# Mapping State Proficiency Standards Onto the NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005-2009

## OHIO

NAEP
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

## Reading

**How do Ohio's reading standards for proficient performance at grades 4 and 8 in 2009 map onto the NAEP scale?**

| | NAEP scale equivalent | NAEP achievement level |
|---|---|---|
| Grade 4 | 192 | below *Basic* |
| Grade 8 | 251 | *Basic* |

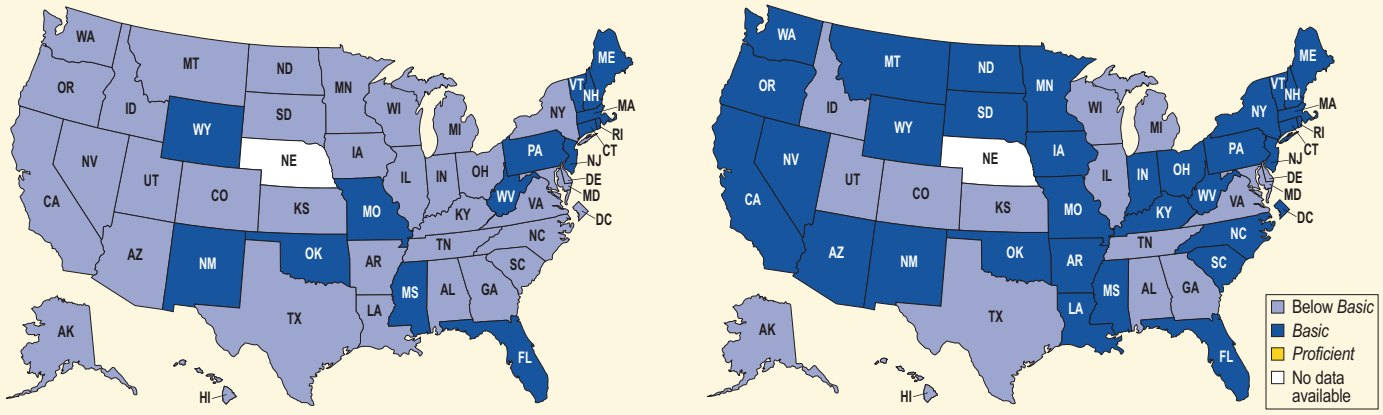
**How do Ohio's reading standards for proficient performance at grades 4 and 8 in 2005 and 2007 map onto the NAEP scale?**

| | 2005 NAEP scale equivalent | 2005 NAEP achievement level | 2007 NAEP scale equivalent | 2007 NAEP achievement level |
|---|---|---|---|---|
| Grade 4 | 199 | below *Basic* | 198 | below *Basic* |
| Grade 8 | 241 | *Basic* | 240 | *Basic* |

**How do Ohio's reading standards for proficient performance at grades 4 and 8 in 2009 compare with those of other states when expressed in terms of NAEP achievement levels?**

| | States below *Basic* | States at *Basic* | States at *Proficient* |
|---|---|---|---|
| Grade 4 | 35 | 15 | 0 |

| | States below *Basic* | States at *Basic* | States at *Proficient* |
|---|---|---|---|
| Grade 8 | 16 | 34 | 0 |




**How do Ohio's NAEP scale equivalent scores of reading standards for proficient performance at grades 4 and 8 in 2009 compare with those estimated for 2005 and 2007?**

### Changes from 2007

| | 2009 | 2007 | Change from 2007 | Comparable to 2007 |
|---|---|---|---|---|
| Grade 4 | 192 | 198 | -6.2 * | Yes |
| Grade 8 | 251 | 240 | 11.6 * | Yes |

Although no substantive changes in the reading assessments from 2007 to 2009 were indicated by the state, the NAEP scale equivalent of its grade 4 standards decreased and the NAEP scale equivalent of its grade 8 standards increased.

