Tour of the NAEP Tools

Jason Nicholas
NAEP State Service Center
Westat, Inc.
• State Profiles
• NAEP Date Explorer
• NAEP Questions Tool
• NAEP State Comparisons Tool
State Profiles

- The state profiles are one of the most popular NAEP data sites

- Provide a single page with multiple data avenues for exploring data for a state

- Provide the big-ticket items that data consumers are looking for
State Profiles presents key data about each state's performance in the National Assessment of Educational Progress (NAEP) in mathematics, reading, writing, and science for grades 4 and 8. Quickly see how a state performed over time, view a state's demographics, download snapshot reports, and compare each state's overall performance to the nation and each other. It is inappropriate to compare scores across subjects. Select a state to get started.

Science: In 2005, the average scale score for fourth-grade students in Arizona was 139. This was not significantly different from their average score in 2000 (140).
## State Profiles

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Average Scale Score</th>
<th>Achievement Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State Avg.</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 2009</td>
<td>241 (1.2)</td>
<td>239 (0.2)</td>
</tr>
<tr>
<td>2007</td>
<td>239 (0.9)</td>
<td>237 (0.2)</td>
</tr>
<tr>
<td>2005</td>
<td>235 (0.9)</td>
<td>234 (0.2)</td>
</tr>
<tr>
<td>2003</td>
<td>228 (1.2)</td>
<td>224 (1.0)</td>
</tr>
<tr>
<td>2000</td>
<td>229 (1.2)</td>
<td>226 (1.0)</td>
</tr>
<tr>
<td>1996</td>
<td>225 (1.1)</td>
<td>222 (1.0)</td>
</tr>
<tr>
<td>1992</td>
<td>222 (1.2)</td>
<td>219 (0.8)</td>
</tr>
<tr>
<td>8 2009</td>
<td>286 (1.0)</td>
<td>282 (0.3)</td>
</tr>
<tr>
<td>2007</td>
<td>281 (1.0)</td>
<td>280 (0.3)</td>
</tr>
<tr>
<td>2005</td>
<td>276 (1.3)</td>
<td>278 (0.2)</td>
</tr>
<tr>
<td>2003</td>
<td>279 (1.1)</td>
<td>276 (0.3)</td>
</tr>
<tr>
<td>2000</td>
<td>271 (1.5)</td>
<td>272 (0.9)</td>
</tr>
<tr>
<td>2000</td>
<td>274 (1.5)</td>
<td>274 (0.8)</td>
</tr>
<tr>
<td>1996</td>
<td>273 (1.4)</td>
<td>271 (1.2)</td>
</tr>
<tr>
<td>1992</td>
<td>271 (1.2)</td>
<td>267 (1.0)</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 2009</td>
<td>224 (1.1)</td>
<td>220 (0.3)</td>
</tr>
<tr>
<td>2007</td>
<td>221 (1.1)</td>
<td>220 (0.3)</td>
</tr>
<tr>
<td>2005</td>
<td>221 (0.9)</td>
<td>217 (0.2)</td>
</tr>
<tr>
<td>2003</td>
<td>222 (1.2)</td>
<td>216 (0.3)</td>
</tr>
<tr>
<td>2002</td>
<td>220 (1.3)</td>
<td>217 (0.5)</td>
</tr>
<tr>
<td>1998</td>
<td>216 (1.3)</td>
<td>213 (1.2)</td>
</tr>
<tr>
<td>1996</td>
<td>216 (1.7)</td>
<td>215 (0.8)</td>
</tr>
<tr>
<td>1994</td>
<td>217 (1.5)</td>
<td>212 (1.1)</td>
</tr>
<tr>
<td>1992</td>
<td>220 (1.2)</td>
<td>215 (1.0)</td>
</tr>
<tr>
<td>8 2009</td>
<td>267 (1.0)</td>
<td>262 (0.3)</td>
</tr>
<tr>
<td>2007</td>
<td>263 (1.0)</td>
<td>261 (0.2)</td>
</tr>
<tr>
<td>2005</td>
<td>265 (1.0)</td>
<td>260 (0.2)</td>
</tr>
</tbody>
</table>

