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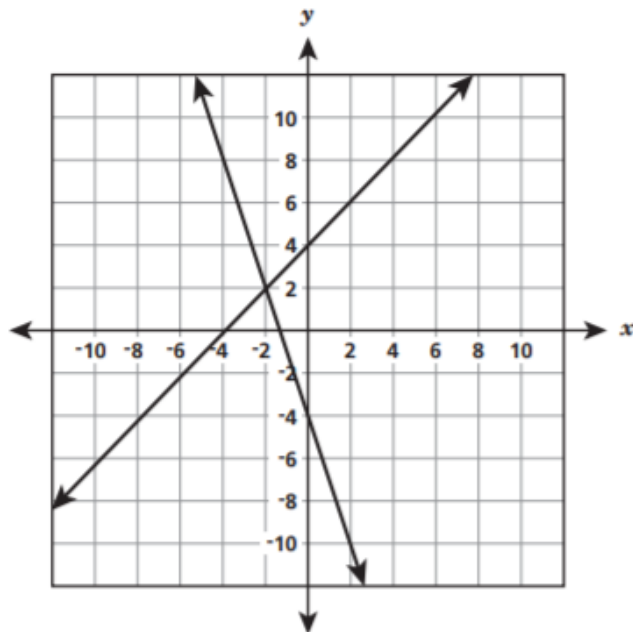
Date: _____

Ms. Streffacio

Class: _____

8.EE.8

Which statement explains why the point $(-2, 2)$ is the solution to the system of linear equations shown below?



- A** It lies on the graph of only one of the equations.
- B** It lies in the second quadrant of the coordinate plane.
- C** It is the only point that satisfies both equations simultaneously.
- D** It is one of many points that satisfies both equations simultaneously.

1.

A system of equations is shown below.

$$5x + 3y = -6$$

$$2x + y = -4$$

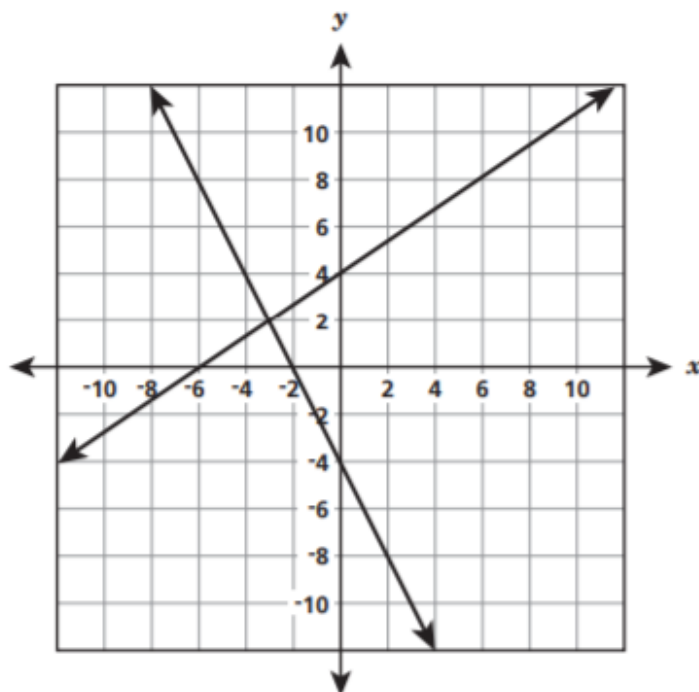
Which statement about the ordered pair $(-6, 8)$ is true?

- A** It is the only solution to the system.
- B** It is not a solution to either equation.
- C** It is one of many solutions to the system.
- D** It is a solution to the first but not the second equation.

Jenny wants to rent a truck for one day. She contacted two companies. Laguna's Truck Rentals charges \$20 plus \$2 per mile. Salvatori's Truck Rentals charges \$3 per mile. After how many miles will the total cost for both companies be the same?

- A 4
- B 6
- C 20
- D 60

The graph of a system of linear equations is shown below.



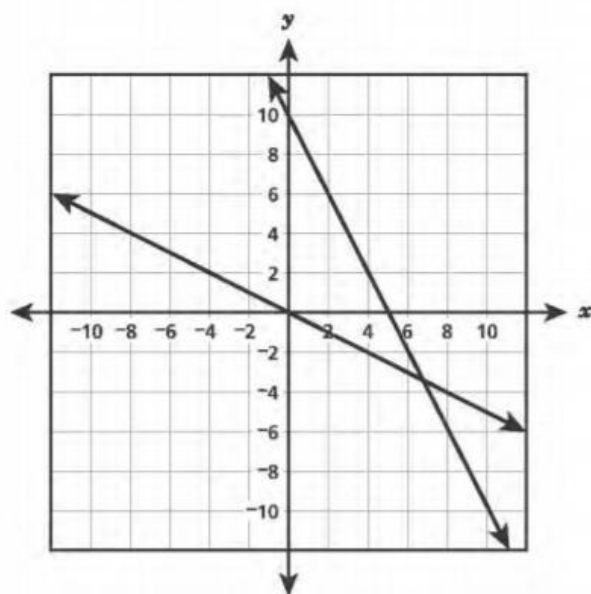
Which ordered pair is the **best** estimate for the solution of this system of linear equations?

