

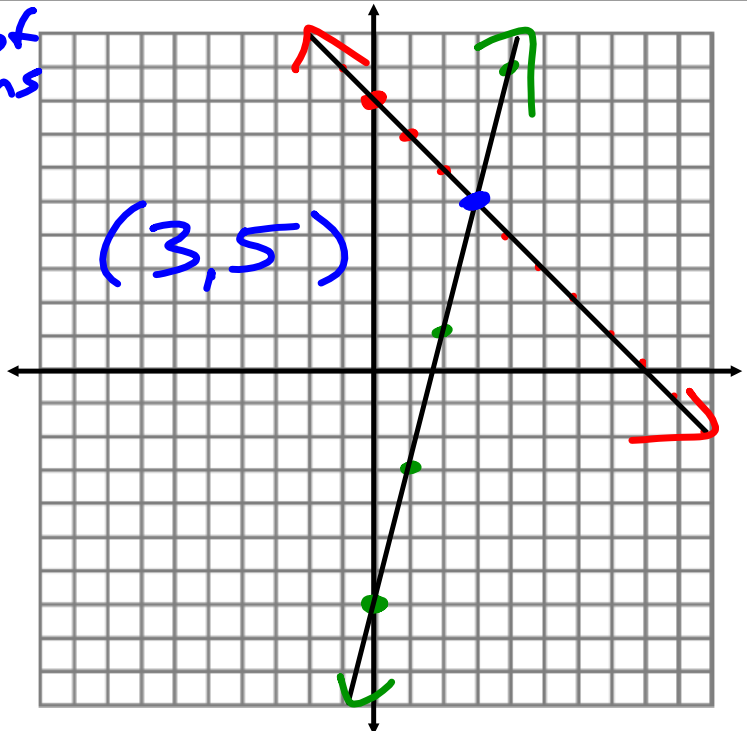
Warm up: *System of equations*
Graph.

1) $y = 4x - 7$

2) $y = -x + 8$

$(3, 5)$

$x = 3$
 $y = 5$

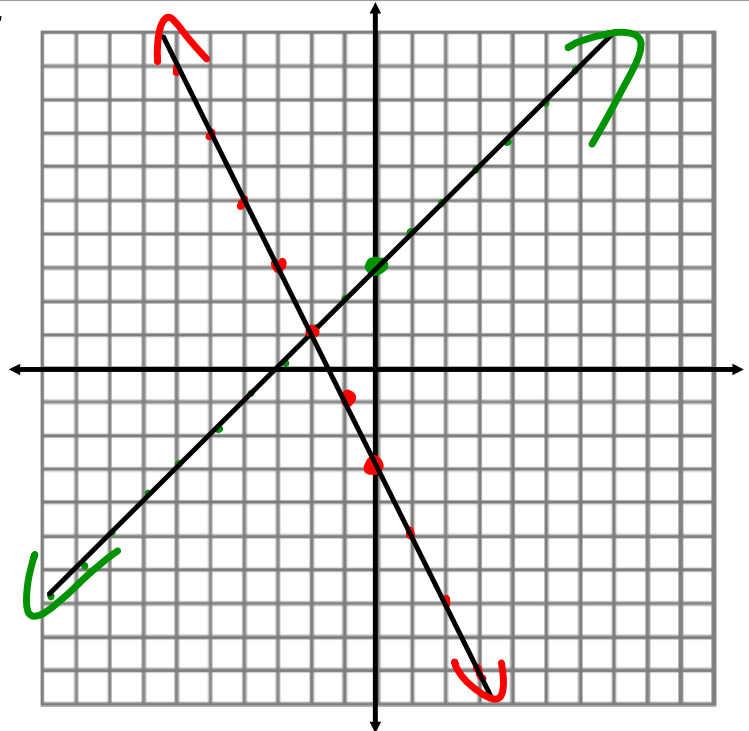


Solve the system of equations by graphing.