### Snapshot Reports

**State Snapshot Reports:**
- Mathematics: Grade 4 (142K PDF)
- Mathematics: Grade 8 (141K PDF)
- Reading: Grade 4 (119K PDF)
- Reading: Grade 8 (118K PDF)
- Science: Grade 4 (217K PDF)
- Science: Grade 8 (237K PDF)
- Writing: Grade 4 (128K PDF)
- Writing: Grade 8 (173K PDF)

**Trial Urban District Assessment Snapshot Reports:**
- Mathematics, Reading, Science, Writing

### Demographics

**Student Characteristics:**
- Number enrolled: 917,188
- Percent in Title I schools: 40.3%
- With Individualized Education Programs (IEP): 15.1%
- Percent in limited-English proficiency programs: --
- Percent eligible for free/reduced lunch: 39.5%

**Racial/Ethnic Background:**
- White: 76.1%
- Black: 17.9%
- Hispanic: 3.7%
- Asian/Pacific Islander: 1.8%
- American Indian/Alaskan Native: 0.4%

**School/District Characteristics:**
- Number of school districts: 524*
- Number of schools: 2438
- Number of charter schools: 39
- Per-pupil expenditures: $8,671
- Pupil/teacher ratio: 13.4
- Number of FTE teachers: 68,430

---

* Local school districts only (type 1-3)
State Profiles

Mathematics, grade 4
Difference in Average scale score Between Jurisdictions
for All students [TOTAL] = All students, 2000

NOTE: Reported differences are statistically significant at the .05 level. DoDEA=Department of Defense Education and Activity (overseas and domestic schools).

All students
• State Profiles
• NAEP Date Explorer
• NAEP Questions Tool
• NAEP State Comparisons Tool
NAEP Data Explorer

• Used for reporting and analytic investigations into national, state, and TUDA district data

• Extremely powerful publicly available tool

• Think of the NDE as a user interface into the NAEP data warehouse

• If it is related to NAEP, it is there
  ★ Lots and lots of variables
  ★ Important to have research question in mind
NAEP Data Explorer

- Many choices for graphical output or export data to excel and make your own
Do you have questions about what the nation's students know and can do?

With the NAEP Data Explorer (NDE) you can create statistical tables, charts, and maps to help you find answers. Explore the results of decades of assessment of students’ academic performance, as well as information about factors that may be related to their learning.

For help using NDE, view the tutorial, visit the Quick Reference Guide (609K PDF) or use the NDE help button available at the top of every page.

System Requirements:

- Target screen resolution is 1024x768.
- Internet Explorer 6 or Higher, (IE7 recommended).
- Firefox 2.0 or higher, (FF 3.0 or higher recommended).
- Enable JavaScript and pop-ups in your browser.
- Adobe Flash Player 9.0.115 or higher, (download).

Accessible version:  ON  OFF
NAEP Data Explorer

- One subject, one grade
- One or more districts, states, nation
- One or more years
- One or more variables
  - Single variable analyses or cross tabulations
- Multiple statistics
- Gaps and Changes in Gaps
1. Select Criteria

**STEP 1:** Select criteria from each drop-down menu to begin. Additional options related to your selections will appear. Then select measures, jurisdictions, and years based on available data.

- **Subject:** Mathematics
- **Grade:** Grade 8

[Links to other sections: Select Variables, Edit Reports, Build Reports, Help]
1. Select Criteria

Select criteria from each drop-down menu to begin. Additional options related to your selections will appear. Then select measures, jurisdictions, and years based on available data.

---

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Composite scale</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Algebra scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Data analysis, statistics, and probability scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Geometry scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Measurement scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Number properties and operations scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ National</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ National Public</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ National Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Large City</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ State</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Alabama</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Alaska</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Arizona</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Select Criteria

<table>
<thead>
<tr>
<th>Measure</th>
<th>All Years</th>
<th>2009</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite scale</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algebra scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data analysis, statistics, and probability scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geometry scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number properties and operations scale</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Overall composite
- Subscales
1. Select Criteria

<table>
<thead>
<tr>
<th>Group</th>
<th>Jurisdiction</th>
<th>All Years</th>
<th>2009</th>
<th>2007</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Public</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Large City</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Alabama</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alaska</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arizona</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Multiple jurisdictions
- National, National Public
- States
- TUDA Districts
2. Select Variables

Select at least one variable from the category list below. View the list of all available variables, view by selected variables only, or search variables by keywords. Years selected will override previous selections.

