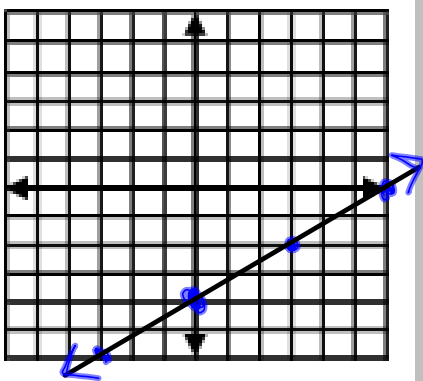


Steps to graph a line given a point and the slope.

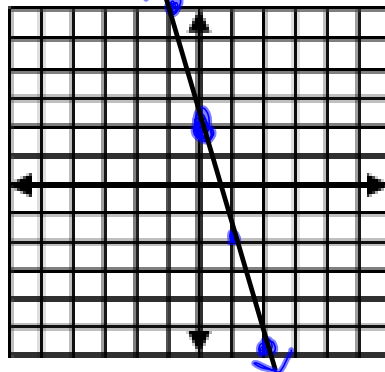
1. Plot the y-intercept.
2. Use the slope to find the next point.
3. Plot at least 3 more points and draw the line. (arrows)
(If you cannot go forward anymore, do the opposite steps to go back wards.)

Graph each line given the y-intercept and the slope.

1. pt (0, -4) $m = \frac{2}{3}$

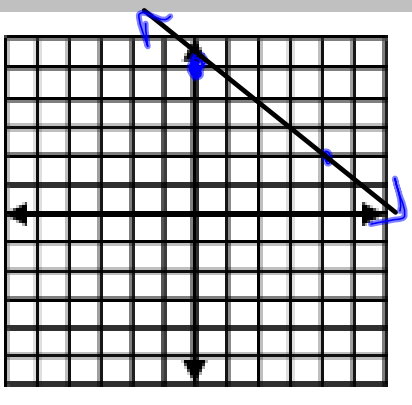


2. pt (0, 2) $m = -4 = \frac{-4}{1}$



Graph each line given the y-intercept and the slope.

3. pt (0, 5) $m = -\frac{3}{4}$



Slope Intercept Form -

$$y = mx + b$$

$$m = \underline{\text{slope}}$$

$$b = \underline{\text{y-int}}$$

*Slope (**m**) is always the coefficient of x.

1) $y = 2x + 4$

$$m = \underline{2} = \frac{2}{1}$$

$$b = \underline{4}$$

(0, 4)

2) $y = 3x$

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

$$b = \underline{0}$$

(0, 0)

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

$$m = \underline{\frac{2}{3}}$$

$$b = \underline{-1}$$

(0, -1)

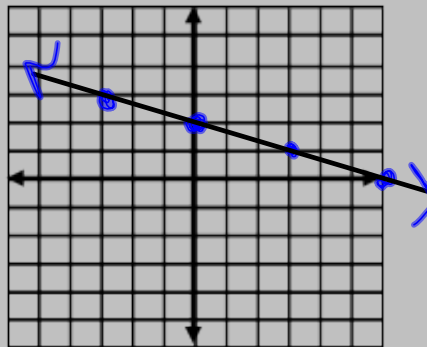
Use slope-intercept form to GRAPH.

1. Solve for y. (if needed)
2. Identify the y-intercept (**b**) and slope (**m**) from the equation.
3. Plot the y-intercept (**b**).
4. From the y-intercept use the slope (**m**) to find the next two points.
5. Draw the line and check the slope with the direction of the line.

Graph each line given an equation.

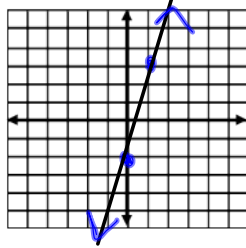
1. $y = \frac{-1}{3}x + 2$

$$m = \underline{-\frac{1}{3}} \quad b = \underline{(0, 2)}$$

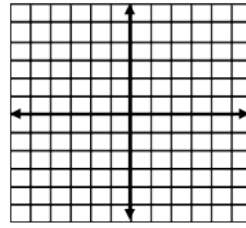


2. $y = -2 + 5x$ $y = 5x - 2$

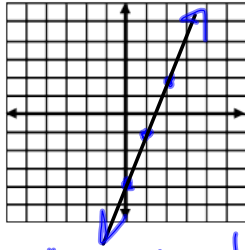
$b = -2$
 $m = \frac{5}{1}$



4. $x - 2y = 4$



3. $-3x + y = -4$ $+3x$ $+3x$



$y = -4 + 3x$ $b = -4$
 $y = 3x - 4$ $m = 3$

$$\begin{array}{r} x - 2y = 4 \\ -x \quad -x \\ \hline -2y = 4 - x \\ \frac{-2}{-2} \quad \frac{-2}{-2} \quad \frac{-x}{-2} \\ -2y = \frac{4}{-2} - \frac{x}{2} \end{array}$$

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