$$y = x + 3$$

$$y = -2x - 3$$

$$(-2, 1)$$



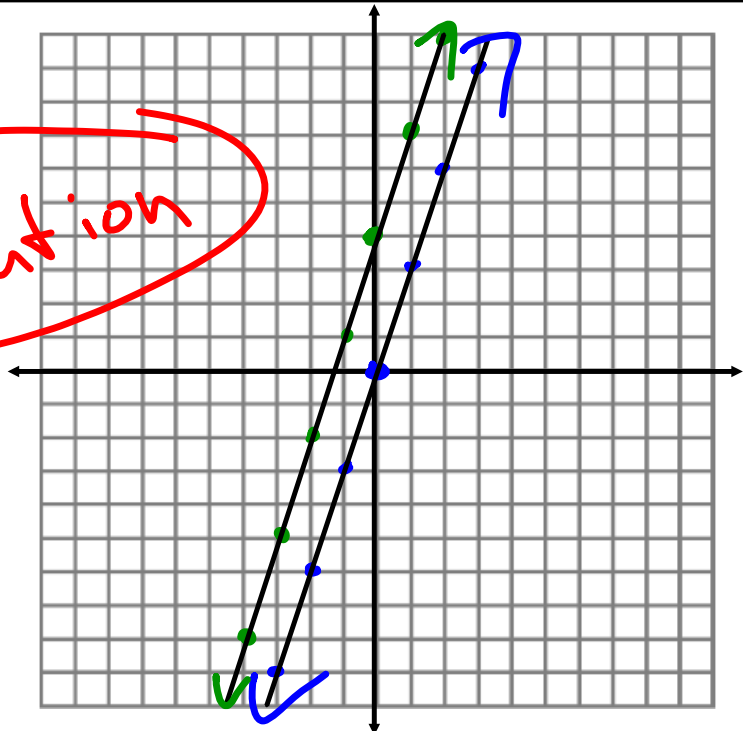
Solve the system of equations by graphing.

$$y = 3x$$

$$y - 4 = 3x$$

$$y = 3x + 4$$

no solution

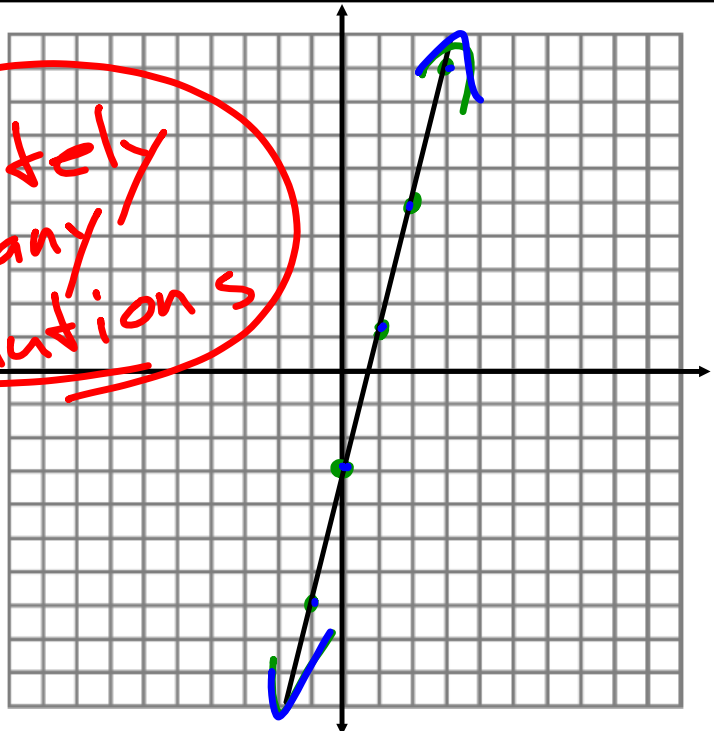



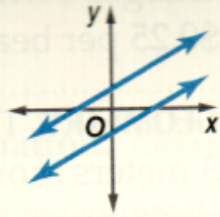
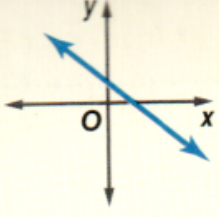
Solve the system of equations by graphing.

