ILLINOIS Assessment of Readiness

Illinois MATH Assessment

Practice Item Answer

Key

Grade 4

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.	**200**
2.	**Column 3 should be selected for row1** **Column 1 should be selected for row2** **Column 1 should be selected for row3** **Column 2 should be selected for row4** **Column 3 should be selected for row5**
3.	**See Rubric**
4.	**5523**
5.	**A**
6.	**See Rubric**
7.	**See Rubric**
8.	**C**
9.	**72**
10.	**Box 1 is <** **Box 2 is =** **Box 3 is >**
11.	**2**

12.	**B**
13.	**Drop Down 1: should have option 1 chosen.** **Drop Down 2: should have option 1 chosen.** **Drop Down 3: should have option 2 chosen.** **Drop Down 4: should have option 2 chosen.** **Multiple Choice: B**
14.	**See Rubric**
15.	**See Rubric**
16.	**Part A: See Rubric** **Part B: 270**
17.	**Box 1 =** 1 and 12, 2 and 6, 3 and 4 **Box 2 =** 1 and 18, 2 and 9, 3 and 6 **Box 3 =** 1 and 24, 2 and 12, 3 and 8, 4 and 6
18.	**A**
19.	**C**
20.	**See Rubric**
21.	**Part A: B** **Part B: C**
22.	**Drop Down 1: should have option 1 chosen.** **Drop Down 2: should have option 3 chosen.** **Drop Down 3: should have option 2 chosen.** **Drop Down 4: should have option 3 chosen.**
23.	**See Rubric**
24.	**D**
25.	**22**
26.	**20**
27.	**A**
28.	**Box 1:** Trapezoid **Box 2:** Parallelog, Rectangle **Box 3:** Scalenetri , Kite
29.	**C, A**

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3
Rubric

3 Point Constructed Response Rubric	
Score	**Description**
3	Student response includes the following elements. • **Reasoning/Modeling component** = 1 point: Correct equation to find the number of buses needed for the field trip, *x*. • **Reasoning/Modeling component** = 1 point: Correct number of buses needed for the field trip. • **Computation component** = 1 point: Correct interpretation of the remainder. Sample Student Response: The equation used to find the number of school buses needed is: $(6 \times 25+22) \div 45 = x$ To find the number of school buses needed, solve the equation. To find the number of school buses needed, first you need to find the total number of students by multiplying 6 by 25, then adding 22. Then, divide by the number of students each school bus holds, 45. $(6 \times 25+22) \div 45 = x$ $(150+22) \div 45 = x$ $172 \div 45 = x$ When dividing 172 by 45, 45 goes in to 172 3 times because 45 times 3 equals 135. Then, there are 37 students left over. 172 divided by 45 is 3 R 37. The school will need 4 buses, because when dividing, there are 37 students that will not fit on the third bus. They will need one more bus to hold the remaining students. 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.

# 6 Rubric	
3 Point Constructed Response Rubric	
Score	**Description**
3	Student response includes the following elements. • **Reasoning/Modeling component** = 1 point: Explains Hector's error • **Computation component** = 1 point: Correct sum • **Reasoning/Modeling component** = 1 point: Correct work Sample Student Response: Hector added the numerators without first finding a common denominator. 4/10 = 40/100 and 40/100 + 5/100 = 45/100. 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

7 Rubric

1 point FIB Rubric - Part A	
Score	Description
1	Student response is 8. Rationale: When 75 is divided by 9, the quotient is 8 with a remainder.
0	The response is incorrect or irrelevant.

1 point FIB Rubric - Part B	
Score	Description
1	Student response is 3. Rationale: When 75 is divided by 9, the quotient is 8 with a remainder of 3. The remainder is the

	number of granola bars the camp counselor gets.
0	The response is incorrect or irrelevant.