Subject, Grade: Mathematics, Grade 4
Jurisdiction: National Public
Measure: Composite scale
Year: 2009

STEP 2: Select at least one variable from the category list below. View the list of all available variables, view by selected variables only, or search variables by keywords. Years selected will override previous selections.

Subject, Grade: Mathematics, Grade 4
Jurisdiction: National Public
Measure: Composite scale
Year: 2009

Select at least one variable from the category list below. View the list of all available variables, view by selected variables only, or search variables by keywords. Years selected will override previous selections.
2. Select Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub Category</th>
<th>Variable</th>
<th>All Years</th>
<th>2009</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Reporting</td>
<td>Student Factors Groups</td>
<td>All students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disability status of student, excluding 504</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disability status of student, including 504</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Natl School Lunch Prog eligibility (3 categories)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Race/ethnicity (from school records)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Status as English Language Learner (2 categories)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student disability or English Language Learner status</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Can select multiple variables
- Search functionality
3. Edit Reports

**STEP 3:** Preview and edit existing reports using the action links next to each report name. Create new reports, set format and statistic options. (New and copied reports will appear at the bottom of the report list.)

**Subject, Grade:** Mathematics, Grade 8  
**Jurisdiction:** National Public  
**Measure:** Composite scale  
**Variables:** Natl School Lunch Prog eligibility (3 categories), Race/ethnicity (from school records)  
**Years:** 2007, 2005, 2003

<table>
<thead>
<tr>
<th>Report</th>
<th>All</th>
<th>Action</th>
<th>Measure</th>
<th>Variable</th>
<th>Year</th>
<th>Jurisdiction</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report 1</td>
<td></td>
<td>Preview</td>
<td>Edit</td>
<td>Composite scale</td>
<td>Natl School Lunch Prog eligibility (3 categories)</td>
<td>2007, 2005, 2003</td>
<td>National Public</td>
</tr>
<tr>
<td>Report 2</td>
<td></td>
<td>Preview</td>
<td>Edit</td>
<td>Composite scale</td>
<td>Race/ethnicity (from school records)</td>
<td>2007, 2005, 2003</td>
<td>National Public</td>
</tr>
<tr>
<td>Cross-Tabulated</td>
<td></td>
<td>Preview</td>
<td>Edit</td>
<td>Composite scale</td>
<td>Natl School Lunch Prog eligibility (3 categories), Race/ethnicity</td>
<td>2007, 2005, 2003</td>
<td>National Public</td>
</tr>
</tbody>
</table>
3. Edit Reports

Format Options
- variable labels
- decimal places
- standard errors
- confidence intervals
- sample display
3. Edit Reports

Statistics Options

- choice of statistic
- can choose two
4. Build Reports

**Subject, Grade:** Mathematics, Grade 8  
**Jurisdiction:** National Public  
**Measure:** Composite scale  
**Variables:** Natl School Lunch Prog eligibility (3 categories), Race/ethnicity (from school records)  
**Years:** 2007, 2005, 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Jurisdiction</th>
<th>White Average scale score</th>
<th>White Standard error</th>
<th>Black Average scale score</th>
<th>Black Standard error</th>
<th>Hispanic Average scale score</th>
<th>Hispanic Standard error</th>
<th>Asian/Pacific Island Average scale score</th>
<th>Asian/Pacific Island Standard error</th>
<th>American Indian Average scale score</th>
<th>American Indian Standard error</th>
<th>Unclassified Average scale score</th>
<th>Unclassified Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>National Public</td>
<td>290 (0.2)</td>
<td>259 (0.4)</td>
<td>264 (0.4)</td>
<td>296 (0.9)</td>
<td>265 (0.9)</td>
<td>282 (1.7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>National Public</td>
<td>288 (0.2)</td>
<td>254 (0.4)</td>
<td>261 (0.4)</td>
<td>294 (1.0)</td>
<td>266 (1.0)</td>
<td>278 (1.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>National Public</td>
<td>287 (0.3)</td>
<td>252 (0.5)</td>
<td>258 (0.6)</td>
<td>289 (1.3)</td>
<td>265 (1.2)</td>
<td>276 (2.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Build Reports