$$\begin{array}{r} y + 3 = 4x \\ \underline{-3 \quad -3} \\ y = 4x - 3 \end{array}$$

$$\begin{array}{r} 2y = 8x - 6 \\ \underline{\quad \quad 2} \\ y = 4x - 3 \end{array}$$

infinitely many solutions



Systems of Equations			Concept Summary
Number of Solutions	one solution	no solutions	infinitely many solutions
Graph	 <p>Intersecting Lines</p>	 <p>Parallel Lines</p>	 <p>Same Line</p>

desmos.com/calculator

Solve the following systems of equations by graphing.

$$\begin{aligned} 1) \quad & y = -x + 2 \\ & y = 2x + 5 \end{aligned}$$

$$\begin{aligned} 2) \quad & x - y = 6 \\ & 2x + y = 0 \end{aligned}$$

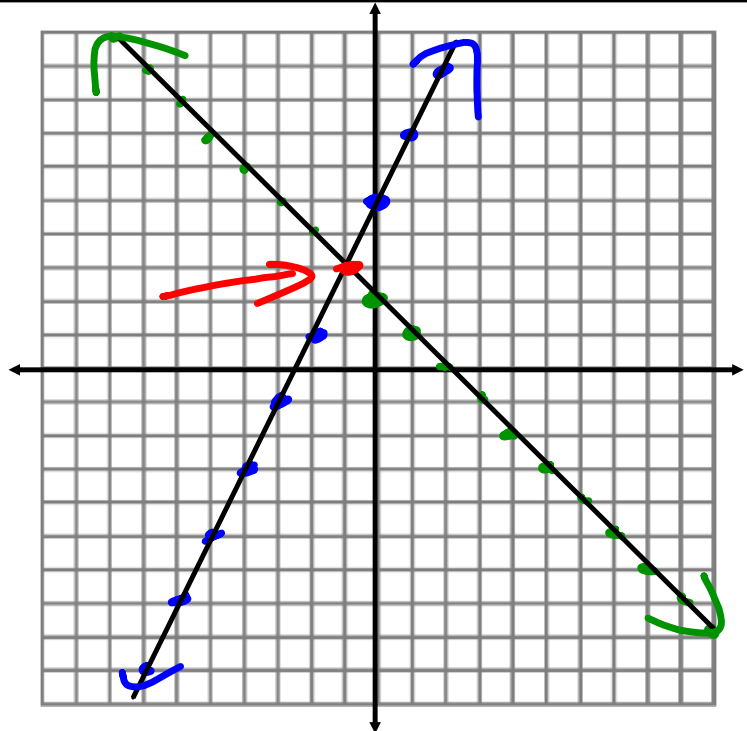
$$\begin{aligned} 3) \quad & 4x + y = -3 \\ & 5x - y = -6 \end{aligned}$$

