

# Graphing Systems of Equations

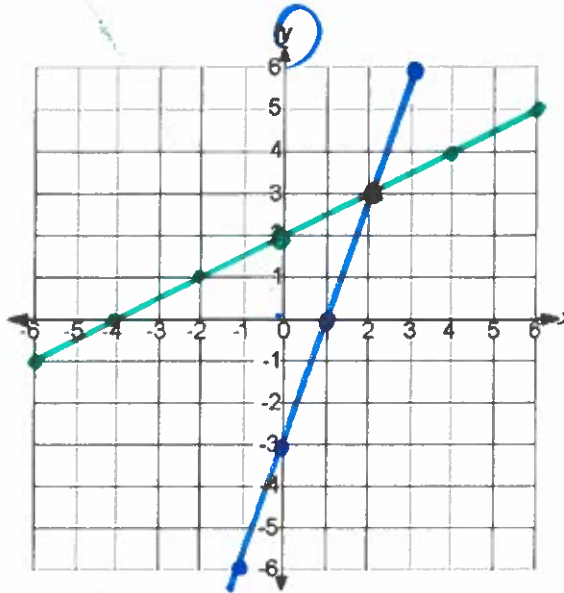
Name: \_\_\_\_\_

Graph each of the systems of equations, then check your solution algebraically.

1.  $y = 3x - 3$   
 $y = \frac{1}{2}x + 2$

Solution: ( 2 , 3 )

$y = 3x - 3$   
 $y = 3(2) - 3$   
 $y = 6 - 3$   
 $y = 3$

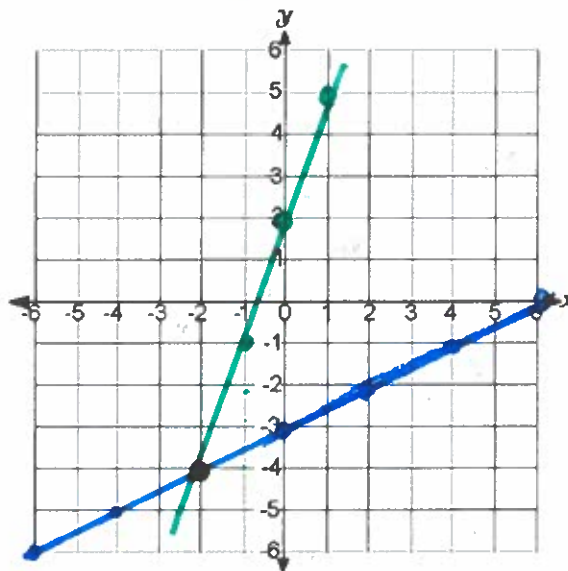


Check your solution with an equation.

$$\begin{array}{r} 3x - 3 = \frac{1}{2}x + 2 \\ -\frac{1}{2}x \quad -\frac{1}{2}x \\ \hline 2.5x - 3 = 2 \\ +3 \quad +3 \\ \hline 2.5x = 5 \\ \div 2.5 \quad \div 2.5 \\ \hline x = 2 \end{array}$$

2.  $y = \frac{1}{2}x - 3$   
 $y = 3x + 2$

Solution: (-2, -4)

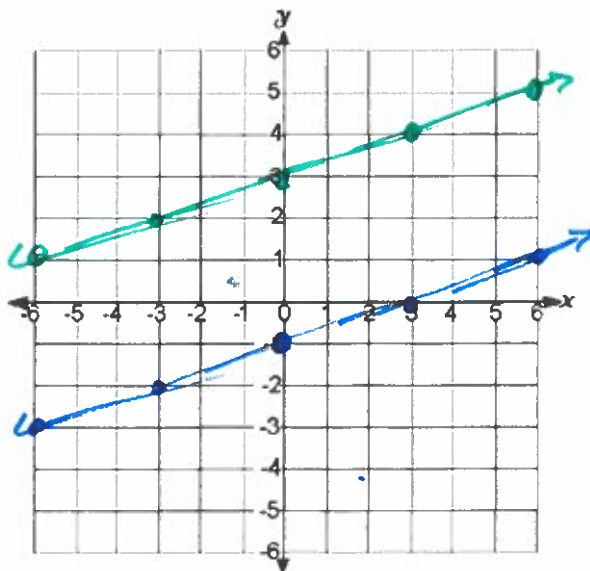


Check your solution with an equation.