### Changes from 2005

| | 2009 | 2005 | Change from 2005 | Comparable to 2005 |
|---|---|---|---|---|
| Grade 4 | 192 | 199 | -6.7 * | Yes |
| Grade 8 | 251 | 241 | 10.6 * | Yes |

Although no substantive changes in the reading assessments from 2005 to 2009 were indicated by the state, the NAEP scale equivalent of both its grade 4 and grade 8 standards decreased.

* Statistically different from zero ($p < .05$).

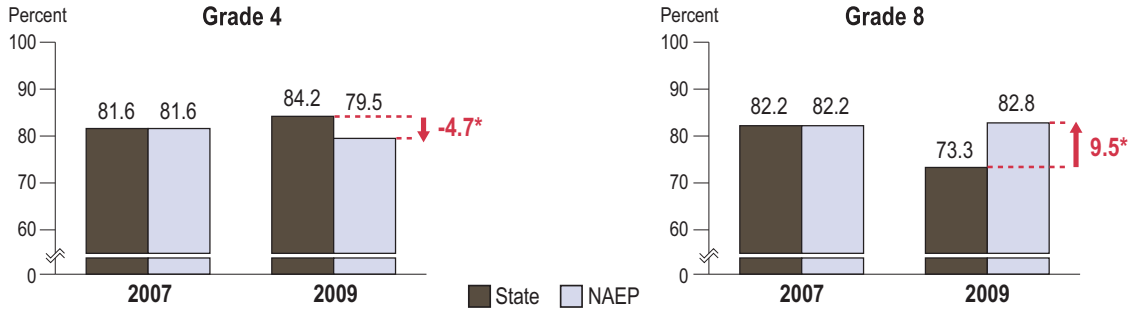
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005, 2007, and 2009 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2008–09, Washington, DC, 2010. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 and 2009 Surveys of State Assessment Program Characteristics. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2010.

# Reading

**Do NAEP and the Ohio reading assessments show the same changes in the proportion of students meeting the state proficiency standards from 2007 to 2009?**

In grade 4, Ohio state assessment results showed a more positive change in achievement than NAEP results. In grade 8, state assessment results showed a less positive change.

| | State percent at the standard in 2007 | State percent at the standard in 2009 | Change from 2007 to 2009 | NAEP percent at the 2007 standard in 2007 | NAEP percent at the 2007 standard in 2009 | Change from 2007 to 2009 | Difference between NAEP and state measures of change |
|---|---|---|---|---|---|---|---|
| Grade 4 | 81.6 | 84.2 | 2.6 | 81.6 | 79.5 | -2.1 | -4.7 * |
| Grade 8 | 82.2 | 73.3 | -8.9 | 82.2 | 82.8 | 0.6 | 9.5 * |




* Statistically different from zero ($p < .05$).

NOTE: Significance tests were performed only for the difference between NAEP and state measures of change.

## Changes to Ohio's reading assessments between 2007 and 2009

| | No significant changes | Changed cut scores | Changed the period of administration | Changed assessment items | Used entirely different assessment | Realigned to new content standards | Changed proficiency standards | Changed accommodation policy | Changed re-test policy | Changed test contractors | Other changes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade 4 | | | | | | | | | Yes | | |
| Grade 8 | | | | | | | | | Yes | | |

## Composition of Ohio's main reading test in 2008–09

| | Multiple choice | | Short constructed response | | Extended constructed response | | Performance tasks | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number of items | Proportion of score | Number of items | Proportion of score | Number of items | Proportion of score | Number of items | Proportion of score | Number of items | Proportion of score |
| Grade 4 | 29 | 59% | 4 | 16% | 3 | 25% | 0 | 0% | 0 | 0% |
| Grade 8 | 32 | 66% | 4 | 17% | 2 | 17% | 0 | 0% | 0 | 0% |

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005, 2007, and 2009 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2008–09, Washington, DC, 2010. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 and 2009 Surveys of State Assessment Program Characteristics. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2010.