$$\begin{aligned} 4) \quad & y = 3x + 1 \\ & y = 3x - 8 \end{aligned}$$

$$\begin{aligned} 5) \quad & x + y = -2 \\ & 2x - y = 10 \end{aligned}$$

$$1) y = -x + 2$$
$$y = 2x + 5$$

$(-1, 3)$

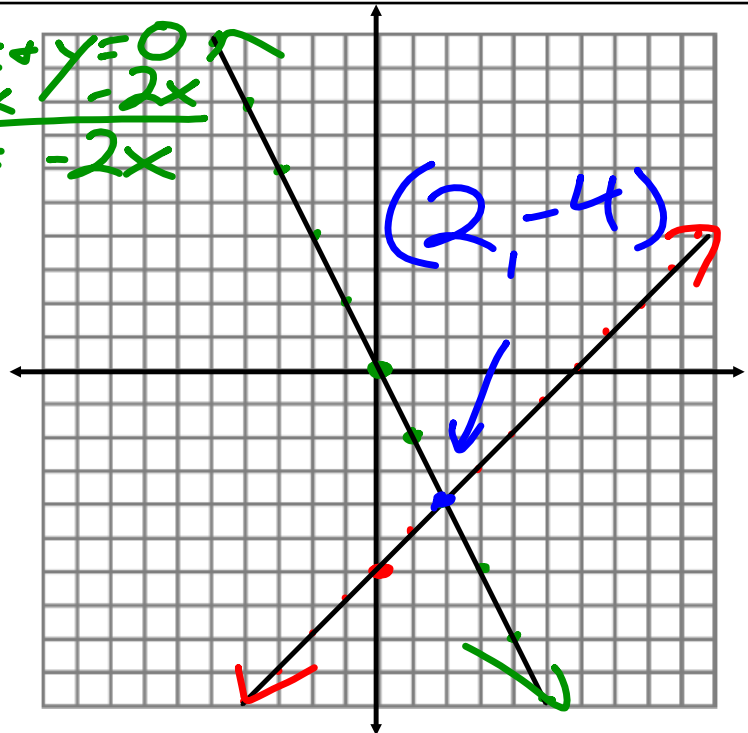


$$2) \quad x - y = 6$$

$$2x + y = 0$$

$$\begin{array}{r} 2x + y = 0 \\ -2x \quad -2x \\ \hline y = -2x \end{array}$$

$$\begin{array}{r} x - y = 6 \\ -x \quad -x \\ \hline -y = -x + 6 \\ \frac{-y}{-1} = \frac{-x + 6}{-1} \\ \hline y = x - 6 \end{array}$$