- A (-6, -2)
- B (-3, 2)
- C (4, -4)
- D (6, 8)

Mr. Thomsen is buying two types of gift cards to give as prizes to employees at a company meeting. He will buy restaurant gift cards that each cost \$50. He will also buy movie theater gift cards that each cost \$20. He has \$450 to buy a total of 15 gift cards. How many of each type of gift card can Mr. Thomsen buy?

- A He can buy 5 restaurant gift cards and 10 movie theater gift cards.
- B He can buy 8 restaurant gift cards and 7 movie theater gift cards.
- C He can buy 10 restaurant gift cards and 5 movie theater gift cards.
- D He can buy 12 restaurant gift cards and 3 movie theater gift cards.

The graph of a system of equations is shown below.



What system of equations represents the graph?

- $y = -2x + 10$
A $y = -\frac{1}{3}x$
- $y = -2x + 10$
B $y = -\frac{1}{2}x$
- $y = -\frac{1}{2}x + 10$
C $y = -2x$
- $y = -\frac{1}{3}x + 10$
D $y = -2x$

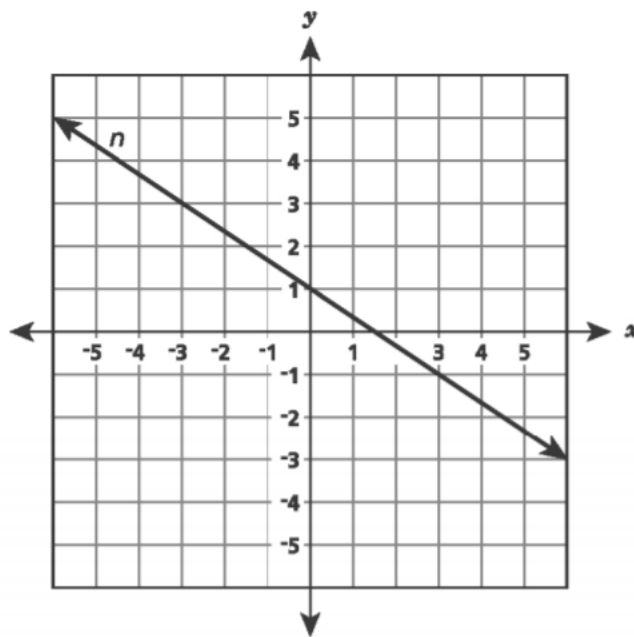
Solve the system of equations below.

$$2x + 4y = 10$$

$$2x + 4y = -10$$

- A $x = 3, y = 1$
- B $x = 6, y = -4$
- C No solution
- D Infinitely many solutions

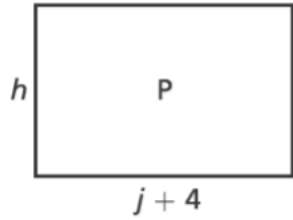
Line n is shown on the grid below.



Line q will be graphed on the same grid. The only solution to the system of linear equations formed by lines n and q occurs when $x = \frac{3}{2}$ and $y = 0$. Which equation could represent line q ?

- A $y = \frac{3}{2}x$
- B $y = \frac{4}{3}x - 2$
- C $y = -\frac{5}{2}x + 1$
- D $y = -\frac{2}{3}x + \frac{3}{2}$

Two rectangles are shown below. Rectangle P has a perimeter of 20 inches. Rectangle Q has a perimeter of 30 inches.



What are the values of j and h ?

- A $j = 3$ and $h = 3$
- B $j = 10$ and $h = 4$
- C $j = 2$ and $h = 4$
- D $j = 9.5$ and $h = 6.5$

What is the solution to the system of equations below?

$$2x + 3y = 6$$

$$x - 3y = 9$$

- A $\left(-1, \frac{8}{3}\right)$
- B $(-3, -4)$
- C $\left(5, -\frac{4}{3}\right)$
- D $\left(8, -\frac{1}{3}\right)$

The amount of revenue in dollars, y , that Jason receives from selling x posters is given by the equation $y = 4x$. The cost of producing x posters is given by the equation $y = \frac{1}{2}x + 280$. How many posters does Jason need to sell so that the cost and revenue are equal?

- A 40
- B 80
- C 140
- D 320

A system of equations is shown below.

$$5x + 2y = -15$$

$$2x - 2y = -6$$

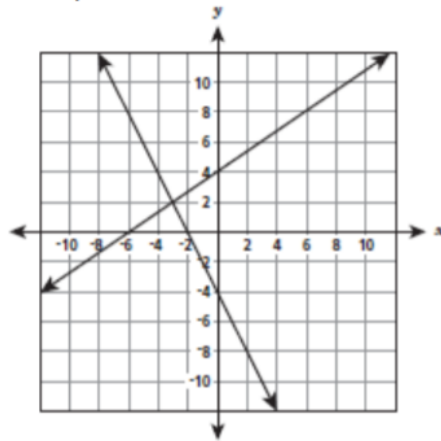
What is the solution to the system of equations?

