

Review:

Find the slope of $(-1/2, 2/3)$ and
 $(-2/5, 3/4)$

I Can: Use Point Slope Form

Find the Equation of a Line given certain information
2.5

point slope form

$$y - y_1 = m(x - x_1)$$

m = slope

(x_1, y_1)

slope-intercept form

$$y = mx + b$$

m = slope

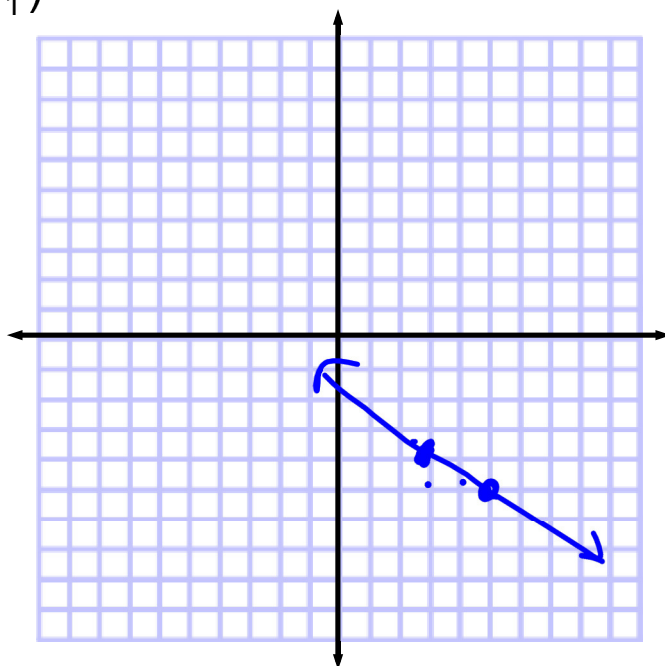
$b = (0, b)$ y-int.

Graph $(y + 4) = -1/2(x - 3)$

$$y - y_1 = m(x - x_1)$$

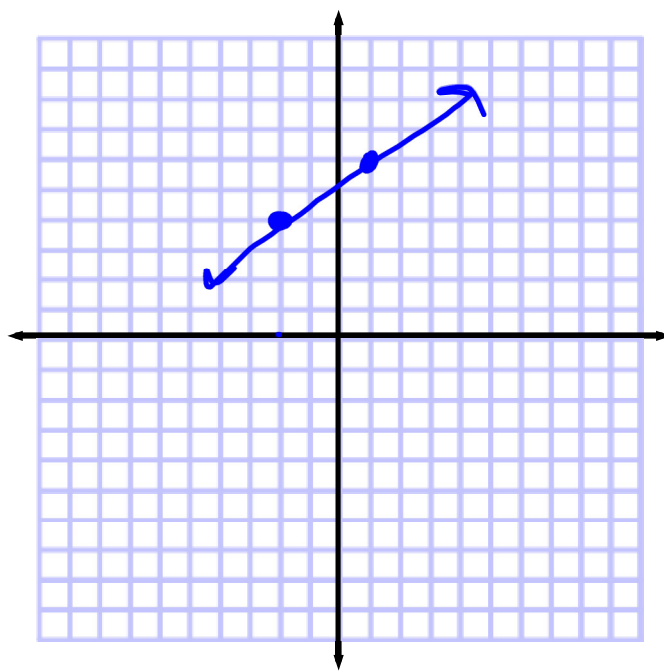
point $(3, -4)$

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



$$y - 4 = \frac{2}{3} (x + 2)$$

point $(-2, 4)$
 $m = \frac{2}{3}$



Find Point Slope Equation Given $m = 3$

$(-7, 8)$

x_1, y_1

$$y - y_1 = m(x - x_1)$$
$$y - 8 = 3(x + 7)$$

$$(-2, 5) \quad m = -3/4$$

$$y - 5 = -\frac{3}{4}(x + 2)$$

Find a line Parallel to $\frac{7}{8}y = \frac{7x - 24}{8}$
with a y intercept of (0,6)
_b

$$y = \frac{7}{8}x - 3$$
$$m_1 = \frac{7}{8}$$

$$m_2 = \frac{7}{8}$$
$$b = 6$$

$$y = \frac{7}{8}x + 6$$

Find a line Perpendicular to $2x + y = 5$
 thru the point $(1, -3)$
 $x \quad y$

$$\cancel{-2x} \quad \underline{-2x}$$

$$y = -2x + 5$$

$$m_2 = \frac{1}{2}$$

$$m_1 = -2$$

$$y = mx + b$$

$$-3 = \frac{1}{2} \cdot 1 + b$$

$$-3 = \frac{1}{2} + b$$

$$-\frac{1}{2} \quad -\frac{1}{2}$$

$$b = -\frac{7}{2}$$

B.W

$$\frac{-3 \cdot 2 - \frac{1}{2}}{1 \cdot 2}$$

$$\frac{-6 - \frac{1}{2}}{2}$$

$$b = -\frac{7}{2}$$

$$y = \frac{1}{2}x - \frac{7}{2}$$

Find the equation of the line given $(2,3)$ and $(3,7)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{7 - 3}{3 - 2} = \boxed{\frac{4}{1}}$$

$$y = mx + b$$

$$\begin{aligned} 3 &= 4 \cdot 2 + b \\ 3 &= 8 + b \\ -8 &\quad -8 \\ \hline b &= -5 \end{aligned}$$

$$\boxed{y = 4x - 5}$$

Find the Equation of the line
given the points $(2, -5)$ and
 $(0, 1)$

x_1 y_1

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$y = mx + b$$

$$m = \frac{1 - (-5)}{0 - 2} = \frac{6}{-2} = -3$$

$$b = 1$$

$$y = -3x + 1$$