14 Rubric

3 Point Constructed Response Rubric	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Shows how to find the number of girls and boys at the Quinceañera • **Modeling component** = 1 point: Shows how to find the amount of pizza the girls ate and the amount of pizza the boys ate • **Computation component** = 1 point: Finds whether the girls or boys ate more pizza Sample Student Response: To find the number of girls at the Quinceañera, multiply the total number of girls and boys at the party by the fraction that are girls. 12 × 3/4 = 9, so there are 9 girls at the Quinceañera. To find the number of boys at the Quinceañera, multiply the total number of girls and boys at the party by the fraction that are boys. 12 × 1/4 = 3, so there are 3 boys at the Quinceañera. To find the amount of pizza the girls ate, multiply the number of girls by the amount of pizza each girl ate. 9 × 1/4 = 9/4, so the girls at 9/4 pizzas. To find the amount of pizza the boys ate, multiply the number of boys by the amount of pizza each boy ate. 3 × 1/2 = 3/2, so the boys at 3/2 pizzas. The girls ate 9/4 pizzas and the boys ate 3/2 pizzas, or (3 × 2)/(2 × 2) = 6/4 pizzas. Since 9 > 6, 9/4 > 6/4. This means the girls ate more pizza. 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.

15 Rubric

2 Point Constructed Response Rubric – Part A	
Score	**Description**
2	Student response includes the following elements. • **Reasoning/Modeling component** = 1 point: Valid explanation for why Jace's reasoning is incorrect. • **Computation component** = 1 point: Correct comparison of $\frac{2}{4}$ and $\frac{1}{2}$, $\frac{2}{4} = \frac{1}{2}$. Sample Student Response: Jace's reasoning is incorrect, because we need to consider both the numerator and the denominator. $\frac{2}{4}$ is 2 pieces out of 4 pieces. $\frac{1}{2}$ is 1 piece out of 2 pieces. They are the same because they are both half of the whole. Therefore, $\frac{2}{4}$ is equal to $\frac{1}{2}$. Note: the comparison statement can be given in words or symbols. 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/Modeling component** = 1 point: Valid explanation for why Catherine's reasoning is incorrect. • **Computation component** = 1 point: Correct comparison of $\frac{3}{5}$ and $\frac{3}{7}$, $\frac{3}{5} > \frac{3}{7}$. Sample Student Response: Catherine's reasoning is incorrect because when the numerators are the same, the fraction with the smaller denominator is greater. This is because the whole is divided into fewer parts, so each part is larger. Therefore, $\frac{3}{5}$ is greater than $\frac{3}{7}$. Note: the comparison statement can be given in words or symbols. Or other valid approaches are acceptable.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

16
Rubric

Scoring Rubric Part A	
Score	**Description**
1	Student response is $90 + x = 360$. Note:

	• Equivalent equations are acceptable. • Equivalent numbers are acceptable.
0	Student response is incorrect or irrelevant.

20 Rubric

3 Point Constructed Response Rubric – Part A	
Score	Description
3	Student response includes the following elements. • **Modeling component 1**= 1 point: Valid equation to find the number of cans of beans. • **Computation component** = 1 point: Correct value for the total number of cans of beans, 88 • **Modeling component** 2= 1 point: Valid explanation or work shown to find the total number of cans of beans. Sample Student Response: $(3 \times 8) + (8 \times 8)$ The total number of cans of beans is 88. $3 \times 8 = 24$ $8 \times 8 = 64$ $24 + 64 = 88$ 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** = 1 point: Valid equation that can be used to find the total number of bags of rice. • **Computation component** = 1 point: Correct value for the total number of bags of rice, 60 • **Reasoning/Modeling component** = 1 point: Valid explanation or work shown to find the total number of bags of rice, Sample Student Response: $7 \times 6 + 3 \times 6$ The total number of bags of rice is 60. $7 \times 6 = 42$ $3 \times 6 = 18$ $42 + 18 = 60$ 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

3 Point Constructed Response Rubric	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct equation to find the number of $8 shirts Olivia can buy, s • **Computation component** = 1 point: Correct number of $8 shirts Olivia can buy • **Reasoning component** = 1 point: Correct interpretation of the remainder Sample Student Response: Olivia has $20. She earns $12 each hour for doing chores. She does chores for 4 hours. So, multiply 12 and 4, and add this amount to 20. Olivia wants to buy as many $8 shirts as she can. So, divide by 8. The equation $s = (20 + 12 \times 4) \div 8$ represents the number of $8 shirts Olivia can buy. Solve the equation. $s = (20 + 12 \times 4) \div 8$ $s = (20 + 48) \div 8$ $s = 68 \div 8$ $s = 8$ R4 The quotient indicates that Olivia can buy 8 4/8 shirts, but it is not possible to buy part of a shirt. Olivia has enough money to buy eight $8 shirts, but not nine $8 shirts. 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.