‡	‡	53	60	50
Cleveland	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Dallas	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Detroit	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
District of Columbia (DCPS)	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Fresno	—	—	—	220	223*,**	—	—	—	59	64*,**	—	—	—	16	16*,**
Hillsborough County (FL)	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Houston	‡	‡	265	264	264*,**	‡	‡	100	98	97	‡	‡	75	78	77*
Jefferson County (KY)	—	—	—	‡	255	—	—	—	‡	87	—	—	—	‡	67
Los Angeles	241***	246	246	248	251	86	88	92	87	90	38	45	49	50	55
Miami-Dade	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Milwaukee	—	—	—	231	230*,**	—	—	—	77	71*,**	—	—	—	28	24*,**
New York City	247	253	257	258	251	89	92	93	93	88	47***	60	65	68	57
Philadelphia	—	—	—	243	251	—	—	—	87	86	—	—	—	40	58
San Diego	238***	245	247	247	248**	84	87	88	86	87	32***	46	50	50	53

— Not available. District did not participate.
‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.
* Significantly different ($p < .05$) from large city in 2011.
** Significantly different ($p < .05$) from the nation in 2011.
*** Significantly different ($p < .05$) from 2011.
[1] Large city includes students from all cities in the nation with populations of 250,000 or more including the participating districts.
NOTE: Beginning in 2009, results for charter schools are excluded from the TUDA results if they are not included in the school district's Adequate Yearly Progress (AYP) report to the U.S. Department of Education. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. 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), various years, 2003-11 Mathematics Assessments.

