Practice Test Answer and Alignment Document
Mathematics – Grade 8

Part A

Item Number	Answer Key	Kentucky Academic Standard	Mathematical Practices
1.	**D**	KY.8.NS.1	MP.7
2.	**B, D**	KY.8.F.1	MP.6, MP.7, MP.8
3.		KY.8.NS.2	MP.7
4.	**B, E**	KY.8.G.1	MP.6

Part B

Item Number	Answer Key	Kentucky Academic Standard	Mathematical Practices
1.	4.2×10^4 Or equivalent expressions written in scientific notation.	KY.8.EE.4	MP.5, MP.7, MP.8
2.	**A**	KY.8.F.5.b	MP.7
3.	**Part A** **Part B** See rubric	KY.8.EE.8.c	MP.1, MP.3, MP.4
4.	The relationship between the variables shows a [positive ▾], [nonlinear ▾] association and has [0 ▾] outliers.	KY.8.SP.1	MP.2, MP.7
5.	See rubric	KY.8.G.9	MP.1, MP.6, MP.7
6.	63.08 or equivalent numbers	KY.8.SP.3	MP.2

Rubrics

Part B #3
Rubric
The total item score is the sum of points awarded in the Machine-scored and Human-scored parts.

Machine Scoring

Score Point 1	**Part A** Student response is two lines $C = 2.5b + 70$ and $C = 5b + 60$ graphed with a solution of (4, 80) selected.
Score Point 0	Student response is incorrect.

Human Scoring

Score Point 3	Student scores a total of 3 points.
Score Point 2	Student scores a total of 2 points.
Score Point 1	Student demonstrates a minimal understanding of solving a real-world problem leading to two linear equations in two variables.
Score Point 0	Student response is insufficient to demonstrate a grade-appropriate, relevant understanding of the task.

Score Points	**Part B**
	 • Score 3 points:
	     ○ Correct solution with all work shown algebraically and a complete explanation of the solution in terms of the context.
	 • Score 2 points:
	     ○ Correct solution with partial work shown algebraically and a complete explanation of the solution in terms of the context. **OR**
	     ○ Correct solution with minimal work shown algebraically and a complete explanation of the solution in terms of the context.
	 • Score 1 point:
	     ○ Correct solution with no work shown and a complete explanation of the solution in terms of the context. **OR**
	     ○ Complete explanation of the solution in terms of the context based on the graph in Part A. **OR**
	     ○ Correct solution with no work shown and a partial explanation of the solution.

Correct Answer	**Part B** $2.5b + 70 = 5b + 60$ $10 = 2.5b$ $\dfrac{10}{2.5} = b$ $4 = b$ $C = 2.5(4) + 70 = 80$ $C = 5(4) + 60 = 80$ The solution (4, 80) represents that when Vincent buys 4 balloons the cost will be $80 at both stores.

Part B #5
Rubric

Score Point 2	Student demonstrates a complete understanding of applying the formula for the volume of a cylinder and using it to solve a real-world problem.
Score Point 1	Student demonstrates a partial understanding of applying the formula for the volume of a cylinder and using it to solve a real-world problem.
Score Point 0	Student response is completely incorrect or irrelevant.

Score Points	• Score 2 points:
	     ○ Correct answer, including units, with all work or explanation provided.
	 • Score 1 point:
	     ○ Correct answer, not including units, with all work or explanation provided. **OR**
	     ○ Correct answer, including units, with partial work or explanation provided. **OR**
	     ○ Correct answer, not including units, with partial work or explanation provided. **OR**
	     ○ Work or explanation provided shows a partial understanding of how to apply the formula in a real-world problem.

Correct Answer	$26 - 1 = 25$ $V = \pi \times 8^2 \times 25 \cong 5026.55$ $\dfrac{3}{4} \times 5026.55 \cong 3769.99$ $\dfrac{3770}{5} = 628\dfrac{1}{3}$ There was an average of $628\dfrac{1}{3}$ cubic inches of water used per hour. Note: Answers between, and including, 628 and 629 are acceptable.