Chart
- Graphs depicting the data in multiple ways

Significance Test
- Check to find if differences are statistically significant

Gap Analysis
- Check gaps on any variable with any statistic
4. Build Reports
4. Build Reports

Significance Test

1. Select one category to compare significance from the choices available below.

- Between Jurisdictions
- Within Variables
- Across Years

2. Create a name for this significance test.

Name: Sig Test 1

3. Select the output type.

- Table
- Map
- Comparison

4. Check to show score details.

- Show score details

5. Select available options from each of the columns below, then preview results.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Variable</th>
<th>Year</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Jurisdictions</td>
<td>Natl School Lunch Prog eligibility (3)</td>
<td>All Years</td>
<td>Average scale scores</td>
</tr>
</tbody>
</table>
4. Build Reports
4. Build Reports

Gap Analysis

1. Select the basis to use for comparison (Between Jurisdictions, Across Years).
   - Between Jurisdictions
   - Across Years

2. Create a name for this gap analysis.
   - Gap Analysis 1

3. Select the difference measure (gap) to analyze.
   - Between Groups
   - Between Years
   - Between Groups and Years
   - Between Percentiles

4. Select the output type.
   - Table
   - Map
   - Comparison

5. Check to show score details.
   - Show score details

6. Select available options from each of the columns below, then preview results.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Variable</th>
<th>Year</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Jurisdictions</td>
<td>Natl School Lunch Prog eligibility (3)</td>
<td>All Years</td>
<td>Average scale scores</td>
</tr>
</tbody>
</table>
4. Build Reports

STEP 4: View each report table by selecting the report name from the drop-down menu. Create report types to edit and preview, each tab created represents one report type to export. Double-click report tabs to rename.

**Subject, Grade:** Mathematics, Grade 8  
**Jurisdiction:** National Public  
**Measure:** Composite scale  
**Variables:** Natl School Lunch Prog eligibility (3 categories), Race/ethnicity (from school records)  
**Years:** 2007, 2005, 2003

Select Report: Report 1

Export Reports

- Report 2
- Report 1
- Cross-Tabulated Report 1
Export Reports

Select report(s) and choose the format to export.

- Report 1
  - Table (Table)
  - Chart 1 (Chart)
  - Sig Test 1 (Sig Test)
  - Sig Test 2 (Sig Test)
  - Sig Test 3 (Sig Test)
  - Chart 2 (Chart)
  - Gap Analysis 1 (Gap Analysis)
- Report 2
- Cross-Tabulated Report 1

Format options:
- HTML
- Excel
- Word
- PDF
• State Profiles
• NAEP Date Explorer
• NAEP Questions Tool
• NAEP State Comparisons Tool
NAEP Questions Tool

- Provides public access to released questions from NAEP assessments dating from 1990
- Provides examples of what NAEP asks students in grades 4, 8 and 12
- Examines student performance for a jurisdiction on a specific question by subgroups
- Creates customizable assessments with scoring guides and examples of student work
After each assessment, NAEP releases dozens of sample questions to the public—more than 2,000 questions are currently available. The tools featured here can be used to supplement classroom instruction, provide additional insight into the content of the assessment, and show what students nationally or in your state or district know and can do. Explore the tools or print a quick reference guide to find out more about NAEP.
NAEP Questions Tool

Search for Questions
To begin your search, decide which assessment to explore (main or long-term trend) and then select a subject. On the next screen, you will be able to refine your search results and use My Workspace to assemble and print questions, student responses, scoring guides, and performance data from NAEP assessments. Find out more about NAEP sample questions, and view the copyright policy.