# Mathematics

**How do Ohio's mathematics standards for proficient performance at grades 4 and 8 in 2009 map onto the NAEP scale?**

| | NAEP scale equivalent | NAEP achievement level |
|---|---|---|
| Grade 4 | 219 | *Basic* |
| Grade 8 | 265 | *Basic* |

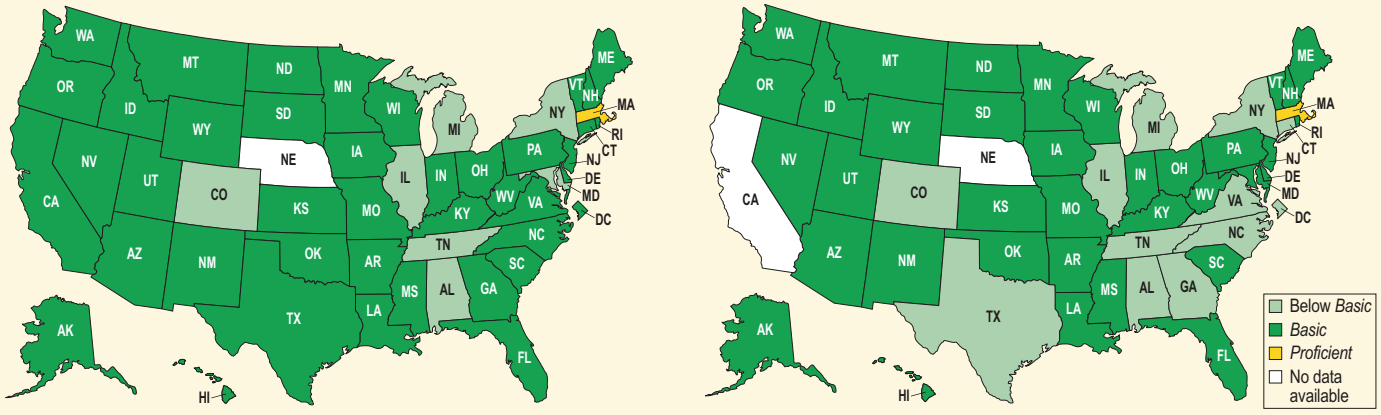
**How do Ohio's mathematics standards for proficient performance at grades 4 and 8 in 2005 and 2007 map onto the NAEP scale?**

| | 2005 NAEP scale equivalent | 2005 NAEP achievement level | 2007 NAEP scale equivalent | 2007 NAEP achievement level |
|---|---|---|---|---|
| Grade 4 | 233 | *Basic* | 225 | *Basic* |
| Grade 8 | 274 | *Basic* | 265 | *Basic* |

**How do Ohio's mathematics standards for proficient performance at grades 4 and 8 in 2009 compare with those of other states when expressed in terms of NAEP achievement levels?**

| | States below *Basic* | States at *Basic* | States at *Proficient* |
|---|---|---|---|
| Grade 4 | 7 | 42 | 1 |

| | States below *Basic* | States at *Basic* | States at *Proficient* |
|---|---|---|---|
| Grade 8 | 12 | 36 | 1 |




**How do Ohio's NAEP scale equivalent scores of mathematics standards for proficient performance at grades 4 and 8 in 2009 compare with those estimated for 2005 and 2007?**

**Changes from 2007**

| | 2009 | 2007 | Change from 2007 | Comparable to 2007 |
|---|---|---|---|---|
| Grade 4 | 219 | 225 | -5.2 * | Yes |
| Grade 8 | 265 | 265 | 0.3 | Yes |

Although no substantive changes in the mathematics assessments from 2007 to 2009 were indicated by the state, the NAEP scale equivalent of its grade 4 standards decreased (the NAEP scale equivalent of its grade 8 standards did not change).

**Changes from 2005**

| | 2009 | 2005 | Change from 2005 | Comparable to 2005 |
|---|---|---|---|---|
| Grade 4 | 219 | 233 | -13.2 * | No |
| Grade 8 | 265 | 274 | -8.9 * | Yes |

Ohio made substantive changes to its mathematics grade 4 assessment between 2005 and 2009, and the NAEP scale equivalent of its grade 4 standards decreased. Also, though no substantive changes in the mathematics grade 8 assessment from 2005 to 2009 were indicated by the state, the NAEP scale equivalent of its grade 8 standards decreased.

