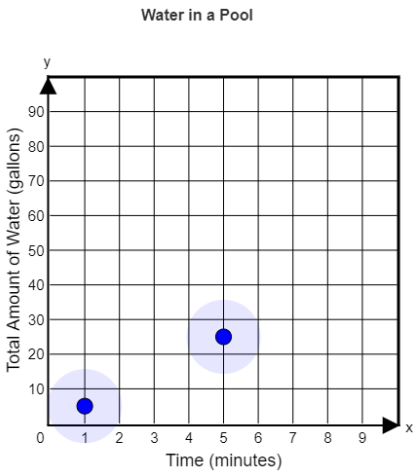
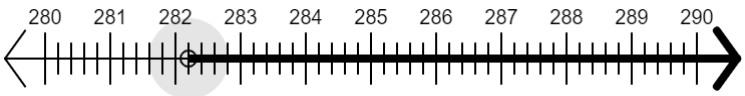
Practice Test Answer and Alignment Document

Mathematics – Grade 7

Part A

Item Number	Answer Key	Kentucky Academic Standard	Mathematical Practices
1.	**C**	KY.7.NS.1.d	MP.2, MP.7
2.	Part A  Part B See rubric	KY.7.RP.2	MP.1, MP.2
3.	$1\frac{1}{2}x + 9$ or equivalent expressions	KY.7.EE.1	MP.7
4.	$\frac{3}{8}$ or equivalent numbers	KY.7.NS.2.c	MP.6, MP.7

Part B

Item Number	Answer Key	Kentucky Academic Standard	Mathematical Practices
1.	**B, E**	KY.7.RP.2.d	MP.1, MP.2
2.	915 or equivalent number	KY.7.G.6.a	MP.5
3.	The owner's prediction is [too low] because he [did not use] the sample that would produce the most valid prediction.	KY.7.SP.2.c	MP.2
4.		KY.7.EE.4.b	MP.2, MP.4
5.	**Part A** See rubric **Part B**  **Part C** See rubric	KY.7.EE.4.b	MP.2, MP.4
6.	Gretchen can use the [area] formula to determine that she needs approximately [176] [square inches] of fabric.	KY.7.G.4.a	MP.1, MP.2, MP.8

Rubrics

<table>
<tr><th colspan="2">Part A #2</th></tr>
<tr><th colspan="2">Rubric</th></tr>
<tr><td colspan="2">The total item score is the sum of points awarded in the Machine-scored and Human-scored parts.</td></tr>
<tr><th colspan="2">Machine Scoring</th></tr>
<tr><td>Score Point 1</td><td>Part A
Student response is to graph any two points on the line $y = 5x$</td></tr>
<tr><td>Score Point 0</td><td>Student response is incorrect.</td></tr>
<tr><th colspan="2">Human Scoring</th></tr>
<tr><td>Score Point 3</td><td>Student scores a total of 3 points.</td></tr>
<tr><td>Score Point 2</td><td>Student response is incorrect.</td></tr>
<tr><td>Score Point 1</td><td>Student demonstrates a minimal understanding of identifying the constant of proportionality (unit rate) in a graph and verbal description of a proportional relationship.</td></tr>
<tr><td>Score Point 0</td><td>Student response is insufficient to demonstrate a grade-appropriate, relevant understanding of the task.</td></tr>
<tr><td>Score Points</td><td>Part B
• Score 3 points:
○ Correct answers with complete work shown or explanations using the points graphed in Part A. OR
○ Correct answers with complete work shown or explanations provided using the context. OR
○ Incorrect reasonable answers based on two incorrect proportional points plotted in Part A with complete work shown or explanations provided.
• Score 2 points:
○ Correct answers with partial work shown or explanations using the points graphed in Part A. OR
○ Correct answers with partial work shown or explanations provided using the context. OR
○ Incorrect reasonable answers based on two incorrect proportional points plotted in Part A with partial work shown or explanations provided. OR
○ Correct answers with no work shown or explanation provided for one of the answers.
• Score 1 point:
○ Correct answers with no work shown or explanation provided. OR
○ One answer is correct with complete work shown or explanation. OR
○ One answer is correct with partial work shown or explanation. OR
○ Incorrect reasonable answers based on two incorrect proportional points plotted in Part A with no work shown or explanations provided.</td></tr>
<tr><td>Correct Answer</td><td>Part B
The constant of proportionality is 5 gallons of water per minute
$\frac{40}{8} = \frac{5}{1}$

$\frac{10}{2} = \frac{5}{1}$

The total amount of water in the pool after 47 minutes is 235 gallons
$\frac{40}{8} = \frac{y}{47}$
$8y = 1{,}880$
$y = 235$

Note: Other reasonable explanations are acceptable.</td></tr>
</table>

Part B #5	
Rubric	
The total item score is the sum of points awarded in the Machine-scored, and Human-scored parts.	
Human Scoring	
Score Point 2	Student demonstrates a complete understanding of solving a word problem leading to an inequality of the form $px + q \leq r$, graphing the solution set, and interpreting it in terms of the context.
Score Point 1	Student demonstrates a partial understanding of solving a word problem leading to an inequality of the form $px + q \leq r$, graphing the solution set, and interpreting it in terms of the context.
Score Point 0	Student response is insufficient to demonstrate a grade-appropriate, relevant understanding of the task.
Score Points	**Part A** • Score 2 points: ○ Correct inequality and the correct solution with work shown. • Score 1 point: ○ Correct inequality and the correct solution with no work shown. **OR** ○ Correct inequality with an incorrect solution. **OR** ○ Correct solution with no inequality or work shown.
Correct Answer	**Part A** $24n + 144 \leq 300$ $24n \leq 156$ $n \leq 6.5$
Machine Scoring	
Score Point 1	**Part B** Student response is to choose the left ray with a closed right point at 6.5.
Score Point 0	Student response is incorrect.
Human Scoring	
Score Point 1	Student demonstrates a complete understanding of solving a word problem leading to an inequality of the form $px + q \leq r$, graphing the solution set, and interpreting it in terms of the context.
Score Point 0	Student response is insufficient to demonstrate a grade-appropriate, relevant understanding of the task.
Score Points	**Part C** • **Score 1 point:** ○ Valid explanation based on the inequality graphed in Part B in terms of the context.
Correct Answer	**Part C** Chris can only buy whole gumballs so the graph would only include the whole numbers less than or equal to 6. Note: Other reasonable explanations are acceptable.