

1. Find an equation of the line described below. Write the equation in slope-intercept form (solved for y), when possible.

Through $(6,2)$ and $(2,6)$

What is the equation of the line?

(Simplify your answer.)

2. Norman and Suzanne own 25 shares of a fast food restaurant stock and 71 shares of a toy company stock. At the close of the markets on a particular day in 2004, their stock portfolio consisting of these two stocks was worth \$1387.00. The closing price of the fast food restaurant stock was \$19 more per share than the closing price of the toy company stock on that day. What was the closing price of each stock on that day?

The price per share of the fast food restaurant stock is \$.

The price per share of the toy company stock is \$.

3. Find the slope of the line that is **(a)** parallel and **(b)** perpendicular to the line through the pair of points.

$(-1, -4)$ and $(3,9)$

(a) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The slope of the parallel line is . (Type an integer or a simplified fraction.)

B. The slope of the parallel line is undefined.

(b) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The slope of the perpendicular line is . (Type an integer or a simplified fraction.)

B. The slope of the perpendicular line is undefined.

4. The revenue for a particular company's parks and resorts, y (in millions) for the years 2004-2007 can be approximated by the equation $y = 1311x + 6480$, where x represents the number of years after 2004.

a. Find the y -intercept of this equation.

b. What does the y -intercept mean?

a. What is the y -intercept?

(Type an ordered pair.)

b. Choose the statement that best describes the significance of the y -intercept.

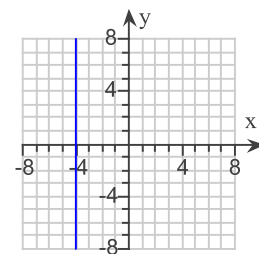
A. In 2004, the revenue for the parks and resorts was \$6480 million more than in 2007.

B. In 2004, the revenue for the parks and resorts was \$6480 million less than in 2007.

C. The revenue for the parks and resorts is never less than \$6480 million between 2004 and 2007.

D. In 2004, the revenue for the parks and resorts was about \$6480 million.

5. Find the slope of the line.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The slope is .

(Type an integer or a simplified fraction.)

B. The slope is undefined.

6. Find an equation of the line with the given slope that passes through the given point. Write the equation in the form $Ax + By = C$.

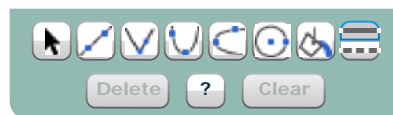
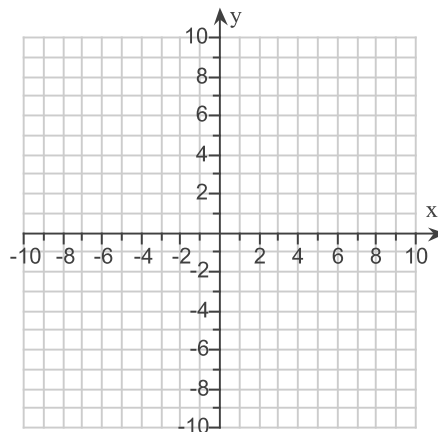
$$m = -\frac{1}{2}, (-6, 0)$$

The equation of the line in the form $Ax + By = C$ is .

(Use integers for any numbers in the expression.)

7. Use the slope-intercept form to graph the equation $y = -7x$.

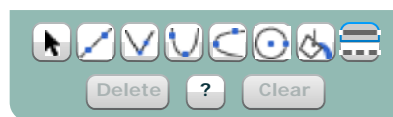
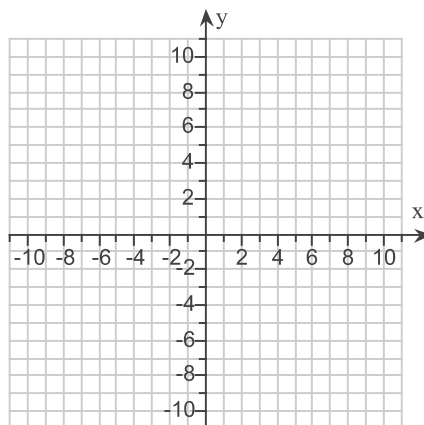
Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



8. Graph the linear equation by finding and plotting its intercepts.

$$-x + 3y = 9$$

Use the graphing tool to graph the equation. Use the intercepts when drawing the line. If only one intercept exists, use it and another point to draw the line.