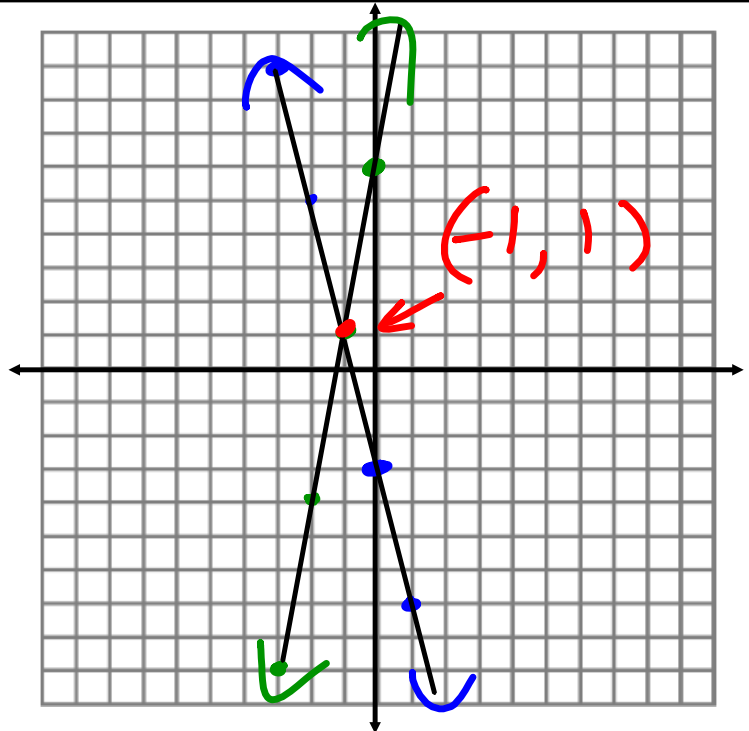


$$3) \quad 4x + y = -3$$

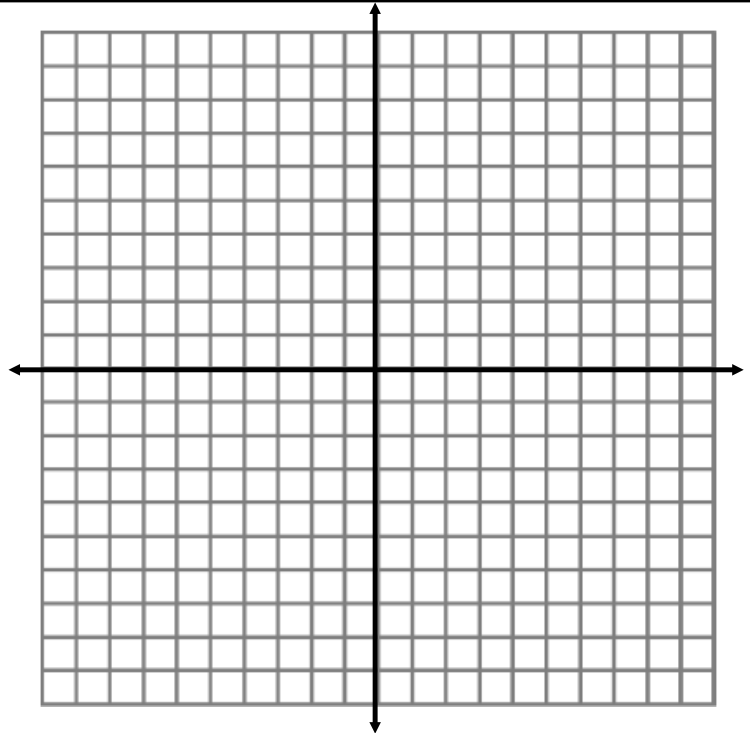
$$5x - y = -6$$

$$\begin{array}{r} 4x + y = -3 \\ -4x \quad -4x \\ \hline y = -4x - 3 \end{array}$$

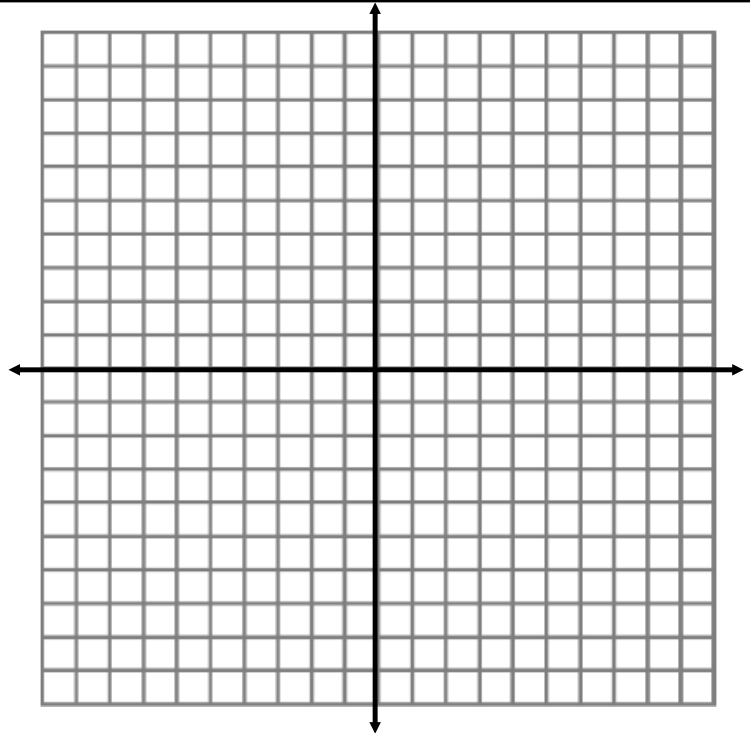
$$\begin{array}{r} 5x - y = -6 \\ -5x \quad -5x \\ \hline -y = -5x - 6 \\ \frac{-y}{-1} = \frac{-5x - 6}{-1} \\ \hline y = 5x + 6 \end{array}$$



4) $y = 3x + 1$
 $y = 3x - 8$



$$5) \begin{aligned} x + y &= -2 \\ 2x - y &= 10 \end{aligned}$$



January 3, 2022