Table A-13. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2003-11

Race/ethnicity and jurisdiction	Average scale score					Percentage of students: At or above *Basic*					Percentage of students: At or above *Proficient*				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
White															
Nation	287***	288***	290***	292	293	79***	79***	81***	82	83	36***	37***	41***	43	43*
Large city[1]	285***	288***	292	294	295	77***	78***	81	81	83	36***	39***	44	46	48**
Albuquerque	—	—	—	—	291	—	—	—	—	79	—	—	—	—	44
Atlanta	298	‡	‡	‡	309*,**	83***	‡	‡	‡	95*,**	54	‡	‡	‡	66*,**
Austin	—	305***	308	312	313*,**	—	90	91	94	94*,**	—	61	65	70	69*,**
Baltimore City	—	—	—	‡	280*,**	—	—	—	‡	70*,**	—	—	—	‡	31*,**
Boston	289***	299	305	311	305*,**	77***	83	89	93	88	48***	54	58	67	61*,**
Charlotte	301***	304***	308	304***	311*,**	91	90	90	91	93*,**	55***	60	62	58***	66*,**
Chicago	276***	281***	287	289	296	68***	71	79	76	84	25***	33	35	39	47
Cleveland	269	265	269	275	277*,**	63	54	64	67	69*,**	14	17	12	21	25*,**
Dallas	—	—	—	—	306*,**	—	—	—	—	91	—	—	—	—	65*,**
Detroit	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
District of Columbia (DCPS)	‡	317	‡	‡	322*,**	‡	94	‡	‡	97*,**	‡	69	‡	‡	78*,**
Fresno	—	—	—	282	281*,**	—	—	—	70	68*,**	—	—	—	38	34*,**
Hillsborough County (FL)	—	—	—	—	293	—	—	—	—	82	—	—	—	—	44
Houston	293***	294***	308	311	309*,**	80***	85	94	94	93*,**	47***	50	63	67	66*,**
Jefferson County (KY)	—	—	—	284	285*,**	—	—	—	75	76*,**	—	—	—	33	34*,**
Los Angeles	277***	280	285	287	291	67	68	73	74	77	29***	32	40	41	44
Miami-Dade	—	—	—	291	288	—	—	—	84	78	—	—	—	40	39
Milwaukee	—	—	—	271	274*,**	—	—	—	61	63*,**	—	—	—	20	22*,**
New York City	289	286	289	295	292	79	77	77	84	80	40	38	39	47	44
Philadelphia	—	—	—	284	281*,**	—	—	—	71	70	—	—	—	35	32*,**
San Diego	284***	292***	294	301	302*,**	76***	83	85	89	89*,**	35***	42***	42***	55	58*,**
Black															
Nation	252***	254***	259***	260	262	39***	41***	47***	49	50	7***	8***	11***	12	13
Large city[1]	247***	250***	254***	256***	261	34***	36***	41***	44***	49	5***	7***	9***	10***	13
Albuquerque	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Atlanta	241***	242***	253***	255***	262	26***	28***	38***	42***	50	3***	4***	8	7***	11
Austin	—	262	265	274	265	—	52	57	62	53	—	12	14	21	17
Baltimore City	—	—	—	255	259	—	—	—	41	45	—	—	—	7	10
Boston	251***	256***	263***	268	272*,**	36***	45***	51	57	61*,**	6***	9***	12***	18	21*,**
Charlotte	258***	264***	267	270	268*,**	47***	54	58	60	58*,**	11	14	15	17	16
Chicago	245***	245***	248***	252***	260	29***	28***	35***	38	48	4***	3***	6	7	10**
Cleveland	249	244	253	252	249*,**	32	29	41	38	31*,**	5	3	5	5	6*,**
Dallas	—	—	—	—	264	—	—	—	—	52	—	—	—	—	12
Detroit	—	—	—	237	244*,**	—	—	—	21	27*,**	—	—	—	4	3*,**
District of Columbia (DCPS)	240***	241***	245	244***	249*,**	26***	27***	31	32	36*,**	3***	4***	6***	6	9*,**
Fresno	—	—	—	246	243*,**	—	—	—	32	29*,**	—	—	—	7	7*,**
Hillsborough County (FL)	—	—	—	—	263	—	—	—	—	54	—	—	—	—	10
Houston	259***	257***	265	266	271*,**	47***	47***	58	59	64*,**	7***	7***	13	13	17
Jefferson County (KY)	—	—	—	252***	257*,**	—	—	—	38	42*,**	—	—	—	7	10
Los Angeles	234***	239	245	247	246*,**	21***	29	28	34	36*,**	2	7	7	5	8
Miami-Dade	—	—	—	260	256*,**	—	—	—	48	42*,**	—	—	—	12	9
Milwaukee	—	—	—	244	246*,**	—	—	—	28	30*,**	—	—	—	3	5*,**
New York City	253***	257	258	261	262	40	44	45	49	50	9	10	10	12	12
Philadelphia	—	—	—	256	260	—	—	—	43	47	—	—	—	8	13
San Diego	252	253	258	263	256	39	40	48	50	42	7	8	11	16	8

See notes at end of table.

Table A-13. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2003-11—Continued

Race/ethnicity and jurisdiction	Average scale score					Percentage of students: At or above *Basic*					Percentage of students: At or above *Proficient*				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
Hispanic															
Nation	258***	261***	264***	266***	269*	47***	50***	54***	56***	60*	11***	13***	15***	17***	20
Large city[1]	256***	258***	261***	264	267**	43***	46***	50***	54	58**	10***	11***	13***	16	19
Albuquerque	—	—	—	—	269	—	—	—	—	57	—	—	—	—	19
Atlanta	‡	‡	‡	‡	264	‡	‡	‡	‡	52	‡	‡	‡	‡	16
Austin	—	267***	271	274	276*,**	—	56***	64	65	67*,**	—	17	19	22	24
Baltimore City	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Boston	252***	261***	270	269	271	38***	51***	60	61	62	7***	12***	20	20	24
Charlotte	262	262***	264	272	272	46	53	50***	63	63	18	15	19	21	22
Chicago	259***	263***	265***	268	271*	48***	52***	55***	59	64*	8***	11***	12***	18	20
Cleveland	249	251	258	250	258**	35	33	44	35	44**	2***	7	6	4	11*,**
Dallas	—	—	—	—	276*,**	—	—	—	—	67*,**	—	—	—	—	22
Detroit	—	—	—	255	258*,**	—	—	—	44	41*,**	—	—	—	8	8*,**
District of Columbia (DCPS)	246	252	251	263	253*,**	33	39	38	56	40*,**	3***	9	9	17	12*,**
Fresno	—	—	—	253	251*,**	—	—	—	40	37*,**	—	—	—	10	10*,**
Hillsborough County (FL)	—	—	—	—	274*	—	—	—	—	64	—	—	—	—	23
Houston	261***	265***	270***	275	278*,**	49***	56***	62***	70	72*,**	9***	12***	15***	21	24*,**
Jefferson County (KY)	—	—	—	‡	270	—	—	—	‡	64	—	—	—	‡	20
Los Angeles	240***	245***	253	254	255*,**	26***	32***	40	41	43*,**	3***	6***	9	8	10*,**
Miami-Dade	—	—	—	274	274*,**	—	—	—	65	65*,**	—	—	—	23	24*,**
Milwaukee	—	—	—	256	259*,**	—	—	—	43	49**	—	—	—	8	11*,**
New York City	260	259	262	261	261*,**	48	47	52	50	50*,**	15	12	14	14	12*,**
Philadelphia	—	—	—	258	256*,**	—	—	—	48	42*,**	—	—	—	12	10*,**
San Diego	248***	258	259	265	263**	34***	49	48	54	52	6***	11	13	14	14*,**

