

Name \_\_\_\_\_

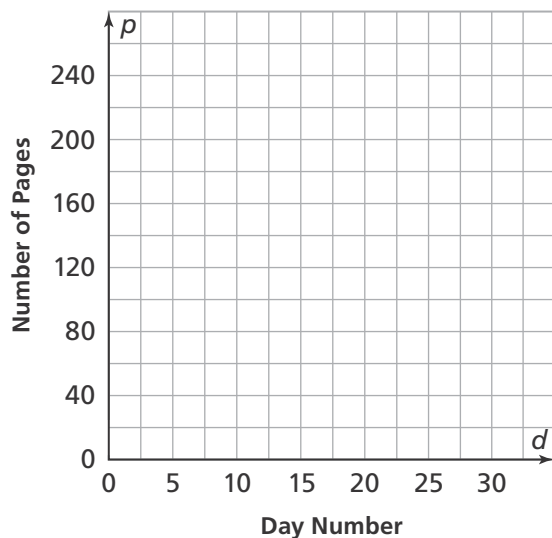
1. Two students are reading a novel. Ashley reads 10 pages per day. Carly reads 8 pages per day, but she starts early and is already on page 40.

**Part A**

Write a system of equations to represent the situation, using  $d$  for days and  $p$  for pages.

**Part B**

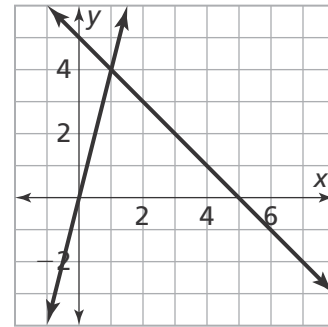
Graph the system of equations.



**Part C**

What does the point of intersection of the graph tell you?

2. How many solutions does the system of equations have?



- (A) No solution
- (B) One solution:  $x = 0, y = 5$
- (C) One solution:  $x = 1, y = 4$
- (D) Infinitely many solutions

3. Adventure Play sells an mp3 player for \$18.00 and charges \$3.25 per song. King Music sells a player for \$23.00 and charges \$2.00 per song. For how many songs will the cost be the same?

- (A) 3 songs
- (B) 4 songs
- (C) 5 songs
- (D) 6 songs

4. Solve the system of equations using elimination. How many solutions does the system have?

$$\begin{aligned} 15j + 12k &= 18 \\ 5j + 4k &= 6 \end{aligned}$$

- (A) No solution
- (B) One solution:  $j = 3, k = 3$
- (C) One solution:  $j = 10, k = 8$
- (D) Infinitely many solutions

5. Solve the system of equations using elimination.

$$15q - 4r = 62$$

$$5q + 8r = 86$$

- (A)  $q = -7, r = -6$   
(B)  $q = 6, r = 7$   
(C)  $q = -7, r = -7$   
(D)  $q = 6, r = 6$

6. What is the solution of the system of equations? Explain.

$$18x + 15 - y = 0$$

$$5y = 90x + 12$$

7. Use substitution. What is the solution of the system of equations? Explain.

$$y = \frac{1}{2}x + 2$$

$$2y = x + 4$$

8. Sia sells large candles for \$3 each and small candles for \$2 each. She sold 17 candles for \$46.00. How many of each size candle did she sell?

- (A) 4 small and 13 large candles  
(B) 5 small and 12 large candles  
(C) 12 small and 5 large candles  
(D) 13 small and 4 large candles

9. Bowler World charges \$5.00 to rent shoes and \$1.10 per game. Lucky Spares charges \$3.00 for shoes and \$1.50 per game.

**Part A**

Write a system of equations to represent the situation, using  $g$  for number of games and  $c$  for cost.

**Part B**

For how many games is the cost the same for both locations? What is that cost?

10. A 40-question test has 108 possible points. There are  $m$  4-point questions and  $n$  2-point questions. How many of each type of questions are on the test?