3.  $y = \frac{1}{3}x - 1$   
 $y = \frac{1}{3}x + 3$

Solution: ( , )

No Solution



Check your solution with an equation.

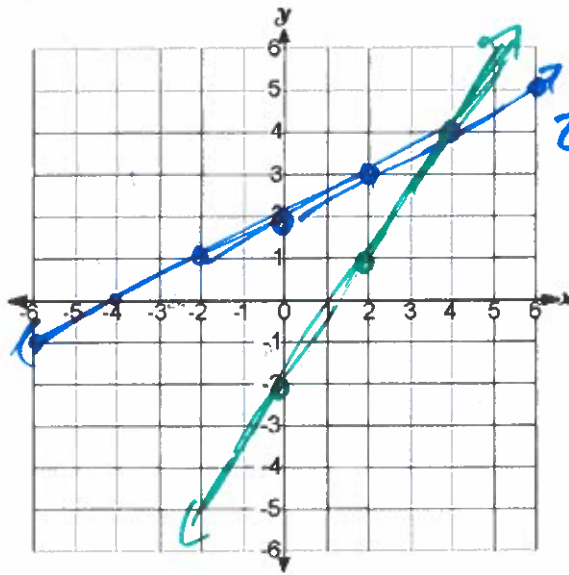
$$\begin{array}{r} \frac{1}{3}x - 1 = \frac{1}{3}x + 3 \\ -\frac{1}{3}x \quad -\frac{1}{3}x \\ \hline -1 = 3 \\ \text{No Solution} \end{array}$$

4.

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

$$y = \frac{3}{2}x - 2$$

Solution:  $(4, 4)$



Check your solution with an equation.

$$\left( \frac{1}{2}x + 2 = \frac{3}{2}x - 2 \right)$$

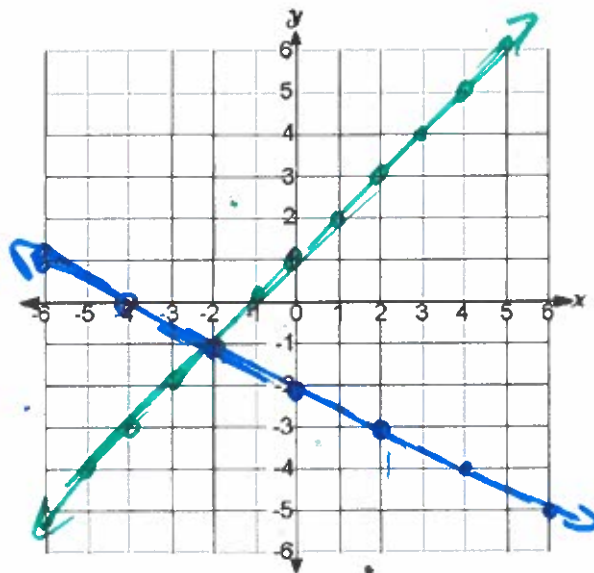
$$x + 4 = 3x - 4$$

5.

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

$$y = x + 1$$

Solution:  $(-2, -1)$



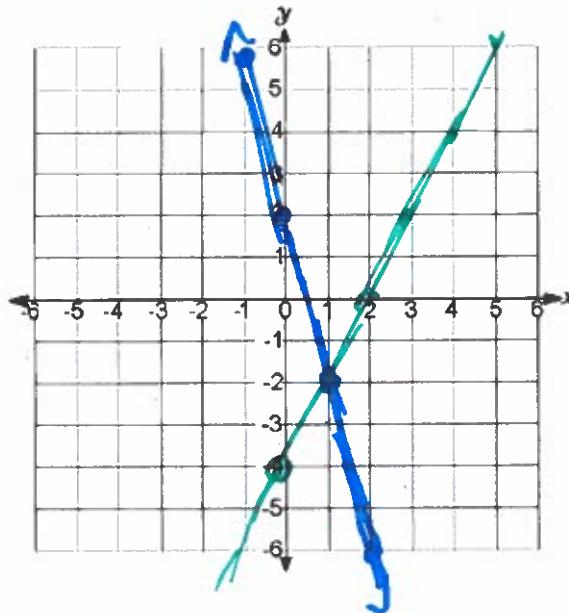
Check your solution with an equation.

6.

$$y = -4x + 2$$

$$y = 2x - 4$$

Solution:  $(1, -2)$



Check your solution with an equation.