ILLINOIS Assessment of Readiness

Illinois MATH Assessment

Practice Item Answer Key

Grade 7 – Online, Text-to-Speech, Spanish

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.	**B,D**
2.	**See Rubric**
3.	**Student response is –2.**
4.	**Student response is 181.**
5.	**D, A, C**
6.	**D**
7.	**C**
8.	**X=2** **Y=1**
9.	**D**
10.	**C, A, E**
11.	**Student response is 12.**
12.	**B**
13.	**See Rubric**
14.	**See Rubric**
15.	**D**
16.	**Part A: Student response is 750.**

	Part B: Student response is 2.25.
17.	**Student responses are 1 in gap1, 2 in gap2, 1 in gap3, 12 in gap4, and 6 in gap5.**
18.	**Part A: Student response is 345.** **Part B: B**
19.	**B**
20.	**See Rubric**
21.	**5 minutes 30 seconds**
22.	**See Rubric**
23.	**. 87 = Likely** **0 = Impossible** **0.03 = Unlikely** **1 = Certain**
24.	**Part A: C** **Part B: C**
25.	**D**
26.	**Student response is 2.**
27.	**Part A: Student response is $21 or $21.00.** **Part B: Student response is $24.20.**
28.	**See Rubric**
29.	**Part A: B** **Part B: C**

#2 Rubric	
2 Point Constructed Response Rubric – Part A	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Student arrives at correct decision regarding requesting money in Part A. If the calculation is incorrect, credit for this point can be awarded based on incorrect data. For example, if the student correctly determined cost of the kits as $231 but neglected to include the cost for chair rental, the conclusion would be Mr. Garces would not need the additional funds and there would be $19 left over. • **Computation component** = 1 point: Correct calculations in Parts A (Either total cost:22·10.50 + 35 = 266 or difference between cost and budget: 22·10.50 + 35 -250 = 16) and B (22/3 = 7 1/3). Sample Student Response: A: Mr. Garces needs to request $16 dollars more because 22(10.50) + 35 - 250 = 266 - 250 = 16. 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.

#13 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Reasoning component** = 1 point: Correctly describes the location of the park, school, library, and post office on a vertical number line

	• **Computation component** = 1 point: Correct distance from the park to the library with valid reasoning • **Computation component** = 1 point: Correct distance from the park to the post office with valid reasoning Sample Student Response: Since the distances are listed from the school, let the school be represented by 0 on a number line. North is above 0 on the number line, so the park is 2 1/2 units above 0 on the number line. So, the park is represented by 2 1/2 on the number line. South is below 0 on the number line, so the library is 2 1/2 units below 0 on the number line and the post office is 3 1/4 units below 0 on the number line. So, the library is represented by −2 1/2 on the number line and the post office is represented by −3 1/4 on the number line. The distance from the park to the library is represented by the distance between the points 2 1/2 and −2 1/2 on the number line. To find the distance between the points 2 1/2 and −2 1/2, subtract 2 1/2 − (−2 1/2). Subtracting a negative is the same as adding the additive inverse. So, the distance from the park to the library is 2 1/2 − (−2 1/2) = 2 1/2 + 2 1/2 = 5 miles. The distance from the park to the post office is represented by the distance between the points 2 1/2 and −3 1/4 on the number line. To find the distance between the points 2 1/2 and −3 1/4, subtract 2 1/2 − (−3 1/4). Subtracting a negative is the same as adding the additive inverse. So, the distance from the park to the post office is 2 1/2 − (−3 1/4) = 2 1/2 + 3 1/4 = 5 3/4 miles. 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.

#14 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct equation to determine the number of hockey tickets Joley bought, x • **Computation component** = 1 point: Correct number of hockey tickets Joley bought

	• **Modeling component** = 1 point: Correct inequality and solution if Joley spent a total less than $502.73 instead of a total of $502.73 Sample Student Response: Each hockey ticket costs $118.32 and Joley bought x hockey tickets which is represented by $118.32x$. Add the processing fee of $29.45 and set the sum equal to the total Joley spent, or $502.73. So, the equation that represents the number of hockey tickets Joley bought is $118.32x + 29.45 = 502.73$. Solve the equation to find how many hockey tickets Joley bought. $118.32x + 29.45 = 502.7$ $118.32x = 473.28$ $x = 4$ Joley bought 4 hockey tickets. The equation would change to an inequality if Joley spent a total less than $502.73 instead of a total of $502.73. The inequality would be $118.32x + 29.45 < 502.73$. The solution would be $x < 4$, so Joley would buy less than 4 hockey tickets. 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.

#20 Rubric	
Score	**Description**
4	Student response includes the following elements. • **Computation component 1** = 1 point: Correct integers to represent the location of the scuba diver on the platform and the location of the scuba diver below sea level • **Reasoning component 1** = 1 point: Correct explanation of what 0 represents in this situation • **Reasoning component 2** = 1 point: Correct expression to determine the distance the scuba diver traveled

	• **Computation component 2** = 1 point: Correct distance the scuba diver traveled Sample Student Response: A 6-foot platform on the back of a boat is above sea level, so it is represented by 6. The scuba diver dives 12 feet below sea level, so it is represented by −12. In this situation, 0 represents sea level. The expression 6 − (−12) can be used to determine the distance the scuba diver traveled. The scuba diver traveled 6 − (−12) = 6 + 12, or 18 feet. 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.

#22 Rubric	
Score	**Description**
3	Student response includes the following elements. • **Computation component** = 1 point: Correct constant of proportionality • **Modeling component** = 1 point: Correct equation to represent the proportional relationship • **Modeling component** = 1 point: Correct interpretation of the point (14, 168) Sample Student Response: The constant of proportionality shown in the table is \$36 ÷ 3 baseballs, or \$12 per baseball. The equation $t = 12n$ represents the total cost t of n baseballs. The point (14, 168) means that 14 baseballs cost \$168. 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.

#28 Rubric	
3 Point Constructed Response Rubric – Part A	
Score	**Description**
3	Student response includes the following elements. • **Modeling component** = 1 point: Correct equation to find the volume of the shipping box • **Computation component** = 1 point: Correct volume of shipping box • **Modeling component** = 1 point: Correct work shown Sample Student Response: The shipping box is in the shape of rectangular prism, which has a volume of $V = l \times w \times h$. So, an equation for the volume of the shipping box is $V = 8 \times 4 \times 6$. The volume of the shipping box is $8 \times 4 \times 6$, or 192 cubic inches. 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 equation to find the volume of the larger shipping box • **Computation component** = 1 point: Correct volume of larger shipping box • **Modeling component** = 1 point: Correct work shown Sample Student Response: The length of the larger shipping box is 8×2, or 16 inches. The width of the larger shipping box is 4×2, or 8 inches. The height of the larger shipping box is

	6 × 2, or 12 inches. The larger shipping box is in the shape of rectangular prism, which has a volume of $V = l \times w \times h$. So, an equation for the volume of the larger shipping box is $V = 16 \times 8 \times 12$. The volume of the larger shipping box is 16 × 8 × 12, or 1,536 cubic inches. 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.