System Requirements

Main NAEP
- Arts
- Civics
- Economics
- Geography
- Mathematics
- Reading
- Science
- U.S. History
- Writing

Long-Term Trend NAEP
- Long-Term Trend Mathematics
- Long-Term Trend Reading
NAEP Questions Tool

Select Grade, Type, Difficulty

- Grade 4 (262)
- Grade 8 (312)
- Grade 12 (186)

Type
- Multiple Choice (501)
- Short Constructed Response (227)
- Extended Constructed Response (32)

Difficulty
- Easy (283)
- Medium (222)
- Hard (255)
NAEP Questions Tool

Content Area
(subscale level)

Complexity
### Refine Search

#### Select Grade, Type, Difficulty

#### Select Content Classifications

#### Select Years

**Framework 2**
- 2007 (107)
- 2005 (141)

**Framework 1**
- 2003 (126)
- 1996 (83)
- 1992 (191)
- 1990 (112)

**Year**

**Keyword Search**
<table>
<thead>
<tr>
<th>Year</th>
<th>Grade</th>
<th>Block</th>
<th>#</th>
<th>Type</th>
<th>Difficulty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>1</td>
<td>MC</td>
<td>Easy</td>
<td>Determine how many given pieces cover a shape</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>2</td>
<td>MC</td>
<td>Easy</td>
<td>Recognize type of transformation from picture</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>3</td>
<td>SCR</td>
<td>Easy</td>
<td>Arrange given pieces to cover a figure</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>4</td>
<td>SCR</td>
<td>Medium</td>
<td>Use given pieces to make shape with certain properties</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>5</td>
<td>MC</td>
<td>Medium</td>
<td>Identify given piece with angle greater than 90 degrees</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>6</td>
<td>ECR</td>
<td>Hard</td>
<td>Make a design using given shapes and solve problem</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>7</td>
<td>SCR</td>
<td>Easy</td>
<td>Determine value of unknown in a number sentence</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>8</td>
<td>SCR</td>
<td>Easy</td>
<td>Use place value to write a number</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>M5</td>
<td>9</td>
<td>MC</td>
<td>Medium</td>
<td>Use estimation to find a difference</td>
</tr>
</tbody>
</table>
NAEP Questions Tool

Information on Each Question

1. Actual question
2. Key / Scoring guide
3. National data
4. Jurisdiction data
4. The weights on the scale above are balanced. Each cube weighs 3 pounds.

A. $6 + N = 12$
B. $6 + N = 4$
C. $2 + N = 12$
D. $2 + N = 4$

Did you use the calculator on this question?
Solution:

If 33% was included with 1/3 or 3/9, score as correct.

<table>
<thead>
<tr>
<th>Score &amp; Description</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any of the following</td>
<td></td>
</tr>
<tr>
<td>1/3</td>
<td>OR</td>
</tr>
<tr>
<td>3/9</td>
<td></td>
</tr>
<tr>
<td>1 out of 3</td>
<td>OR</td>
</tr>
<tr>
<td>3 out of 9</td>
<td>OR</td>
</tr>
<tr>
<td>1 in 3</td>
<td></td>
</tr>
<tr>
<td>1:3</td>
<td>OR</td>
</tr>
<tr>
<td>3 to 9</td>
<td></td>
</tr>
<tr>
<td>.33...</td>
<td>OR</td>
</tr>
<tr>
<td>.3</td>
<td>OR</td>
</tr>
<tr>
<td>33 1/3%</td>
<td>OR</td>
</tr>
<tr>
<td>.33</td>
<td>OR</td>
</tr>
<tr>
<td>.3</td>
<td></td>
</tr>
</tbody>
</table>
NAEP Questions Tool

19. The graph above represents Marisa’s riding speed throughout her 80-minute bicycle trip. Use the graph to write the trip, including her speed throughout the trip.

During the first 20 minutes, Marisa increased her speed to 6mph.

From 20 minutes to 60 minutes, she rode at an evenly rate of 6mph.

From 60 minutes to 80 minutes, she decreased her speed to 0, riding slower than a mph, until she was done.
NAEP national performance results in Mathematics at grade 4: 2007
Identify number sentence that models balanced scale (calculator available)

Score

- Correct: 79%
- Incorrect: 19%
- Omitted: 2%

Percentage of Students
### NAEP Questions Tool

#### Score Distribution

<table>
<thead>
<tr>
<th>Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect</td>
<td>49%</td>
</tr>
<tr>
<td>Minimal</td>
<td>31%</td>
</tr>
<tr>
<td>Partial</td>
<td>1%</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>4%</td>
</tr>
<tr>
<td>Extended</td>
<td>4%</td>
</tr>
<tr>
<td>Omitted</td>
<td>11%</td>
</tr>
</tbody>
</table>

