DoDEA MATH Assessment Practice Item Answer Key

Grade 5 – Online (non-accommodated) and TTS

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.	**Part A: Student response is 3.** **Part B: Student response is 4.**
2.	**See Rubric**
3.	**B**
4.	**See Rubric**
5.	**C**
6.	**B**
7.	**0.3 cm = 0.003 m** **3 cm = 0.03 m** **30 cm = 0.3 m** **300 cm = 3 m**
8.	**Part A: Student response is 7,000.** **Part B: Student response is 3.**
9.	**Student response is 2/3×3/8.**
10.	**See Rubric**
11.	**See Rubric**
12.	**A**
13.	**0.112**

14.	**Student response is 1/8.**
15.	**Student response is 3(1/2) × (1/3) = 7/6.**
16.	**Part A: Student response is 40.** **Part B: Student response is 44.**
17.	**Part A: C** **Part B: D**
18.	**Student responses are tens in gap1 and thousands in gap2.**
19.	**Part A: Student response is 7.5.** **Part B: Student response is 4.**
20.	**140**
21.	**C**
22.	**D**
23.	**See Rubric**
24.	When plotting the point (5,3) on a coordinate grid, start at the origin and move **5** units in the direction of the **x-axis.** Then move **3** units in the direction of the other axis.
25.	**See Rubric**

#2 Rubric

2 Point Constructed Response Rubric – Part A

Score	Description
2	Student response includes the following elements. • **Computation component** = 1 point: Correct value for the number of unit cubes that can fit in the prism, 30. • **Reasoning component** = 1 point: Valid explanation for determining the number of unit cubes that can fit in the prism. Sample Student Response: 30 unit cubes can fit in the rectangular prism. To determine how many unit cubes can fit in the prism, first you determine the volume of the prism. The volume of the prism is 30 cubic units, so 30 unit cubes can fit inside. Or other valid approaches are acceptable.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

1 Point Constructed Response Rubric – Part B

Score	Description
1	Student response includes the following elements. • **Reasoning/Modeling component** = 1 point: Valid explanation for determining how many smaller boxes can fit within the larger box. Sample Student Response: The volume of the larger box is 30 cubic units. To determine how many of the smaller box can fit within the larger box, divide the volume of the larger box by the volume of the smaller box. $30 \div 10 = 330 \div 10 = 3$ Or other valid approaches are acceptable.

0	Student response is incorrect or irrelevant.

#4 Rubric	
Score	**Description**
4	Student response includes the following elements. • **Reasoning component 1** = 1 point: Valid explanation of Ichiro's error. • **Computation component 1** = 1 point: Correct value for the number of packages of udon noodles Ichiro ordered, 24 • **Computation component 2** = 1 point: Correct value for the number of boxes of udon noodles Ichiro ordered, 2 • **Reasoning component 2** = 1 point: Valid explanation for how to use the relationship between multiplication and division to determine the number of packages of udon noodles Ichiro ordered and the boxes of udon noodles Ichiro ordered. Sample Student Response: Ichiro divided the number of ounces of udon noodles he ordered by the number of ounces in each package to find the number of boxes of udon noodles he ordered. However, he found the number of packages of udon noodles that he ordered. Divide the number of ounces of udon noodles Ichiro ordered by the number of ounces in each package to find the number of packages of udon noodles Ichiro ordered. $14 \times 24 = 336$, so $336 \div 14 = 24$. Ichiro ordered 24 packages of udon noodles. Divide the number of packages of udon noodles Ichiro ordered by the number of packages in each box to find the number of boxes of udon noodles Ichiro ordered. $12 \times 2 = 24$, so $24 \div 12 = 2$. Ichiro ordered 2 boxes of udon noodles. Or other valid approaches are acceptable.
3	Student response includes 3 of the 4 elements.
2	Student response includes 2 of the 4 elements.
1	Student response includes 1 of the 4 elements.
0	Student response is incorrect or irrelevant.

#10 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct equation to determine how much more of the book Kathy read than Ashton, b • **Computation component** = 1 point: Correct amount of the book Kathy read compared to Ashton • **Modeling component** = 1 point: Correct use of benchmark fractions to check the reasonableness of answer Sample Student Response: Subtract the amount of the book Ashton read from the amount of the book Kathy read. So, the equation $b = 7/8 - 2/5$ represents how much more of the book Kathy read than Ashton. Kathy read $b = 7/8 - 2/5 = 35/40 - 16/40 = 19/40$ more of the book than Ashton. $7/8$ is close to 1 and $2/5$ is close to $1/2$. $1 - 1/2 = 1/2$ and $19/40$ is close to $1/2$, so the answer is reasonable. 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.

#10 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct expression to determine the number of baseballs the manager ordered • **Computation component** = 1 point: Correct use of the standard algorithm to determine the total number of baseballs the manager ordered

	• **Modeling component** = 1 point: Correct use of partial products to check answer
	Sample Student Response: Multiply the number of baseballs in one crate by the number of crates ordered to determine the total number of baseballs the manager ordered: 108 × 12.
	108 ×12 216 108 1,296 108 ×12 216 108 1,296 The manager ordered 1,296 baseballs.
	The partial products are 2 × 8 = 16, 2 × 0 = 0, 2 × 100 = 200, 10 × 8 = 80, 10 × 0 = 0, 10 × 100 = 1,000 and 16 + 0 + 200 + 80 + 0 + 1,000 = 1,296, so the answer is correct.
	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. • **Modeling component** = 1 point: Correct meaning of the expression • **Computation component** = 1 point: Correct product • **Modeling component** = 1 point: Correct description of using an area model to check work Sample Student Response: The expression 3/4 × 2/3 represents the fraction of the animals on the farm that are female cattle. 3/4 × 2/3 = 6/12 = 1/2, so 1/2 of the animals on the farm that are female cattle. Draw an area model with 3 rows and 4 columns. Shade 3 of the 4 columns to represent 3/4. Shade 2 of the 3 rows to represent 2/3. 6 of the 12 sections are shaded twice, so 3/4 × 2/3 = 6/12 = 1/2. Or other valid approaches are acceptable.
2	Student response includes 2 of the 3 elements.

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1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

#25 Rubric

3 Point Constructed Response Rubric – Part A

Score	Description
3	Student response includes the following elements. • **Computation component** = 1 point: Correct total number of dashikis at all three warehouses • **Reasoning/Modeling component** = 2 points: Explains process for finding the total number of dashikis at all three warehouses Sample Student Response: Warehouse B has 4 times as many dashikis as Warehouse A. So, Warehouse B has 345×4, or 1,380 dashikis. Warehouse C has 440 fewer dashikis than Warehouse B, so Warehouse C has $1,380 - 440$, or 940 dashikis. Add to find the total number of dashikis at all three warehouse. So, there are $345 + 1,380 + 940$, or 2,665 dashikis at all three warehouses. 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. • **Computation component** = 1 point: Correct total number of boubous at all three warehouses • **Reasoning/Modeling component** = 2 points: Explains process for finding the total number of boubous at all three warehouses

	Sample Student Response: Warehouse B has 3/5 times as many boubous as Warehouse A. So, Warehouse B has 515 × 3/5, or 309 boubous. Warehouse C has 256 more boubous than Warehouse B, so Warehouse C has 309 + 256, or 565 boubous. Add to find the total number of boubous at all three warehouse. So, there are 515 + 309 + 565, or 1,080 boubous at all three warehouses. 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.