MATH Assessment Practice Item Answer Key

Grade 6 – Online and Text-to-Speech

The following pages include the answer key for all machine-scored items, followed by a sample response for the hand-scored item.

- The rubrics show sample student responses. Student responses other than that shown in the rubric may earn full or partial credit.
- Which responses to hand-scored items receive full or partial credit will be confirmed during range-finding (reviewing sets of real student work)
- If students make a computation error, they can still earn points for reasoning or modeling.

Item Number	Answer Key
1.	**Student response is 7.5.**
2.	**Student response is $p \geq 25$.**
3.	**D, E, B**
4.	**Student response is 4.**
5.	**B**
6.	**D**
7.	**Bar Graph: The values of the editable bars going from left to right should be 3, 5, 2.**
8.	**Student response is 22.**
9.	**Student response is (–7,6).**
10.	**Student response is 5.**
11.	**Student response is 214.**
12.	**Student response is 215.**
13.	**Student response is a point plotted at (–4, 3).**
14.	**Part A: 24** **Part B: 30**
15.	**C, B, A**
16.	**See Rubric**

17.	**Part A: Student response is 20 = 0.25 × n.** **Part B: Student response is 45%.**
18.	**Drop Down 1: 34** **Drop Down 2: 14**
19.	**Student response is 7.5.**
20.	**Part A: Student response is 55.5x=277.5.** **Part B: Student response is 5.**
21.	**See Rubric**
22.	**Part A: Student responses are 3 in gap1, 1 in gap2, 2 in gap3, 6 in gap4, 4 in gap5, and 5 in gap6.** **Part B: Student responses are + in gap1 and 3 in gap2.**
23.	**See Rubric**
24.	**See Rubric**
25.	**See Rubric**
26.	**Student response is 2 pints = 4 cups, 2 quarts = 8 cups.**
27.	**1. Triangular pyramid** **2. Square pyramid** **3. Triangular prism** **4. Rectangular prism**
28.	**Student response is 8.**
29.	**See Rubric**

#16 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Reasoning component 1** = 1 point: Valid explanation for finding Maya's hiking rate. • **Computation component** = 1 point: Correct value for the total number of hours Maya hikes to complete the trail • **Reasoning/Modeling component** = 1 point: Valid explanation for how to use reasoned estimates to check the work. Sample Student Response: Maya has hiked 4 miles in 2 hours, which is a rate of 4 miles ÷ 2 hours, or 2 miles per hour. It will take Maya 4.5 hours total to complete the trail. Maya has hiked 4 miles in 2 hours. She has 5 more miles to hike. It will take Maya slightly longer to hike 5 more miles than it took her to hike 4 miles. A reasonable estimate is that it will take Maya 3 hours to hike 5 more miles. So, a reasonable estimate is that it will take Maya 2 hours + 3 hours, or 5 total hours, to complete the trail. The estimate of 5 hours is close to the answer of 4.5 hours.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

#21 Rubric	
3 Point Constructed Response Rubric – Part A	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct expression to find the volume of the box of cereal • **Computation component** = 1 point: Correct volume of the box of cereal • **Computation component** = 1 point: Correct cost for shipping each cubic inch of the box of cereal with work shown Sample Student Response: The box of cereal is in the shape of a rectangular prism. To find the volume of a rectangular prism, multiply the length by the width by the height. So, an expression to find the volume of the box of cereal is $8 \times 2 \times 12$. The volume of the box of cereal is $8 \times 2 \times 12 = 192$ cubic inches. Divide the cost to ship the box of cereal by the volume of the box of cereal. The cost for shipping each cubic inch of the box of cereal is $\$5.76 \div 192 = \$0.03$ per cubic inch. Or other valid approaches are acceptable.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

