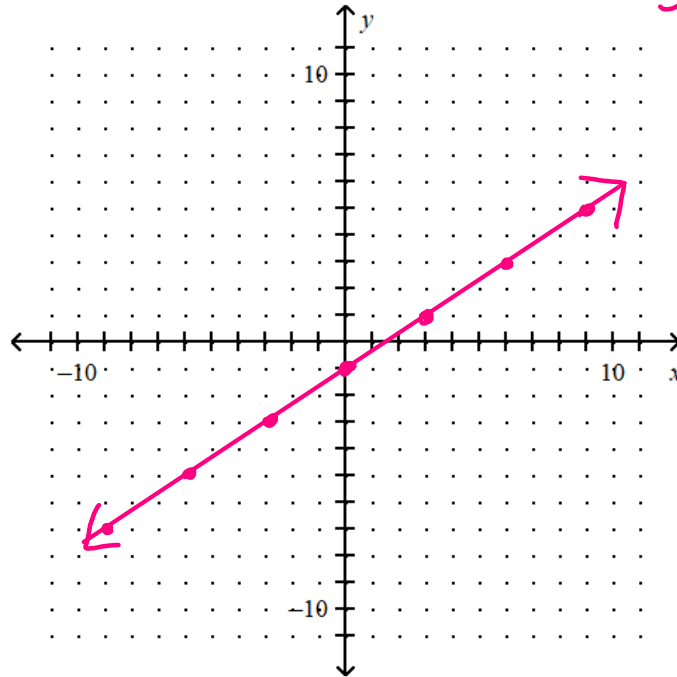


1. Graph $y = \frac{2}{3}x - 1$.

$$m = \frac{2}{3} \quad \underline{y\text{-int} = -1}$$

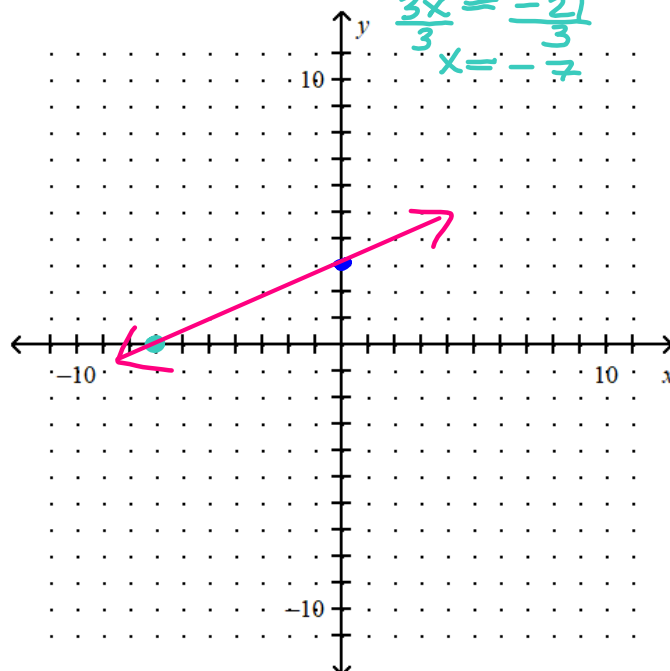
Start!



2. Find the intercepts of $3x - 7y = -21$

and graph the line.

$$\begin{array}{l} \underline{x\text{-int}} \\ 3x - 7(0) = -21 \\ 3x = -21 \\ x = -7 \end{array} \quad \begin{array}{l} \underline{y\text{-int}} \\ 3(0) - 7y = -21 \\ -7y = -21 \\ \frac{-7y}{-7} = \frac{-21}{-7} \\ y = 3 \end{array}$$



3. Write the point-slope form of an equation for a line that passes through $(-8, 5)$ with $m = -\frac{3}{5}$.

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

$$y - 5 = -\frac{3}{5}(x + 8)$$

4. Write an equation in slope-intercept form for the line that passes through $(-9, -2)$ with a slope of 2.

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

$$y + 2 = 2(x + 9)$$

$$y + 2 = 2x + 18$$

$$y = 2x + 16$$

$$y = mx + b$$

5. Write the slope-intercept form of an equation that passes through $(12, -3)$ and is

perpendicular to the graph of $y = \frac{4}{3}x - 8$.

opp. reciprocal

$$m = \frac{4}{3} \rightarrow m_{\perp} = -\frac{3}{4}$$

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

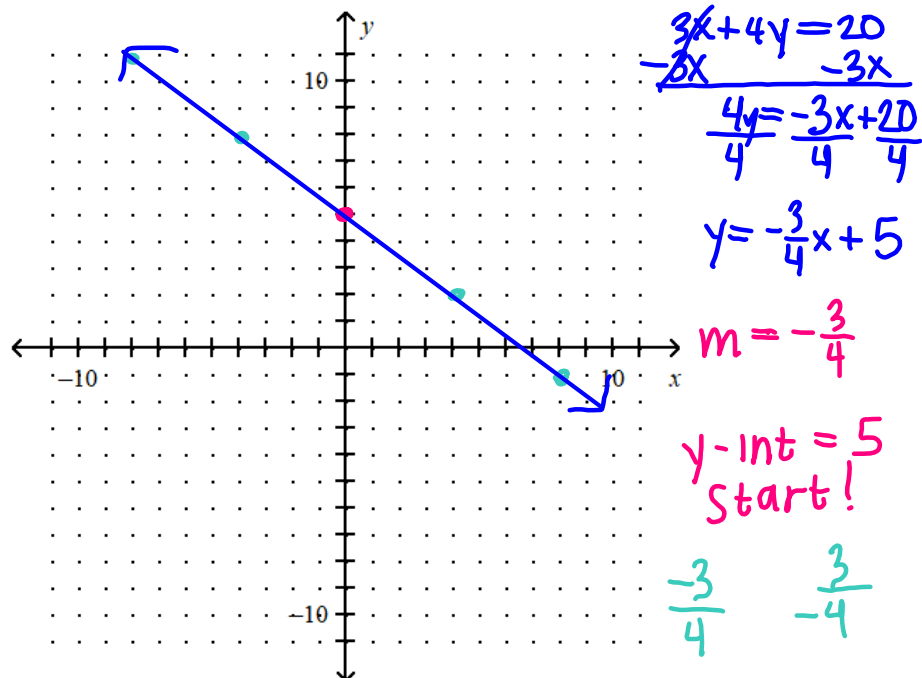
$$y + 3 = -\frac{3}{4}(x - 12)$$

$$y + 3 = -\frac{3}{4}x + 9$$

$$\begin{array}{r} -3 \\ -3 \end{array}$$

$$y = -\frac{3}{4}x + 6$$

6. Write the function $3x + 4y = 20$ in slope-intercept form and graph the line.



7. Write an equation of the line in slope-intercept form that passes through $(-1, -7)$ and $(1, -1)$.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - (-7)}{1 - (-1)} = \frac{6}{2} = 3$$

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

$$y + 7 = 3(x + 1)$$

$$y + 7 = 3x + 3$$

$$y = 3x - 4$$

8. In slope-intercept form, write the equation of the line that passes through $(-14, 6)$ and is parallel to $y = \frac{1}{2}x + 9$.

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

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

$$y - 6 = \frac{1}{2}(x + 14)$$

$$y - 6 = \frac{1}{2}x + 7$$

$$y = \frac{1}{2}x + 13$$