

1. Solve for y ; $y = mx + b$
2. Graph each line
3. The solution is the intersection (ordered pair)

$$12 + 4y = -7x$$

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

$$\frac{12 + 4y}{-12} = \frac{-7x}{-12}$$

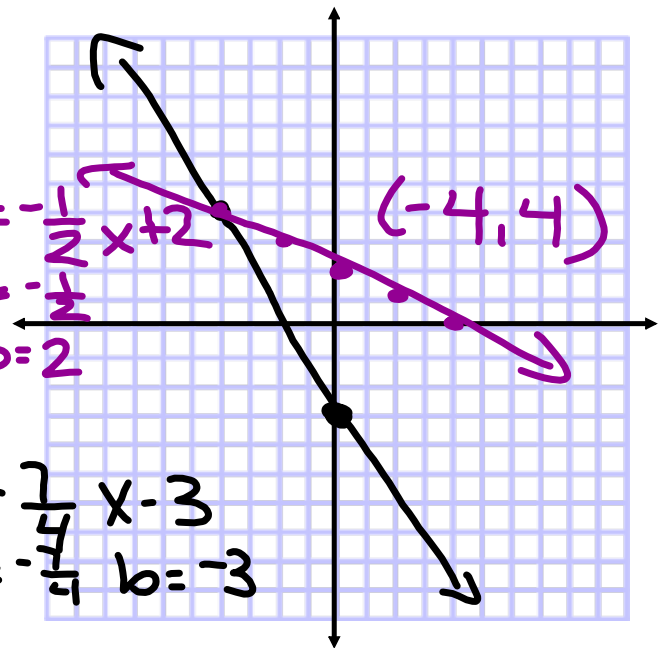
$$\frac{4y}{4} = \frac{-7x - 12}{4}$$

$$y = -\frac{7}{4}x - 3$$

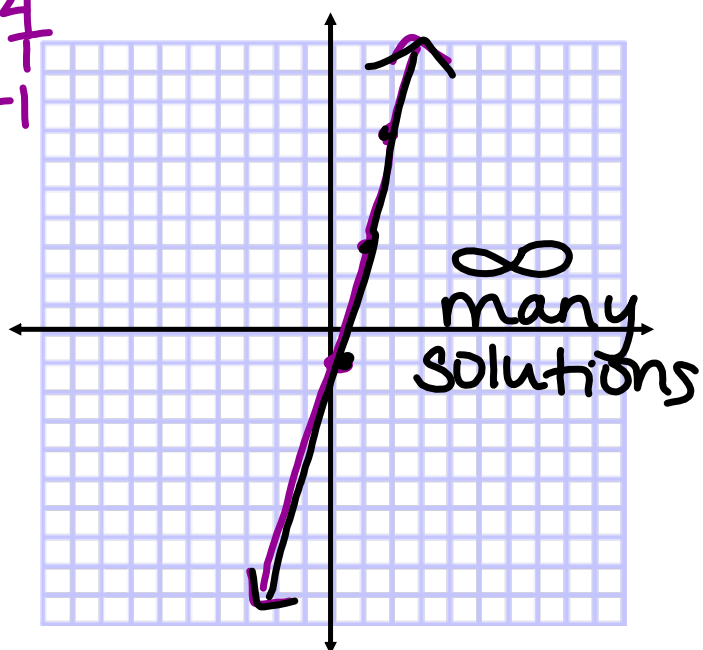
$m = -\frac{7}{4}$ $b = -3$

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

$m = -\frac{1}{2}$ $b = 2$



$$\begin{array}{l}
 -1 + 4x = y \quad m=4 \\
 \quad \quad \quad \quad \quad \quad \quad b=-1 \\
 -4x + y = -1 \\
 +4x \quad \quad \quad +4x \\
 \hline
 y = 4x - 1 \\
 m = 4 \\
 b = -1
 \end{array}$$



$$-3y + 9 = -2x$$

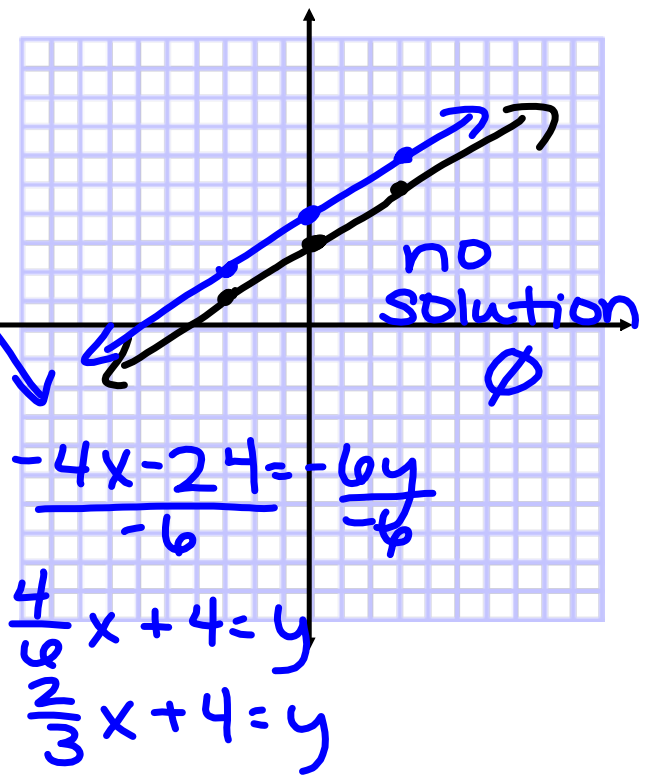
$$-4x = 24 - 6y$$

$$-3y + 9 = -2x$$

$$\quad -9 \quad -9$$

$$\frac{-3y}{-3} = \frac{-2x - 9}{-3}$$

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



Types of Solution

- * 1 Solution is at the intersection
- * No solution - when lines are parallel
- * ∞ many when the lines coincide