* Statistically different from zero ($p < .05$).

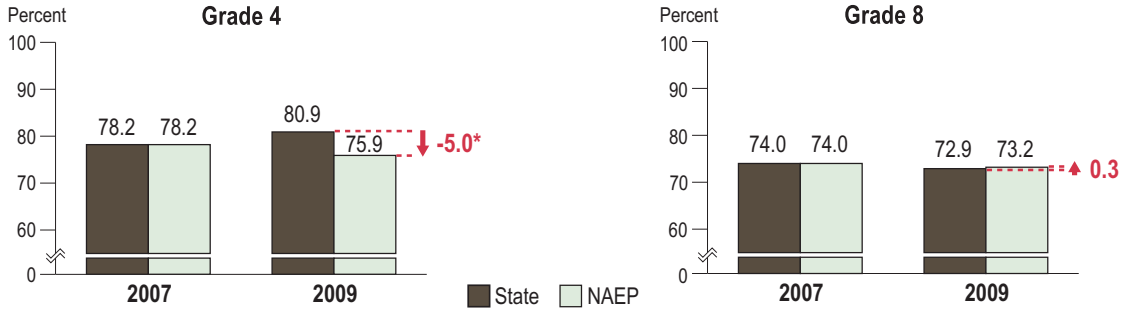
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005, 2007, and 2009 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2008–09, Washington, DC, 2010. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 and 2009 Surveys of State Assessment Program Characteristics. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2010.

# Mathematics

**Do NAEP and the Ohio mathematics assessments show the same changes in the proportion of students meeting the state proficiency standards from 2007 to 2009?**

In grade 4, Ohio state assessment results showed a more positive change in achievement than NAEP results. In grade 8, state assessment and NAEP results showed similar changes.

| | State percent at the standard in 2007 | State percent at the standard in 2009 | Change from 2007 to 2009 | NAEP percent at the 2007 standard in 2007 | NAEP percent at the 2007 standard in 2009 | Change from 2007 to 2009 | Difference between NAEP and state measures of change |
|---|---|---|---|---|---|---|---|
| Grade 4 | 78.2 | 80.9 | 2.7 | 78.2 | 75.9 | -2.4 | -5.0 * |
| Grade 8 | 74.0 | 72.9 | -1.1 | 74.0 | 73.2 | -0.8 | 0.3 |




* Statistically different from zero ($p < .05$).

NOTE: Significance tests were performed only for the difference between NAEP and state measures of change.

### Changes to Ohio's mathematics assessments between 2007 and 2009

| | No significant changes | Changed cut scores | Changed the period of administration | Changed assessment items | Used entirely different assessment | Realigned to new content standards | Changed proficiency standards | Changed accommodation policy | Changed re-test policy | Changed test contractors | Other changes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade 4 | | | | | | | | | Yes | | |
| Grade 8 | | | | | | | | | Yes | | |

### Composition of Ohio's main mathematics test in 2008–09

| | Multiple choice | | Short constructed response | | Extended constructed response | | Performance tasks | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number of items | Proportion of score | Number of items | Proportion of score | Number of items | Proportion of score | Number of items | Proportion of score | Number of items | Proportion of score |
| Grade 4 | 32 | 62% | 6 | 23% | 2 | 15% | 0 | 0% | 0 | 0% |
| Grade 8 | 32 | 69% | 5 | 22% | 1 | 9% | 0 | 0% | 0 | 0% |

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005, 2007, and 2009 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2008–09, Washington, DC, 2010. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 and 2009 Surveys of State Assessment Program Characteristics. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2010.

**For additional information, refer to the report and documentation at http://nces.ed.gov/nationsreportcard/studies/statemapping.**