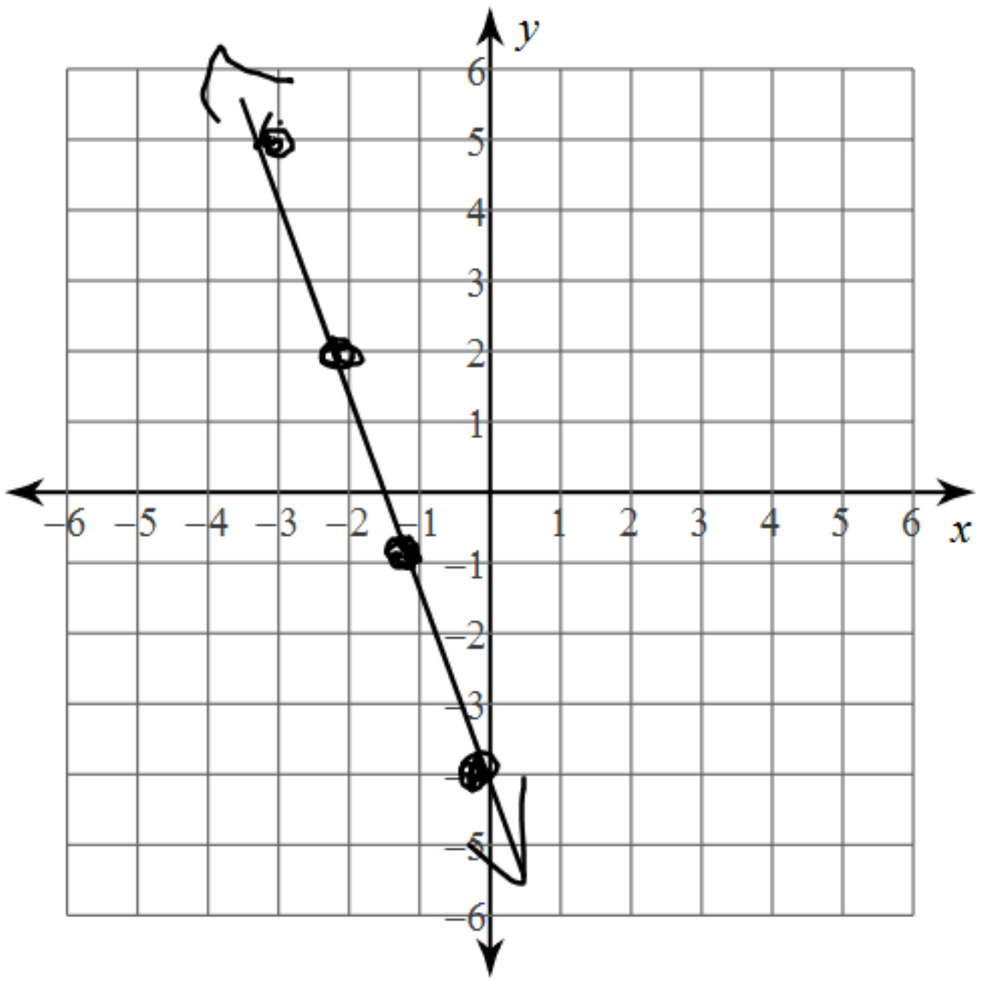
First, rearrage the equation to get y by itself. Then, state the 'b' (y intercept) and the 'm' (slope). Then, sketch the graph of the line.