The National Data tab is highlighted in the tool.
NAEP Questions Tool

National average scale score and percentage of students in each response category in NAEP Mathematics at grade 4: 2007

Identify number sentence that models balanced scale (calculator available)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>236 (1.7)</td>
<td>75 (1.7)</td>
<td>‡ (†)</td>
<td></td>
<td>7 (1.1)</td>
<td></td>
<td>218 (4.9)</td>
<td></td>
</tr>
<tr>
<td>Alaska</td>
<td>243 (1.6)</td>
<td>74 (1.8)</td>
<td>‡ (†)</td>
<td></td>
<td>6 (1.1)</td>
<td></td>
<td>218 (4.4)</td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td>239 (1.4)</td>
<td>73 (1.7)</td>
<td>‡ (†)</td>
<td></td>
<td>8 (1.0)</td>
<td></td>
<td>218 (4.4)</td>
<td></td>
</tr>
<tr>
<td>Arkansas</td>
<td>242 (1.4)</td>
<td>78 (1.7)</td>
<td>‡ (†)</td>
<td></td>
<td>7 (1.0)</td>
<td></td>
<td>218 (4.4)</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>237 (1.1)</td>
<td>74 (1.3)</td>
<td>203 (3.3)</td>
<td>6 (0.7)</td>
<td></td>
<td></td>
<td>217 (3.4)</td>
<td>6 (0.6)</td>
</tr>
<tr>
<td>Colorado</td>
<td>244 (1.7)</td>
<td>81 (1.4)</td>
<td>‡ (†)</td>
<td></td>
<td>5 (0.8)</td>
<td></td>
<td>217 (3.4)</td>
<td>6 (0.6)</td>
</tr>
<tr>
<td>Connecticut</td>
<td>246 (2.0)</td>
<td>75 (2.1)</td>
<td>‡ (†)</td>
<td></td>
<td>5 (0.8)</td>
<td></td>
<td>217 (3.4)</td>
<td>6 (0.6)</td>
</tr>
<tr>
<td>Delaware</td>
<td>244 (1.0)</td>
<td>80 (1.8)</td>
<td>‡ (†)</td>
<td></td>
<td>5 (0.9)</td>
<td></td>
<td>217 (3.4)</td>
<td>6 (0.6)</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>222 (2.3)</td>
<td>69 (2.7)</td>
<td>‡ (†)</td>
<td></td>
<td>10 (1.6)</td>
<td></td>
<td>217 (3.4)</td>
<td>6 (0.6)</td>
</tr>
<tr>
<td>Florida</td>
<td>245 (1.0)</td>
<td>80 (1.4)</td>
<td>‡ (†)</td>
<td></td>
<td>5 (0.7)</td>
<td></td>
<td>217 (3.4)</td>
<td>6 (0.6)</td>
</tr>
</tbody>
</table>
NAEP Questions Tool

Explore NAEP Questions

After each assessment, NAEP releases dozens of sample questions to the public—more than 2,000 questions are currently available. The tools featured here can be used to supplement classroom instruction, provide additional insight into the content of the assessment, and show what students nationally or in your state or district know and can do. Explore the tools or print a quick reference guide to find out more about NAEP.

- Questions Tool >>
  Explore a database of released NAEP questions.

- Item Maps >>
  See what students at each achievement level are likely to know and can do.

- Test Yourself >>
  Try out actual questions administered to students in the NAEP assessments.

- Scoring >>
  Learn how NAEP questions are scored.
NAEP Questions Tool

300
290
282 Advanced
280

- 276 Approximate fraction of an hour given minutes (MC)
- 275 Solve a story problem involving comparison of unit costs—Minimal Response (CR)
- 273 Solve a story problem involving large numbers (calculator available)—Correct Response (CR)
- 272 Determine missing numbers in number sentence—Correct Response (CR)
- 272 Solve a story problem involving multiplication (calculator available) (MC)

270

- ▲ 260 Determine the width of a rectangle after it is folded (MC)
- ▲ 260 Arrange tiles in different ways to satisfy given condition—Partial Response (CR)

260

- ◆ 258 Represent a situation with an algebraic expression (MC)
- ▲ 254 Identify which figure on grid has greatest area (MC)
- ▼ 253 Complete a bar graph from a description of data (CR)

250 Proficient

- ◆ 247 Determine missing numbers in number sentence—Partial Response (CR)
- ▲ 245 Determine the value of a point on a number line (CR)
- ▲ 242 Identify given measurements on a ruler—Partial Response (CR)
- ▲ 240 Arrange tiles in different ways to satisfy given condition—Minimal Response (CR)

240
NAEP Questions Tool

each point represents.

