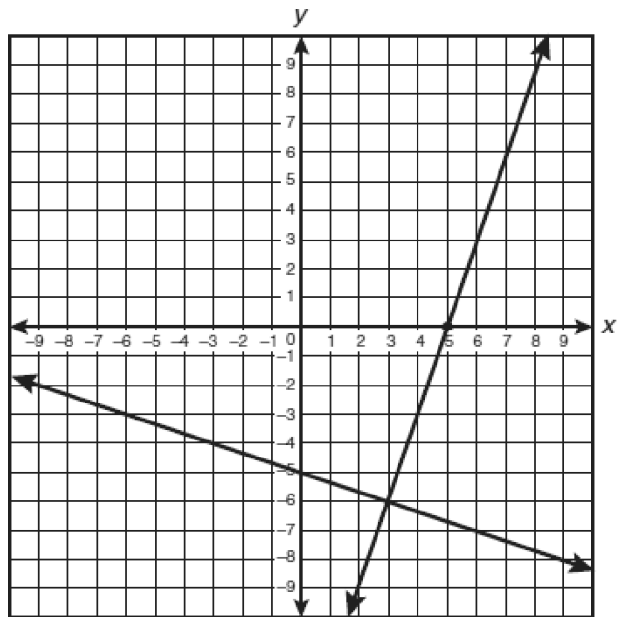


## Unit 7: Systems of Equations Practice Test

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. What is the apparent solution to the system of equations graphed below?



- A.  $(-6, 3)$    B.  $(0, -5)$    C.  $(3, -6)$    D.  $(5, 0)$

2. What is the  $y$ -value of the solution to the following system of linear equations?

$$\begin{aligned} y &= x + 8 \\ x + 2y &= 1 \end{aligned}$$

- A.  $-7$    B.  $-5$    C.  $3$    D.  $13$

3. 
$$\begin{cases} 7x + 3y = -8 \\ -4x - y = 6 \end{cases}$$

What is the solution to the system of equations shown above?

- A.  $(-2, -2)$                       B.  $(-2, 2)$   
C.  $(2, -2)$                          D.  $(2, 2)$

4. 
$$\begin{cases} y = 3x - 5 \\ y = 2x \end{cases}$$

What is the solution of the system of equations shown above?

- A.  $(1, -2)$                             B.  $(1, 2)$   
C.  $(5, 10)$                           D.  $(-5, -10)$

5. What is the solution to this system of equations?

$$\begin{cases} y = -3x - 2 \\ 6x + 2y = -4 \end{cases}$$

- A.  $(6, 2)$   
B.  $(1, -5)$   
C. no solution  
D. infinitely many solutions

6. What is the solution to the following system of equations?

$$\begin{aligned}2x + 3y &= 5 \\ -x - 5y &= 1\end{aligned}$$

- A.  $(-2, 3)$    B.  $(-1, 4)$    C.  $(1, 1)$    D.  $(4, -1)$

7. What is the value of  $x$  in the solution of the system of equations below?

$$\begin{aligned}3x - 2y &= 6 \\ x + 2y &= 10\end{aligned}$$

- A. 2      B. 4      C. 10      D. 16

8. Mary graphed the system of equations below.

$$\begin{aligned}y &= \frac{3}{2}x + \frac{7}{2} \\ y &= -\frac{2}{3}x + \frac{7}{3}\end{aligned}$$

Which of these *best* describes the relationship between the two lines?

- A. They have no point in common.  
B. They have one point in common.  
C. They have two points in common.  
D. They have infinite points in common.

9. What is the solution to the system of equations shown below?

$$\begin{aligned}y &= \frac{1}{2}x + 1 \\ y &= \frac{1}{2}x - 1\end{aligned}$$

- A.  $\left(1, \frac{3}{2}\right)$   
B.  $(-2, 0)$   
C. There is no solution.  
D. There are infinite solutions.

10. The only coins that Alexis has are dimes and quarters.

- Her coins have a total value of \$5.80.
- She has a total of 40 coins.

Which of the following systems of equations can be used to find the number of dimes,  $d$ , and the number of quarters,  $q$ , Alexis has?

- A.  $\begin{cases} d + q = 5.80 \\ 40d + 40q = 5.80 \end{cases}$   
B.  $\begin{cases} d + q = 40 \\ 0.25d + 0.10q = 5.80 \end{cases}$   
C.  $\begin{cases} d + q = 5.80 \\ 0.10d + 0.25q = 40 \end{cases}$   
D.  $\begin{cases} d + q = 40 \\ 0.10d + 0.25q = 5.80 \end{cases}$

11. Anna and Ravi became members of different health clubs on the same day.
- Anna's club charges members \$25 per month and does not require a registration fee.
  - Ravi's club charges members \$15 per month plus a one-time registration fee of \$50.