+3x −3x

1) $3x + y = -4$



$y = -3x - 4$

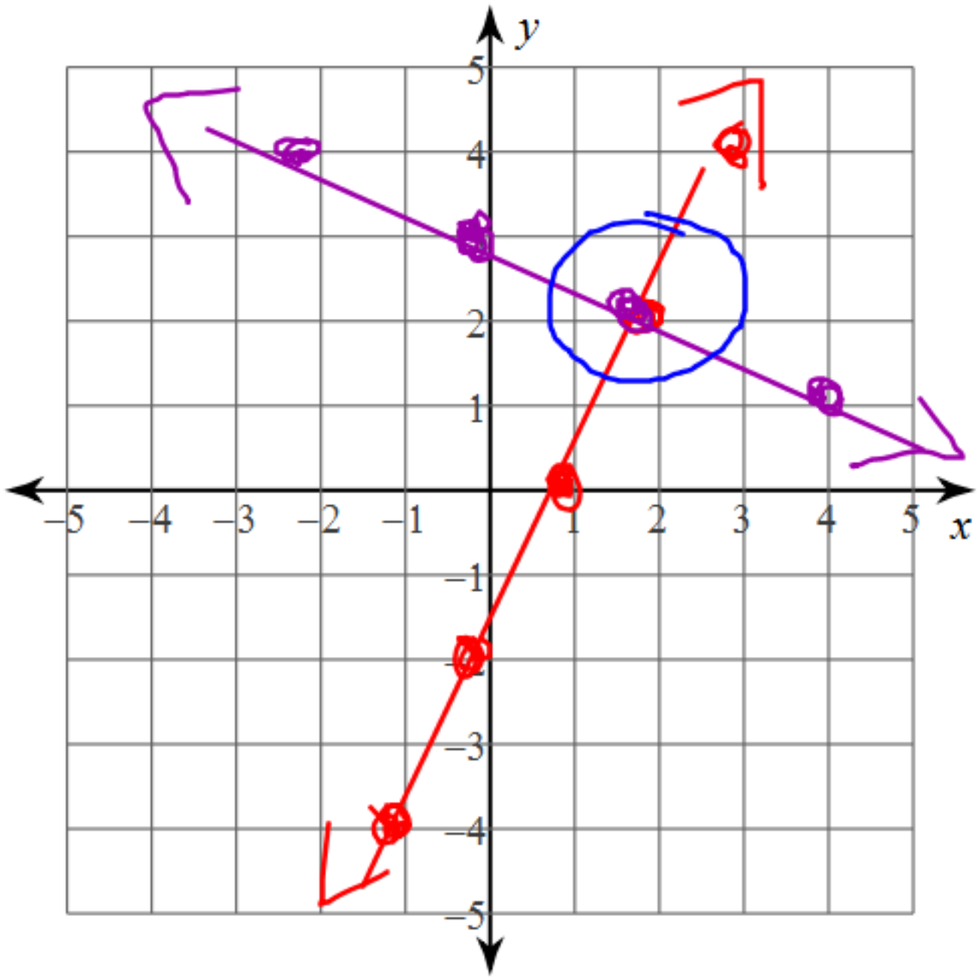
$m = \frac{-3}{1}$

$b = -4$

Solve each system by graphing.

1) $y = 2x - 2$

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



① $m = 2$ $b = -2$

② $m = -\frac{1}{2}$ $b = 3$

∴ POI is (2, 2)

Solve each system by elimination.

POI (-4, -1)

1) $4x - 7y = -9$
$-2x - 4y = 12$

2

$-4x - 8y = 24$
$4x - 7y = -9$

$-15y = 15$
$-15 \quad -15$

$y = -1$

Solve x:

$4x - 7y = -9$

$4x - 7(-1) = -9$

$4x + 7 = -9$ -7

$\frac{4x}{4} = \frac{-16}{4}$

$x = -4$

Show

Solve each system by substitution.

5) $-5x + 8y = -5$

$x - 3y = 8$

$+3y \quad +3y$

$x = 8 + 3y$

$-5(8+3y) + 8y = -5$

$-40 - 15y + 8y = -5$

$+40 \quad +40$

$-40 - 7y = -5$

$\frac{-7y}{-7} = \frac{35}{-7}$

$y = -5$

Solve For x:

$-5x + 8y = -5$

$-5x + 8(-5) = -5$

$+40 \quad +40$

$-5x - 40 = -5$

$\frac{-5x}{-5} = \frac{35}{-5}$

$x = -7$

∴ PoI $(-7, -5)$

1) Bill and Jasmine are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Bill sold 9 small boxes of oranges and 14 large boxes of oranges for a total of $397. Jasmine sold 1 small box of oranges and 7 large boxes of oranges for a total of $153. What is the cost each of one small box of oranges and one large box of oranges?

Let x be small boxes

let y be large boxes

B: $9x+14y=397$

J: $\div 2\,(x+7y=153)$

$-2x-14y=-306$

$9x+14y=397$

$7x=91$

$\frac{7x}{7}=\frac{91}{7}$

$x=13$

Find y:

$9(13)+14y=397$

$-117 \quad 117+14y=397 \quad -117$

$14y=280$

$\frac{14y}{14}=\frac{280}{14}$

$y=20$

∴ A small box is $13 and a large box is $20.