

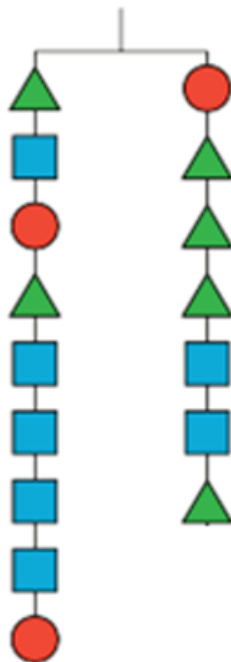
Name:

Class:

Grade 8, Unit 4: Practice Summative Assessment

Question 1

A circle has a mass of 3 grams and a square has a mass of 2 grams. What is the mass of a triangle?



- (A) $\frac{9}{6}$ grams
- (B) $\frac{9}{4}$ grams
- (C) $\frac{9}{2}$ grams
- (D) 9 grams

Question 2

For each system below, state whether there is (i) one solution, (ii) no solutions, or (iii) infinitely many solutions.

Part 1

$$\begin{cases} y = 5x + 3 \\ y = 5x + 2 \end{cases}$$

Part 2

$$\begin{cases} y = -5x + 4 \\ y = x + 4 \end{cases}$$

Part 3

$$\begin{cases} x + y = -10 \\ x + y = -20 \end{cases}$$

Part 4

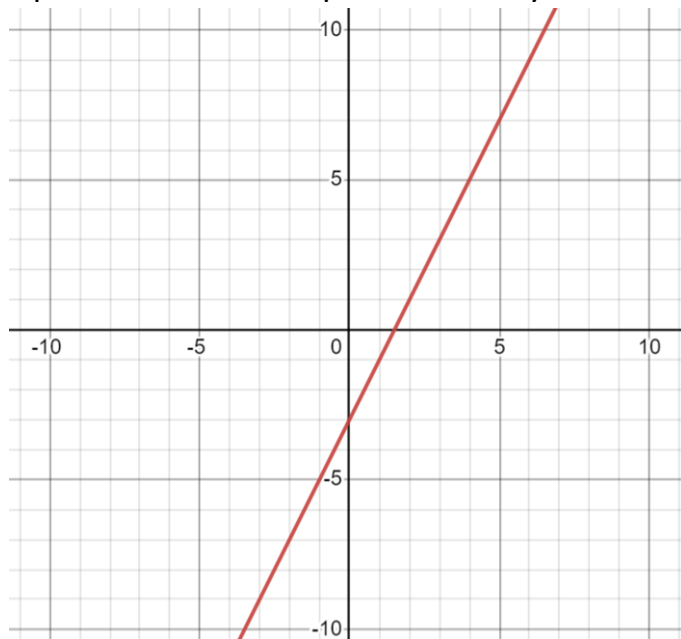
$$\begin{cases} y = 2x + 5 \\ y = -2x + 11 \end{cases}$$

Part 5

$$\begin{cases} 3x + 3y = -15 \\ x + y = -5 \end{cases}$$

Question 3

Here is the graph of one of two equations in a system of equations.



The solution to the system is $(4, 5)$.

Select the three equations that could be the other equation in the system.

Ⓐ $y = 4x + 5$

Ⓑ $y = x + 1$

Ⓒ $y = 2x - 5$

Ⓓ $y = \frac{1}{2}x + 7$

Ⓔ $y = -\frac{1}{2}x + 7$

Ⓕ $y = \frac{1}{4}x + 4$

Question 4

Solve the equation below. Show your work.

$$\frac{1}{2}x + 5 = \frac{1}{3}(4x - 5)$$

Question 5

Find the solution for the system of equations below. Show your work.

$$\begin{cases} 2x - 3y = 9 \\ y = \frac{1}{3}x + 1 \end{cases}$$

Question 06

Carlos and Derrick are each saving money. Carlos starts with \$290 in his savings account and adds \$15 per week. Derrick starts with \$200 in his savings account and adds \$25 each week.

Show your work answering the questions below!

Part 1 After 7 weeks, who has more money in their savings account?

Part 2 After how many weeks will Carlos and Derrick have the same amount saved?

Question 07

Wendy and Vicky each bought notebooks and folders. Each notebook cost the same amount, and each folder cost the same amount.

- Wendy paid \$5.10 for 3 notebooks and 1 folder.
- Vicky paid \$4.00 for 2 notebooks and 2 folders.

Show your work answering the questions below!

Part 1 What is the cost, in dollars, of 1 notebook?

Part 2 What is the cost, in dollars, of 1 folder?