

3.3 Graphing Systems of Equations

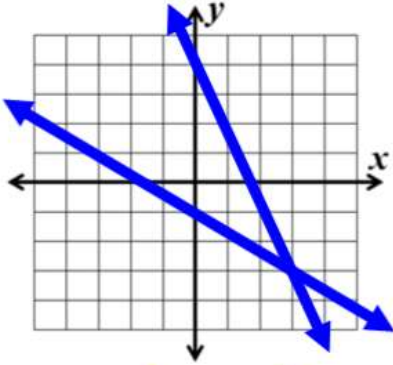
Algebra 1

Name: Solutions

Practice

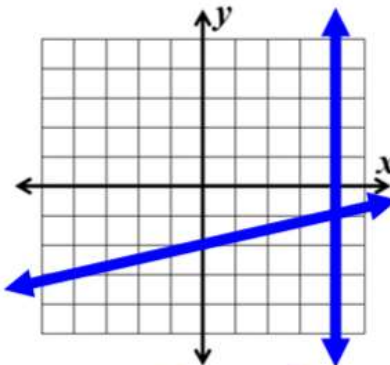
Solve each system of equations by graphing.

1.
$$\begin{cases} y = -\frac{7}{3}x + 4 \\ y = -\frac{2}{3}x - 1 \end{cases}$$



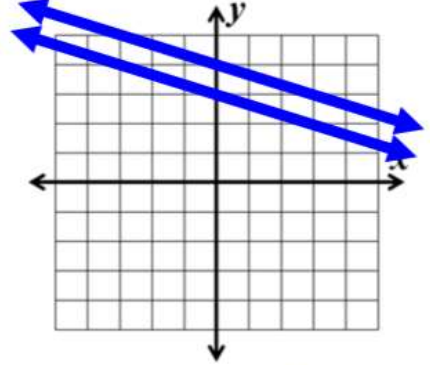
Answer: (3, -3)

2.
$$\begin{cases} y = \frac{1}{4}x - 2 \\ x = 4 \end{cases}$$



Answer: (4, -1)

3.
$$\begin{cases} y = -\frac{1}{3}x + 3 \\ y = -\frac{1}{3}x + 4 \end{cases}$$

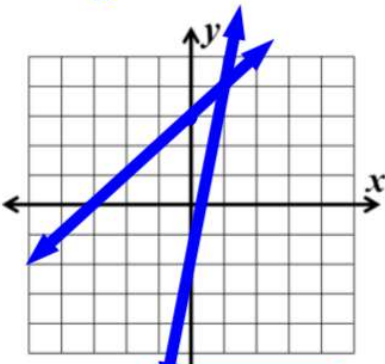


Answer: no solutions

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

$$-y = -x - 3$$

$$y = x + 3$$

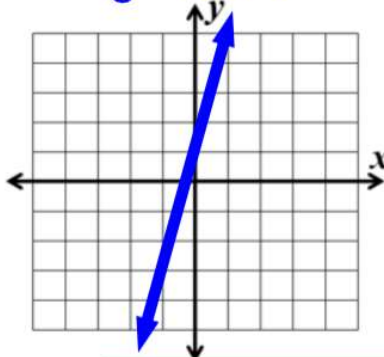


Answer: (1, 4)

5.
$$\begin{cases} y = 4x + 1 \\ 2y - 8x = 2 \end{cases}$$

$$\frac{2y}{2} = \frac{8x + 2}{2}$$

$$y = 4x + 1$$

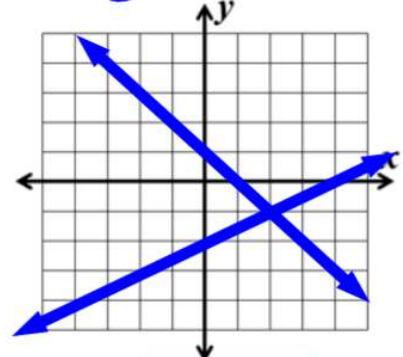


Answer: Infinite Solutions

6.
$$\begin{cases} y = -x + 1 \\ x - 2y = 4 \end{cases}$$

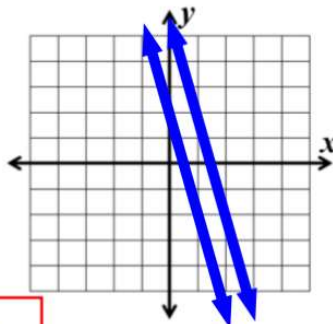
$$\frac{-2y}{-2} = \frac{-x + 4}{-2}$$

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



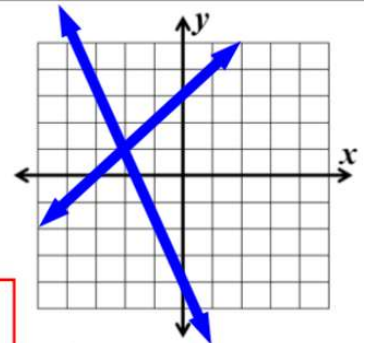
Answer: (2, -1)

7.
$$\begin{cases} y = 5 - 4x \\ y = -4x + 2 \end{cases}$$



Answer: No solution

8.
$$\begin{cases} y = -\frac{5}{2}x - 4 \\ y = x + 3 \end{cases}$$



Answer: (-2, 1)

Use a graphing calculator to solve the following systems. Round your answer to two decimal places.

9.
$$\begin{cases} y = -\frac{2}{3}x - 1 \\ y = -3x - 9 \end{cases}$$

Answer: $(-3.43, 1.29)$

10.
$$\begin{cases} y = 17x - 9 \\ y = \frac{1}{2}x + 7 \end{cases}$$

Answer: $(0.97, 7.48)$

11.
$$\begin{cases} y = -3x + 7 \\ 4x - 3y = 15 \end{cases}$$
$$-3y = -4x + 15$$
$$y = \frac{4}{3}x - 5$$

Answer: $(2.77, -1.31)$

12.
$$\begin{cases} y = -\frac{2}{7}x + 4 \\ 11x + 5y = -35 \end{cases}$$
$$5y = -11x - 35$$
$$y = -\frac{11}{5}x - 7$$

Answer: $(-5.75, 5.64)$

13. Solve
$$-5x - 8(2x - 8) = -104$$

$$-5x - 16x + 64 = -104$$

$$-21x + 64 = -104$$

$$-21x = -168$$

$$x = 8$$

14. Simplify
$$3 - 6(8v - 2)$$

$$3 - 48v + 12$$

$$-48v + 15$$

15. Simplify
$$7(b + 2) + b$$

$$7b + 14 + b$$

$$8b + 14$$