September 19, 2011

Warm-Up

List 5 "facts" about slope.

$y = mx + b$

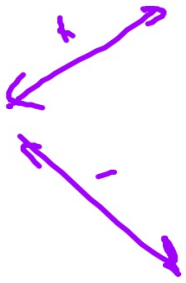
$y - y_1 = m(x - x_1)$

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

$\frac{\text{rise}}{\text{run}}$

|| - same

⊥ - opp reciprocals



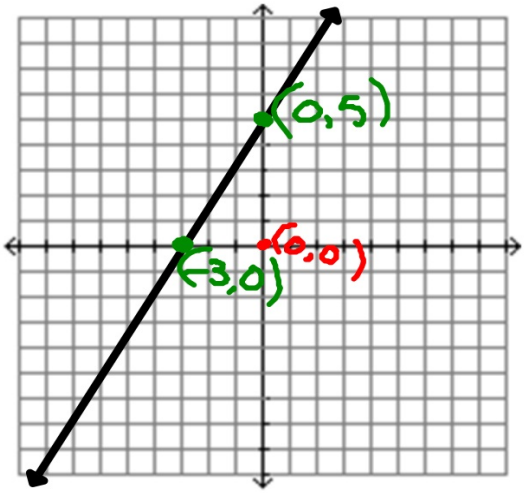
vertical = undef

horiz = 0

graphable steepness

9/19 - Quick Graphs of Linear Equations

Method 1: Intercepts using Standard Form



Where are the intercepts?

the ~~place~~ point on the x- and y-axis that the line goes through

What are the intercepts?

x-int: (-3, 0)

y-int: (0, 5)

Find the x- and y-intercepts of each.

$8x - 2y = 4$

$\left(\frac{1}{2}, 0\right)$ x-int

$8x - 2(0) = 4$

$8x - 0 = 4$

$\frac{8x}{8} = \frac{4}{8}$

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

$(0, -2)$ y-int

$8(0) - 2y = 4$

$0 - 2y = 4$

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

$3x - 5y = 10$

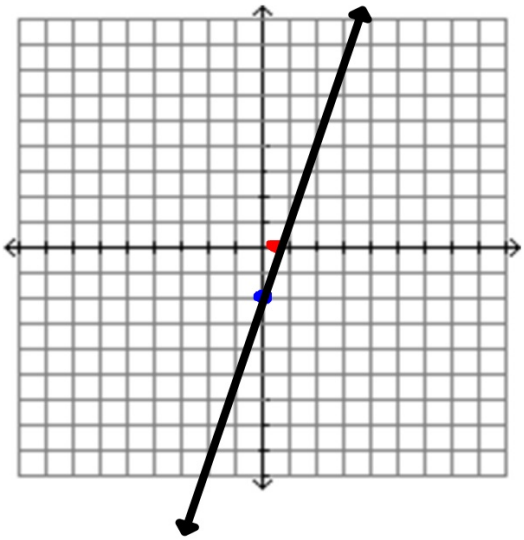
$\left(\frac{10}{3}, 0\right)$

$(0, -2)$

Graph using the intercepts.

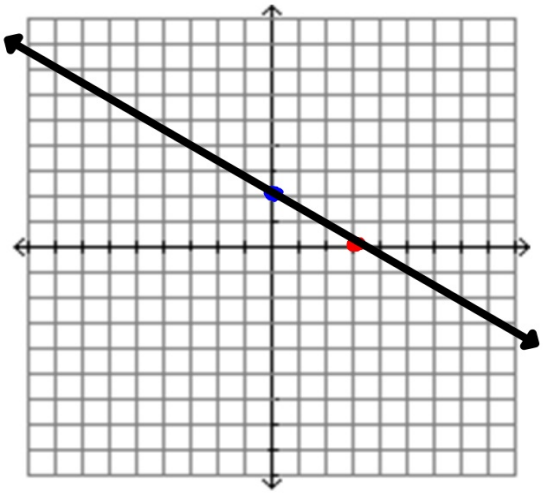
$8x - 2y = 4$

$(\frac{1}{2}, 0)$ $(0, -2)$



$2x + 3y = 6$

$(3, 0)$ $(0, 2)$



Method 2: Slope-Intercept

$$y = mx + b$$

slope y-int.

Write the slope-intercept form of each:

$$8x - 2y = 4$$

$-8x \quad -8x$

$$\frac{-2y}{-2} = \frac{-8x}{-2} + \frac{4}{-2}$$

$$y = 4x - 2$$

$$2x + 3y = 6$$

$-2x \quad -2x$

$$\frac{3y}{3} = \frac{-2x}{3} + \frac{6}{3}$$

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

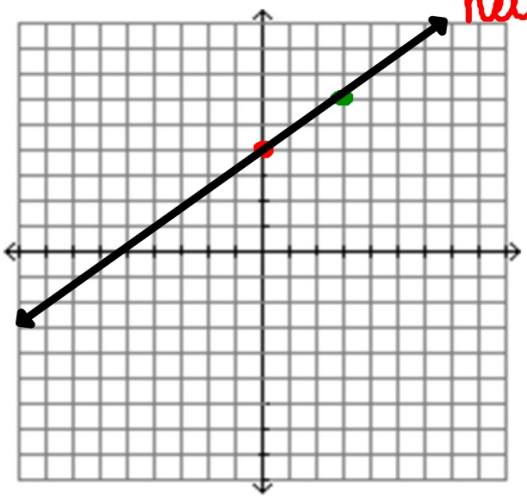
Sketch each line using slope and intercept.

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

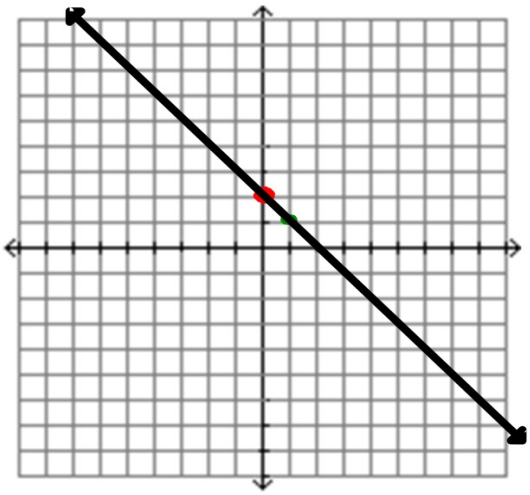
up

over

start here



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



Homework:

Page 81:

7-12, 25-42 all

due: Tuesday