9. Solve the system of equations by the substitution method.

$$\begin{cases} 5x + 10y = 30 \\ 4x + 8y = 36 \end{cases}$$

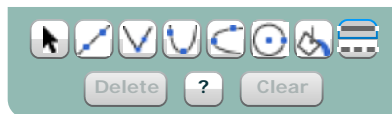
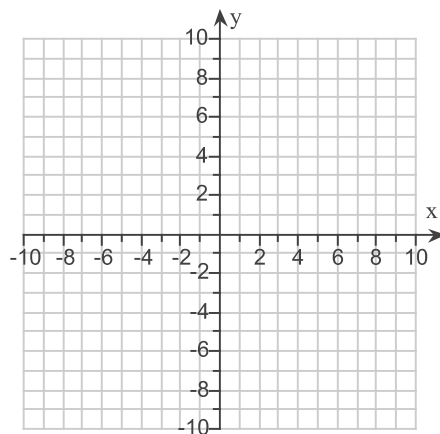
Select the correct choice below and fill in any answer boxes within your choice.

- A. There is one solution. The solution is .
(Simplify your answer. Type an ordered pair.)
- B. There are infinitely many solutions.
- C. There is no solution.

10. Graph the inequality.

$$x + 3y \leq 4$$

Use the graphing tool to graph the inequality.



11. Solve the system of linear equations by graphing.

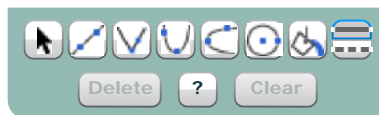
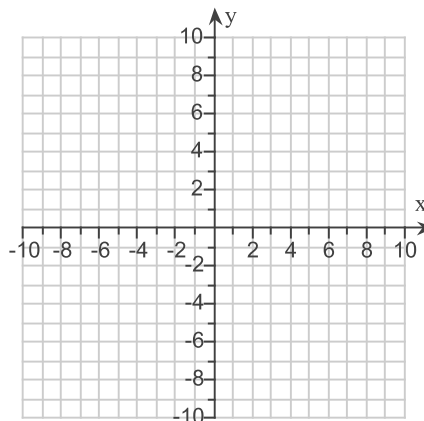
$$\begin{cases} y = 3x \\ 4x + y = 7 \end{cases}$$

Use the graphing tool to graph the system.

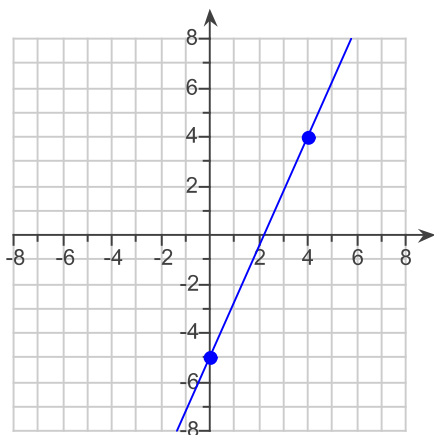


What is the solution of the system of equations?
Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. (Type an ordered pair.)
- B. There are infinitely many solutions.
- C. There is no solution.



12. Find the slope of the line if it exists.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

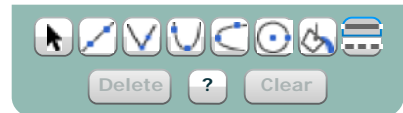
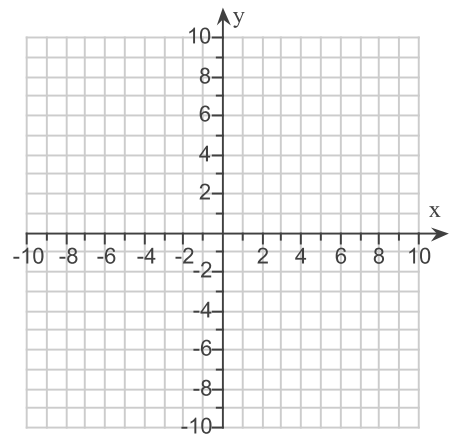
- A. The slope is .
(Simplify your answer. Type an integer or a fraction.)
- B. The slope is undefined.