See notes at end of table.

Grade 8 Mathematics 2011 (Continued)

Table A-13. Average scores and achievement-level results in NAEP mathematics for eighth-grade public school students, by selected race/ethnicity categories and jurisdiction: Various years, 2003-11—Continued

Race/ethnicity and jurisdiction	Average scale score					Percentage of students: At or above *Basic*					Percentage of students: At or above *Proficient*				
	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011	2003	2005	2007	2009	2011
Asian/Pacific Islander															
Nation	289***	294***	296***	300	302*	77***	81***	82***	84	85*	42***	46***	49***	53	55*
Large city[1]	281***	289***	291	299	296**	71***	76***	78	83	82**	33***	40***	44	52	49**
Albuquerque	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Atlanta	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Austin	—	‡	‡	‡	‡	—	‡	‡	‡	‡	—	‡	‡	‡	‡
Baltimore City	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Boston	300***	309	305***	312	319*,**	87	92	91	92	93*	57	61	57	68	71*,**
Charlotte	293	‡	305	‡	304	81	‡	88	‡	83	43	‡	56	‡	61
Chicago	286	292	‡	301	296	78	83	‡	88	82	36	38	‡	54	50
Cleveland	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Dallas	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Detroit	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
District of Columbia (DCPS)	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
Fresno	—	—	—	266	264*,**	—	—	—	54	53*,**	—	—	—	17	17*,**
Hillsborough County (FL)	—	—	—	—	‡	—	—	—	—	‡	—	—	—	—	‡
Houston	‡	299	310	‡	309*	‡	85	87	‡	87	‡	55	63	‡	66
Jefferson County (KY)	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Los Angeles	275***	291	292	291	295	64***	82	82	78	80	25***	43	45	44	48
Miami-Dade	—	—	—	‡	‡	—	—	—	‡	‡	—	—	—	‡	‡
Milwaukee	—	—	—	‡	271*,**	—	—	—	‡	68	—	—	—	‡	23*,**
New York City	286***	295	299	309	304*	74	79	83	89	86	38***	50	53	64	57
Philadelphia	—	—	—	295	295	—	—	—	85	79	—	—	—	46	47
San Diego	278***	282***	289	292	293**	69	74	77	81	78	28***	31***	40	48	45**

— Not available. District did not participate.
‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.
* Significantly different ($p < .05$) from large city in 2011.
** Significantly different ($p < .05$) from the nation in 2011.
*** Significantly different ($p < .05$) from 2011.
[1] Large city includes students from all cities in the nation with populations of 250,000 or more including the participating districts.
NOTE: Beginning in 2009, results for charter schools are excluded from the TUDA results if they are not included in the school district's Adequate Yearly Progress (AYP) report to the U.S. Department of Education. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. 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), various years, 2003-11 Mathematics Assessments.