280: Arrange tiles in different ways to satisfy given condition—Correct Response
286: Identify given measurements on a ruler—Correct Response
286: Solve a story problem involving comparison of unit costs—Partial Response
284: Subtract fractions with common denominators
276: Approximate fraction of an hour given minutes
275: Solve a story problem involving comparison of unit costs—Minimal Response
273: Solve a story problem involving large numbers (calculator available)—Correct Response
272: Determine missing numbers in number sentence—Correct Response
272: Solve a story problem involving multiplication (calculator available)

Not started: 270
Basic: 214
Proficient: 249
Advanced: 282
After each assessment, NAEP releases dozens of sample questions to the public—more than 2,000 questions are currently available. The tools featured here can be used to supplement classroom instruction, provide additional insight into the content of the assessment, and show what students nationally or in your state or district know and can do. Explore the tools or print a quick reference guide to find out more about NAEP.

- **Questions Tool >>**
  - Explore a database of released NAEP questions.

- **Item Maps >>**
  - See what students at each achievement level are likely to know and can do.

- **Test Yourself >>**
  - Try out actual questions administered to students in the NAEP assessments.

- **Scoring >>**
  - Learn how NAEP questions are scored.
No proficiency level determination or scale score
• State Profiles
• NAEP Date Explorer
• NAEP Questions Tool
• NAEP State Comparisons Tool
NAEP State Comparisons Tool

- NAEP Comparisons Tool allows for comparisons between all states and the nation in regard to *Average Scale Scores*
  - No achievement level comparisons

- No graphics

- Not only rank order, but statistical significance comparisons

- Between states only; no significance check within state
NAEP State Comparisons Tool

• Variables can be examined individually and over time
  ★ All students
  ★ Gender – Male, Female
  ★ Race/Ethnicity – White, Black, Hispanic
  ★ National School Lunch Eligibility – Eligible, Not Eligible

• Can also compare between groups within these categories (gaps)
  ★ White v Black, White v Hispanic, Male v Female, etc.
NAEP State Comparisons Tool

Select a grade, subject, and student group, in boxes 1, 2, and 3, respectively.

1. Grade
   - Grade 4
   - Grade 8

2. Subject
   - Mathematics
   - Reading
   - Science
   - Writing

3. Student Group
   - Gender
   - Race/Ethnicity - White and Black
   - Race/Ethnicity - White and Hispanic
   - Race/Ethnicity - Hispanic and Black
   - National School Lunch Eligibility
   - Percentiles - 75th and 25th

4. Year(s)
   (please make selections in boxes 1, 2, and 3)

5. Display Options
   - Number of decimal places:
     - 0 (n)
     - 2 (n.nn)
   - Include:
     - Neither
     - Standard Error
     - Confidence Interval