13.

Graph the linear equation.

$$x - 3y = -9$$

Use the graphing tool to graph the equation.



14.

Solve the system of equations by the substitution method.

$$\begin{cases} y = 2x + 9 \\ y = 5x + 10 \end{cases}$$

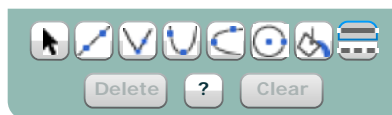
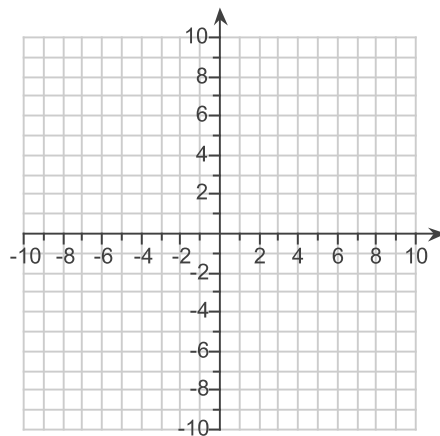
Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution is . (Simplify your answer. Type an ordered pair.)
- B. There are infinitely many solutions.
- C. There is no solution.

15. Graph the following inequality.

$$y \leq 0$$

Use the graphing tool to graph the inequality.



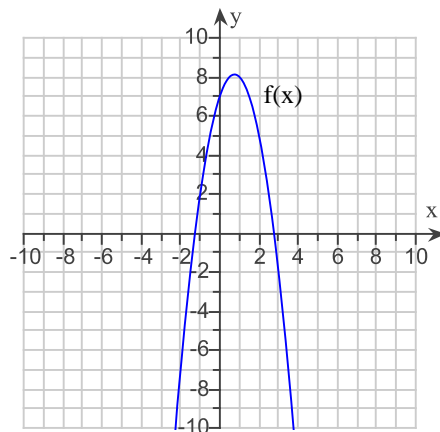
16. Find an equation of the line with the given slope and containing the given point. Write the equation using function notation.

Slope $\frac{4}{5}$; through $(-10, 5)$

The equation of the line is $f(x) = \square$.

17. Use the graph of the function to write the corresponding ordered pair if $f(2) = 5$.

(Type an ordered pair.)



18. Sarah Meeham blends coffee for Tasti-Delight. She needs to prepare 180 pounds of blended coffee beans selling for \$4.38 per pound. She plans to do this by blending together a high-quality bean costing \$5.50 per pound and a cheaper bean at \$3.25 per pound. To the nearest pound, find how much high-quality coffee bean and how much cheaper coffee bean she should blend.

She should blend lbs of high quality beans.
(Round to the nearest pound as needed.)

She should blend lbs of cheaper beans.
(Round to the nearest pound as needed.)

19. Find an equation of the line through $(3,7)$ and parallel to $y = 4x - 6$. Write the equation using function notation.

$f(x) =$

20. Find the slope of the line.

$$y = -0.4x - 3.9$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The slope is . (Type an integer or a decimal.)
- B. The slope is undefined.

21. Solve the system by the addition method.

$$\begin{aligned}x + 2y &= 0 \\4x + 3y &= -10\end{aligned}$$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- A. The solution is . (Simplify your answer. Type an ordered pair.)
- B. There are infinitely many solutions.
- C. There is no solution.