- (A)  $m = 19, n = 21$   
(B)  $m = 26, n = 14$   
(C)  $m = 14, n = 26$   
(D)  $m = 21, n = 19$

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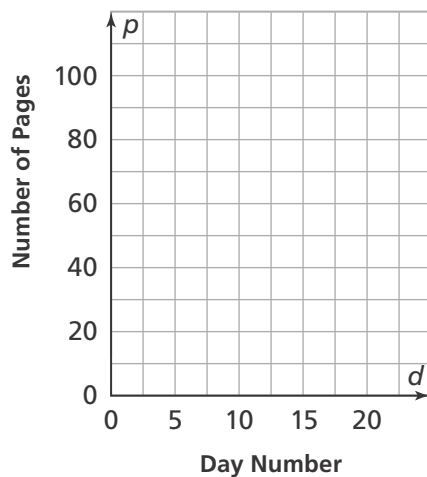
1. Two students are reading a book. Keith reads 6 pages a day. Tameka reads 5 pages a day, but he starts sooner and has already read 15 pages.

**Part A**

Write a system of equations to represent the situation, using  $d$  for days and  $p$  for pages.

**Part B**

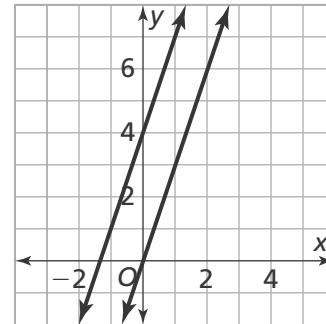
Graph the system of equations.



**Part C**

Will Keith and Tameka ever be on the same page on the same day? Explain.

2. How many solutions does the system of equations have?



- (A) No solution
- (B) One solution:  $x = 0, y = 0$
- (C) One solution:  $x = 0, y = 5$
- (D) Infinitely many solutions

3. Taxi A charges a fee of \$3.50, plus \$1.75 per mile. Taxi B charges a fee of \$1.25, plus \$2.00 per mile. At what distance would the taxis cost the same?

- (A) 2 miles
- (B) 5 miles
- (C) 9 miles
- (D) 15 miles

4. Solve the system of equations. How many solutions does the system have?

$$6x + 3y = 24$$

$$y = -2x + 8$$

- (A) No solution
- (B) One solution:  $x = 2, y = 4$
- (C) One solution:  $x = 3, y = 2$
- (D) Infinitely many solutions

5. Solve the system of equations using elimination.

$$72f - 12g = 96$$

$$6f - 2g = 10$$

- (A)  $f = -2, g = 1$   
(B)  $f = -1, g = 2$   
(C)  $f = 1, g = -2$   
(D)  $f = 2, g = -1$

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

$$16x - 2 - 2y = 0$$

$$y = 8x + 4$$

7. Use substitution. What is the solution to the system of equations? Explain.

$$y = \frac{1}{4}x + 4$$

$$12y - 48 = 3x$$

8. Nia sells pizzas. Large pizzas cost \$8 each, and small pizzas cost \$6 each. She sold 12 pizzas for \$84. How many of each size pizza did Nia sell?

- (A) 4 small and 8 large pizzas  
(B) 5 small and 7 large pizzas  
(C) 6 small and 6 large pizzas  
(D) 10 small and 2 large pizzas

9. Ice Dream charges \$4 to rent ice skates, plus \$1.50 per hour to skate. Skating Paradise charges \$1 to rent ice skates, plus \$3 per hour to skate.

**Part A**

Write a system of equations to represent the situation, using  $h$  for number of hours and  $c$  for cost.

**Part B**

For how many hours is the cost for both locations equivalent? What is this cost?

10. A 40-question test has 132 possible points. There are  $m$  5-point questions and  $n$  1-point questions. How many of each type of question is on the test?

- (A)  $m = 23, n = 17$   
(B)  $m = 25, n = 25$   
(C)  $m = 30, n = 20$   
(D)  $m = 35, n = 15$