Next Steps
## NAEP State Comparisons Tool

<table>
<thead>
<tr>
<th>Order</th>
<th>Jurisdiction</th>
<th>Cross-state significant difference</th>
<th>Number of Jurisdictions Significantly</th>
<th>All students</th>
<th>White</th>
<th>Hispanic</th>
<th>White - Hispanic difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>higher</td>
<td>not different</td>
<td>lower</td>
<td>2009 Scale Score</td>
<td>2009 Scale Score</td>
</tr>
<tr>
<td>1</td>
<td>Massachusetts</td>
<td>&gt;</td>
<td>0</td>
<td>2</td>
<td>49</td>
<td>252</td>
<td>258</td>
</tr>
<tr>
<td>2</td>
<td>New Hampshire</td>
<td>&gt;</td>
<td>0</td>
<td>2</td>
<td>49</td>
<td>251</td>
<td>252</td>
</tr>
<tr>
<td>3</td>
<td>Minnesota</td>
<td>&gt;</td>
<td>0</td>
<td>4</td>
<td>47</td>
<td>249</td>
<td>255</td>
</tr>
<tr>
<td>4</td>
<td>Vermont</td>
<td>&gt;</td>
<td>2</td>
<td>2</td>
<td>47</td>
<td>248</td>
<td>248</td>
</tr>
<tr>
<td>5</td>
<td>New Jersey</td>
<td>&gt;</td>
<td>2</td>
<td>11</td>
<td>38</td>
<td>247</td>
<td>255</td>
</tr>
<tr>
<td>6</td>
<td>Kansas</td>
<td>&gt;</td>
<td>4</td>
<td>14</td>
<td>33</td>
<td>245</td>
<td>251</td>
</tr>
<tr>
<td>7</td>
<td>North Dakota</td>
<td>&gt;</td>
<td>4</td>
<td>12</td>
<td>35</td>
<td>245</td>
<td>248</td>
</tr>
<tr>
<td>8</td>
<td>Connecticut</td>
<td>&gt;</td>
<td>4</td>
<td>16</td>
<td>31</td>
<td>245</td>
<td>253</td>
</tr>
<tr>
<td>9</td>
<td>Maine</td>
<td>&gt;</td>
<td>4</td>
<td>16</td>
<td>31</td>
<td>244</td>
<td>245</td>
</tr>
<tr>
<td>10</td>
<td>Montana</td>
<td>&gt;</td>
<td>4</td>
<td>16</td>
<td>31</td>
<td>244</td>
<td>247</td>
</tr>
<tr>
<td>11</td>
<td>Maryland</td>
<td>&gt;</td>
<td>4</td>
<td>19</td>
<td>28</td>
<td>244</td>
<td>255</td>
</tr>
<tr>
<td>12</td>
<td>North Carolina</td>
<td>&gt;</td>
<td>4</td>
<td>18</td>
<td>29</td>
<td>244</td>
<td>254</td>
</tr>
<tr>
<td>13</td>
<td>Ohio</td>
<td>&gt;</td>
<td>4</td>
<td>20</td>
<td>27</td>
<td>244</td>
<td>249</td>
</tr>
<tr>
<td>14</td>
<td>Pennsylvania</td>
<td>&gt;</td>
<td>4</td>
<td>20</td>
<td>27</td>
<td>244</td>
<td>249</td>
</tr>
<tr>
<td>15</td>
<td>Wisconsin</td>
<td>&gt;</td>
<td>5</td>
<td>18</td>
<td>28</td>
<td>244</td>
<td>250</td>
</tr>
<tr>
<td>16</td>
<td>Colorado</td>
<td>&gt;</td>
<td>5</td>
<td>21</td>
<td>25</td>
<td>243</td>
<td>252</td>
</tr>
<tr>
<td>17</td>
<td>Virginia</td>
<td>&gt;</td>
<td>5</td>
<td>22</td>
<td>24</td>
<td>243</td>
<td>251</td>
</tr>
<tr>
<td>18</td>
<td>Indiana</td>
<td>&gt;</td>
<td>6</td>
<td>21</td>
<td>24</td>
<td>243</td>
<td>247</td>
</tr>
<tr>
<td>19</td>
<td>Iowa</td>
<td>&gt;</td>
<td>6</td>
<td>21</td>
<td>24</td>
<td>243</td>
<td>245</td>
</tr>
<tr>
<td>20</td>
<td>Washington</td>
<td>&gt;</td>
<td>7</td>
<td>21</td>
<td>23</td>
<td>242</td>
<td>247</td>
</tr>
<tr>
<td>21</td>
<td>South Dakota</td>
<td>&gt;</td>
<td>10</td>
<td>17</td>
<td>24</td>
<td>242</td>
<td>247</td>
</tr>
<tr>
<td>22</td>
<td>Wyoming</td>
<td>&gt;</td>
<td>10</td>
<td>17</td>
<td>24</td>
<td>242</td>
<td>244</td>
</tr>
<tr>
<td>23</td>
<td>Florida</td>
<td>&gt;</td>
<td>7</td>
<td>21</td>
<td>23</td>
<td>242</td>
<td>250</td>
</tr>
</tbody>
</table>