3 Point Constructed Response Rubric – Part B	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct expression to find the number of 1/4-cup servings of cereal there are in the box of cereal • **Modeling component** = 1 point: Correct description of how to use a model to find the

	number of 1/4-cup servings of cereal there are in the box of cereal • **Computation component** = 1 point: Correct description of how to use the relationship between multiplication and division to find the number of 1/4-cup servings of cereal there are in the box of cereal Sample Student Response: To find the number of 1/4-cup servings of cereal there are in the box of cereal, divide the number of cups of cereal by the amount of one serving: $6 \div 1/4$. Draw a model with 6 equal parts to represent the 6 cups of cereal. Divide each part into 4 equal parts to represent a serving size of 1/4 cup. The model shows 24 equal parts, so there are twenty-four 1/4-cup servings of cereal in the box of cereal. $6 \div 1/4 = 24$ because $24 \times 1/4 = 6$, so there are twenty-four 1/4-cup servings of cereal in the box of cereal. Or other valid approaches are acceptable.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

#23 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Computation component** = 1 point: Correct value of the expression $-2(x - 5)$ when $x = 3$ • **Computation component** = 1 point: Correct value of the expression $10 - 2x$ when $x = 3$ • **Modeling component** = 1 point: Shows why the expressions $-2(x - 5)$ and $10 - 2x$ are equivalent Sample Student Response: When $x = 3$, $-2(x - 5) = -2(3 - 5) = -2(-2) = 4$. When $x = 3$, $10 - 2x = 10 - 2(3) = 10 - 6 = 4$. The expressions $-2(x - 5)$ and $10 - 2x$ are equivalent because when $x = 3$, or when $x =$ any

	value, the expressions have the same value. (In other words, –2(x – 5) and 10 – 2x are equivalent because -2(x-5) = –2x + 10 = 10 – 2x.) Or other valid approaches are acceptable.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

#24 Rubric

Score	Description
3	Student response includes the following elements. • **Modeling component** = 1 point: Valid explanation or work shown for determining how many miles Samantha and Jake each rode their bike. • **Modeling component** = 1 point: Valid explanation or work shown for determining how much farther Samantha biked. • **Computation component** = 1 point: Correct value for the number of miles, 8 Sample Student Response: 12×4=4810×4=4048−40=812×4=4810×4=4048-40=8 Or other valid approaches are acceptable.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

#25 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct expression to find the number of 1/8-cup servings of raisins that are in 1/2 cup of raisins • **Modeling component** = 1 point: Correct description of how the model can be modified to show how many 1/8-cup servings of raisins are in 1/2 cup of raisins • **Computation component** = 1 point: Finds the correct number of 1/8-cup servings of raisins in 1/2 cup of raisins using the relationship between multiplication and division Sample Student Response: Divide the total amount of raisins by the amount of raisins in one serving. So, to find the number of 1/8-cup servings of raisins that are in 1/2 cup of raisins use the expression (1/2) ÷ (1/8). The diagram shows the 1/2 cup of raisins that Jamie has. Divide it into 8 equal parts so that each part represents a 1/8-cup serving. The diagram would show 4 of 8 parts shaded, which means there are four 1/8-cup servings of raisins in 1/2 cup of raisins. There are four 1/8-cup servings of raisins in 1/2 cup of raisins because (1/2) ÷ (1/8) = 4 since 1/8 × 4 is 1/2. Or other valid approaches are acceptable.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

#29 Rubric	
2 Point Constructed Response Rubric – Part A	
Score	**Description**
2	Student response includes the following elements. • **Reasoning component** = 1 point: Explains how to determine the distance from Paige's house to the school using absolute value • **Computation component** = 1 point: Correct distance from Paige's house to the school Sample Student Response: Paige's house is located at (–4, –1) and the school is located at (2, –1). Since the *y*-coordinates are the same and the *x*-coordinates are opposites, find the sum of the absolute value of the *x*-coordinates. So, the distance from Paige's house to the school is $\|-4\| + \|2\| = 4 + 2 = 6$ miles. Or other valid approaches are acceptable.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.
2 Point Constructed Response Rubric – Part B	
Score	**Description**
2	Student response includes the following elements. • **Reasoning component** = 1 point: Explains how to determine the distance from the school to the library using absolute value • **Computation component** = 1 point: Correct distance from the school to the library Sample Student Response: The school is located at (2, –1) and the library is located at (2, –4). Since the *x*-coordinates are the same and the *y*-coordinates are not opposites, find the difference of the absolute value of the *y*-coordinates. So, the distance from the school to the library is $\|-4\| - \|-1\| = 4 - 1 = 3$ miles. Or other valid approaches are acceptable.

1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.