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

At a local basketball game, all tickets are the same price and all souvenirs are the same price. Mr. Smith bought 2 tickets to this basketball game and 1 souvenir for a total of \$17.25. Ms. Lockhart bought 5 tickets to the same game and 2 souvenirs for a total of \$42.00. How much was a ticket to this game?

- A \$2.25
- B \$7.50
- C \$8.50
- D \$9.75

The graph of a system of linear equations is shown below.



Which ordered pair is the best estimate for the solution of this system of linear equations?

- A. (-6, -2)
- B. (-3, 2)
- C. (4, -4)
- D. (6, 8)

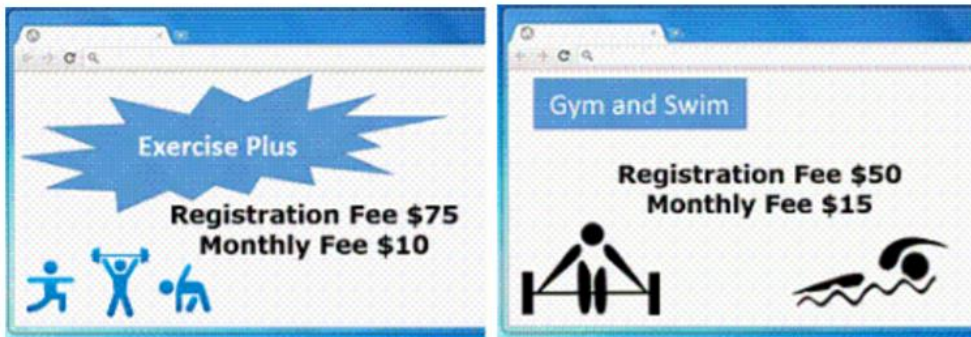
Where do the graphs of the linear equation $2x + 3y = 4$ and $5x + 6y = 7$ intersect?

- A. (-1, 2)
- B. (4, 7)
- C. The lines do not intersect.
- D. The lines are the same line, so they intersect at every point on the line.

A company charges \$211.25 for 5 trees and 15 shrubs. The company charges \$15.25 more for a tree than a shrub. How much does each shrub cost?

- A. \$6.75
- B. \$7.75
- C. \$19.25
- D. \$22.00

Sharon was searching online for a gym to join. She found the two memberships pictured below.



Which conclusion about the costs of the two gyms is correct?

- A. The cost is the same at 5 months.
- B. The cost is the same at $\frac{2}{3}$ of a month.
- C. The cost is the same each month.
- D. The cost is never the same.

Consider the equation $40x - 25y = 15$.

David wrote a second equation to create a system that has infinitely many solutions.

Which of these could be the equation that David wrote?

- A $8x + 5y = 3$
- B $8x - 5y = 3$
- C $8x + 5y = -3$
- D $-8x - 5y = -3$

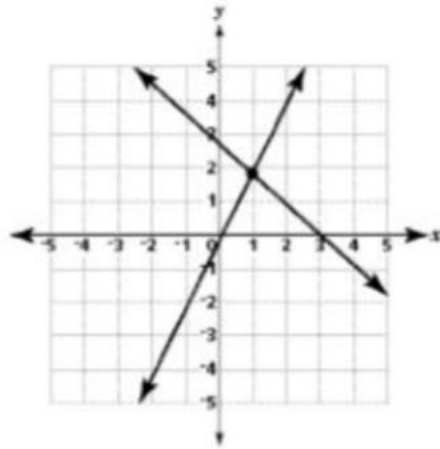
Which ordered pair is a solution to the system of equations?

$$3x - 3y = -9$$

$$2x + y = -3$$

- A (0, 3)
- B (0, -3)
- C (-2, 1)
- D (1, 2)

A system of linear equations is shown in the graph below.



Which point **best** estimates the solution to the system of equations?

- A. (2,1)
- B. (1, 2)
- C. (0, 0)
- D. (2, 2)

Where do the graphs of the linear equations $2x + 3y = 4$ and $5x + 6y = 7$ intersect?

- A. (-1, 2)
- B. (4, 7)
- C. The lines do not intersect.
- D. The lines are the same line, so they intersect at every point on the line.

In the equations $6x - 12y = a$ and $3x - 6y = b$, a and b are constants. The two equations have infinitely many solutions. What is the relationship between a and b ?

- A. $a = b$
- B. $a = \frac{b}{2}$
- C. $a = 2b$
- D. $a = -b$

At what point do the graphs of the equations below intersect?

$$\begin{aligned}4x - 5y &= -2 \\4x + 5y &= 2\end{aligned}$$

- A. (-2, 2)
- B. $(-\frac{1}{2}, 0)$
- C. $(1, \frac{6}{5})$
- D. $(0, \frac{2}{5})$

Exercise Plus charges a yearly fee of \$75 plus \$10 a month. Gym and Swim charges a yearly fee of \$50 plus \$15 a month. After how many months is the cost the same?

- A. The cost is the same at 5 months.
- B. The cost is the same at $\frac{2}{3}$ of a month.
- C. The cost is the same each month.
- D. The cost is never the same.