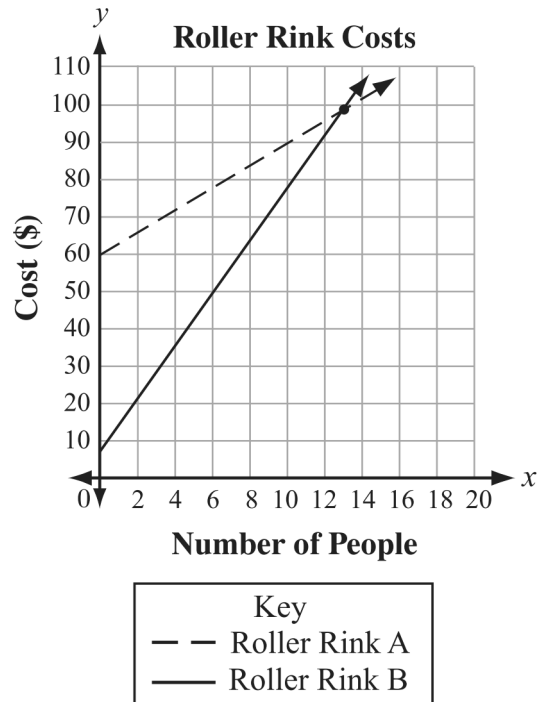
After how many months of membership will Anna and Ravi have paid the same total amount of money?

- A. 2      B. 4      C. 5      D. 10

12. Members of a senior class held a car wash to raise funds for their senior prom. They charged \$3 to wash a car and \$5 to wash a pick-up truck or a sport utility vehicle. If they earned a total of \$275 by washing a total of 75 vehicles, how many cars did they wash?

- A. 25      B. 34      C. 45      D. 50

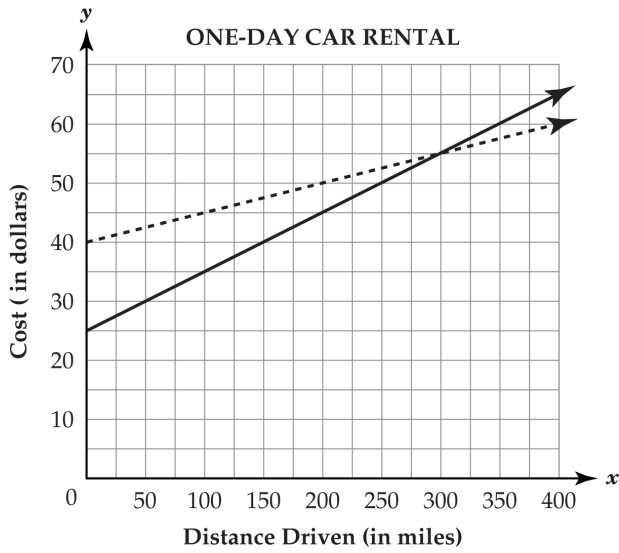
13. The graph below shows the cost for going roller skating at 2 roller rinks.



Bianca is going roller skating with a group of friends. Roller Rink A charges \$3.00 per person and a \$60 group fee. Roller Rink B charges \$7.00 per person and an \$8.00 group fee. When comparing costs, which statement is true?

- A. Roller Rink A always costs less.  
 B. Roller Rink B always costs less.  
 C. Roller Rink A costs less if Bianca's group has fewer than 13 people.  
 D. Roller Rink B costs less if Bianca's group has fewer than 13 people.

14. Ace Car Rentals advertises that a rental car costs \$25 per day plus a charge of \$0.10 per mile. For the same car, Better Car Rental advertises a price of \$40 per day plus \$0.05 per mile. The graph below models the costs of a one-day rental from the two car rental companies.



KEY	
Better Car Rental	---
Ace Car Rental	—

For what number of miles is the cost of renting a car the same at both companies?

- A. 50 miles                      B. 55 miles  
 C. 300 miles                     D. 325 miles

Unit 7: Systems of Equations Practice Test 1/29/2020

1.  
Answer: C  
Points: 1
2.  
Answer: C  
Points: 1
3.  
Answer: B  
Points: 1
4.  
Answer: C  
Points: 1
5.  
Answer: D  
Points: 1
6.  
Answer: D  
Points: 1
7.  
Answer: B  
Points: 1
8.  
Answer: B  
Points: 1
9.  
Answer: C  
Points: 1
10.  
Answer: D  
Points: 1
11.  
Answer: C  
Points: 1
12.  
Answer: D  
Points: 1
13.  
Answer: D  
Points: 1
14.  
Answer: C  
Points: 1