Sample NAEP Assessment Items – Grade 8

Math

1. [Diagram of segment AB]

What is the length of segment AB shown above?

A. 0.52 millimeter
B. 0.52 centimeter
C. 5.2 millimeters
D. 5.2 centimeters
E. 520 millimeters

The correct answer is D.

2. A nickel, a dime, and a quarter are flipped at the same time. Each coin can land either heads up (H) or tails up (T). List all the different possible outcomes for this event in the chart below. The list has been started for you.

<table>
<thead>
<tr>
<th>Nickel</th>
<th>Dime</th>
<th>Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>H</td>
<td>H</td>
<td>T</td>
</tr>
</tbody>
</table>

Solution:
Sample Correct Response:
HHH – given
HHT – given
HTT
HTH
THT
TTH
TTT
THH

Description: Determine complete sample space
Grade: 8
Year: 2013
Type of Question: Short Constructed Response
Difficulty: Medium (48.97% Correct)
Content Classification:
Content Area: Data analysis and probability
Complexity (2005 and on): Low
9. In which of the following equations does the value of \( y \) increase by 6 units when \( x \) increases by 2 units?

A. \( y = 3x \)  
B. \( y = 4x \)  
C. \( y = 6x \)  
D. \( y = 4x + 2 \)  
E. \( y = 6x + 2 \)

The correct answer is A.

11. The Atwood family sells firewood. They keep track of how their weekly income varies with the price they set for the firewood. In the graph below, the relationship between the price per truckload and weekly income is modeled by the curve.

About how many truckloads of firewood would the Atwood family expect to sell at $170 per truckload?

Answer: ________________________________

Show how you found your answer.
Sample responses:

Description: Read a graph to solve a problem.
Grade: 8
Year: 2013
Type of Question: Short Constructed Response
Difficulty: Hard (13.04% Correct)
Content Classification:
  Content Area: Algebra
  Complexity (2005 and on): High

Answer:

Show how you found your answer.

Answer:

Show how you found your answer.

Scored Comments: These correct responses contain an acceptable answer and show correct work.

Answer:

Scored Comments: The partially correct response to the top contains an acceptable answer, but no work is shown. The partially correct response on the bottom contains an acceptable answer, but the work shown is insufficient.

Answer:

Scored Comments: These partially correct responses contain answers outside of the acceptable range, but the work shown demonstrates a correct process.

Answer:

Scored Comments: These incorrect responses contain unacceptable answers that are not based on a correct process.
Grade 8 Reading

1. Explain what the author means when she says, “Fun is a rare jewel.”

**Acceptable responses**
Responses at this level explain that the phrase means fun is difficult to find/doesn’t happen all the time/when it occurs, it is precious.

- The author means that fun isn’t easy to find. Fun is like a rare jewel because it is something very valuable and rare.
- Fun is not something that exists everywhere, in everything.
- Fun is a rare jewel means that fun is something to cherish.
- It is hard to come by just like a rare jewel.
- Fun isn’t everywhere.

**Unacceptable**
Responses at this level may repeat other ideas about fun from the article or provide personal opinions about fun.

- Real fun that might be disruptive or hurting someone isn’t real fun.
- Real fun is everywhere.
- I like to have fun. I also like football.
- Fun is rare these days.

5. On page 4, when the author tells us to “treat fun **reverently**,” she is encouraging us to:

   A. Look forward to having fun.
   B. Have great respect for fun.
   C. Teach others how to have fun.
   D. Have fun less frequently.

The correct answer is B.