1. $y = -x + 8$

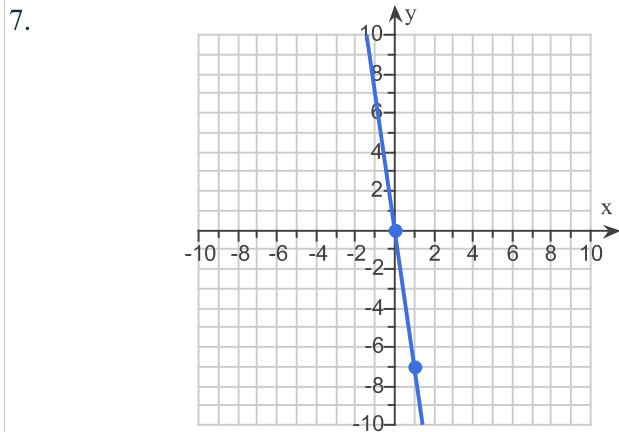
2. 28.50
9.50

3. A, $\frac{13}{4}$
A, $-\frac{4}{13}$

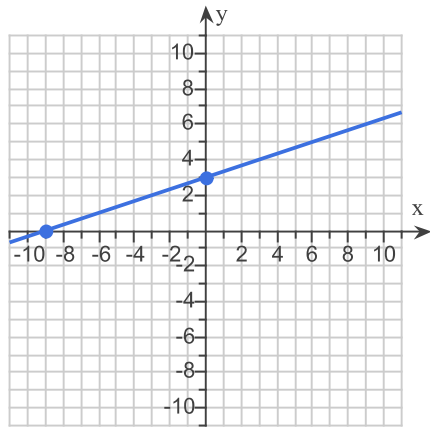
4. (0,6480)
D

5. B

6. $x + 2y = -6$



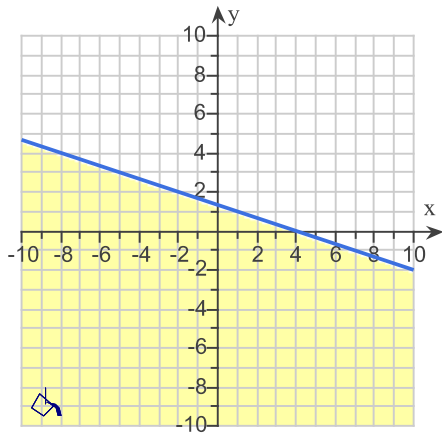
8.



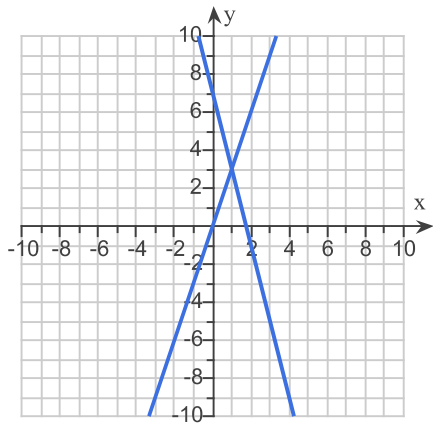
9.

C

10.



11.

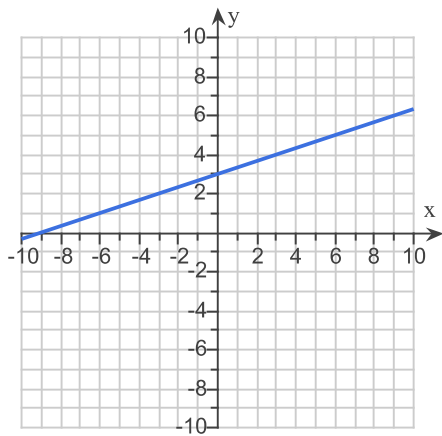


A, (1,3)

12.

A, $\frac{9}{4}$

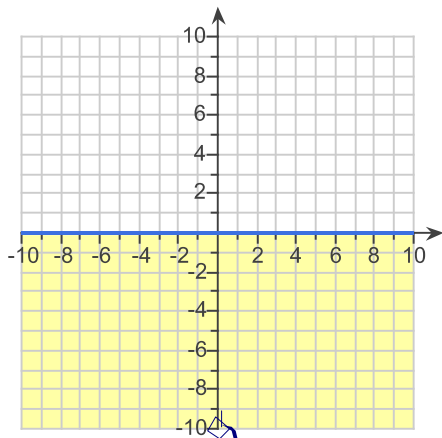
13.



14.

$$A, \left(-\frac{1}{3}, \frac{25}{3} \right)$$

15.



16.

$$\frac{4}{5}x + 13$$

17.

$$(2, 5)$$

18.

$$90$$

$$90$$

19.

$$4x - 5$$

20.

$$A, -0.4$$

21. A, $(-4, 2)$