

5.1. Slope-Intercept form

Graph Paper,

Nov. 28, 2006

But Not Required

Recall: The Slope-Intercept form of the equation of a line is:

$$y = mx + b$$

→ generic equation

where $m = \text{slope}$ $b = \text{y-int.}$

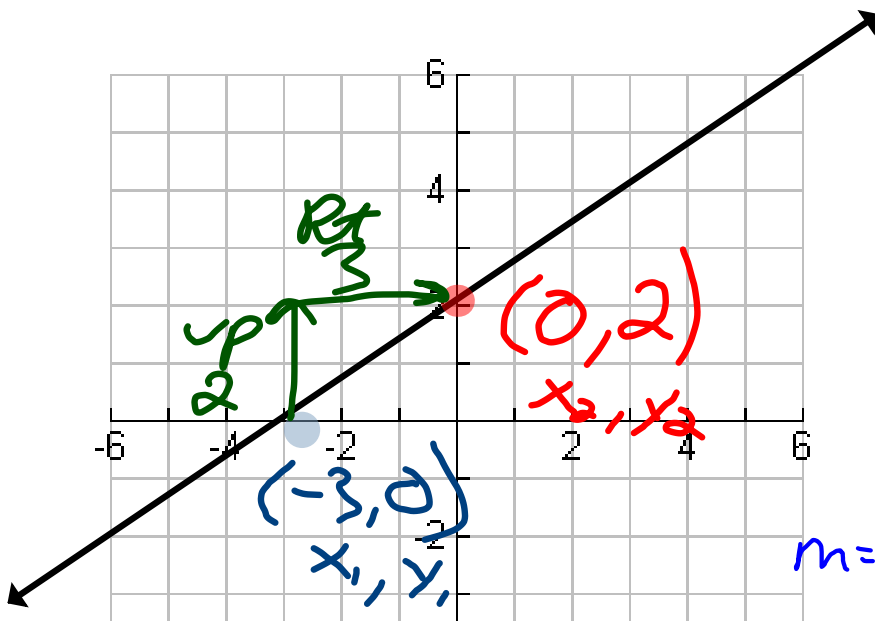
Write the equation of the line
with $\text{slope} = 3$ + $y\text{-int} = 7$

$$y = mx + b$$
$$y = 3x + 7$$

w/ $y\text{-int} = -8$ + $m = \frac{5}{2}$

$$y = mx + b$$
$$y = \frac{5}{2}x - 8$$

Write the equation of the line:



We know Slope Intercept

$$y = mx + b$$

We need to know...

$$\text{Slope} = \frac{2}{3}$$

$$y\text{-int.} = 2$$

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

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

$$m = \frac{\text{rise}}{\text{run}} = \frac{2}{3}$$

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

Write the equation of the line:

$$y = mx + b$$

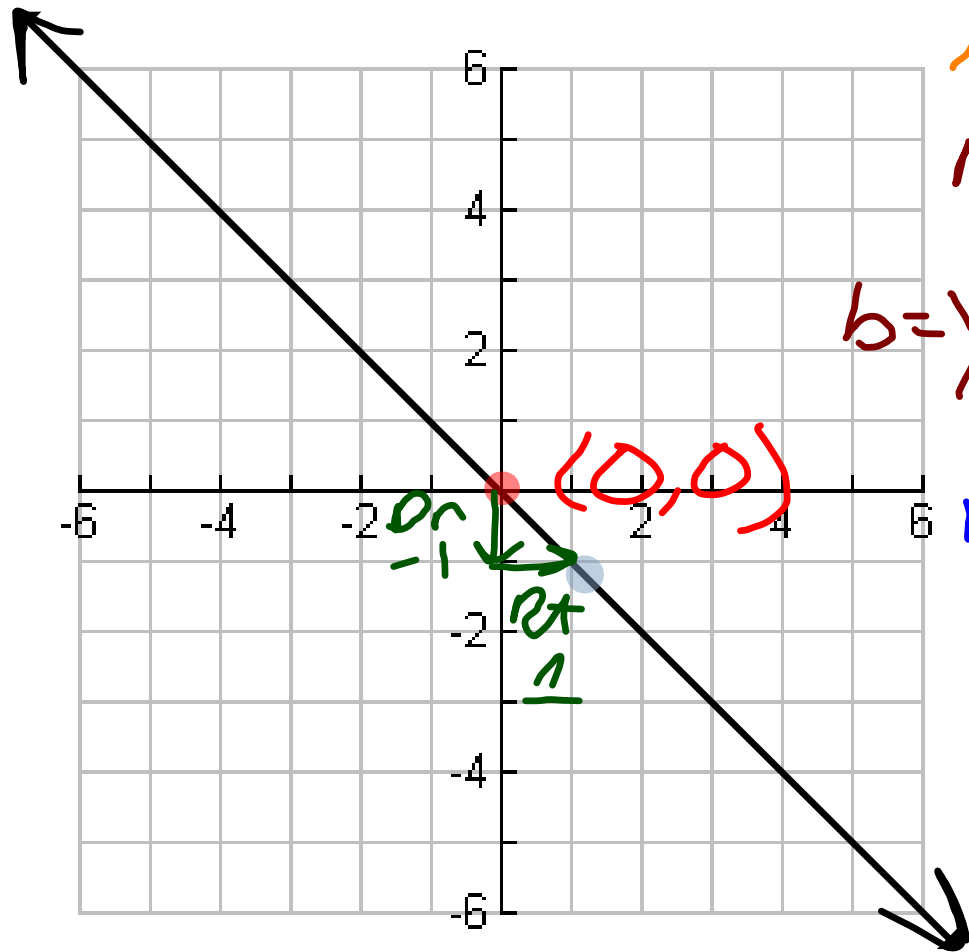
$$m = \text{slope} = \frac{-1}{1}$$

$$b = \text{y-int} = 0$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{-1}{1} = -1$$

$$y = -1x + 0$$

$$\underline{\underline{y = -1x}} \text{ or } \underline{\underline{y = -x}}$$



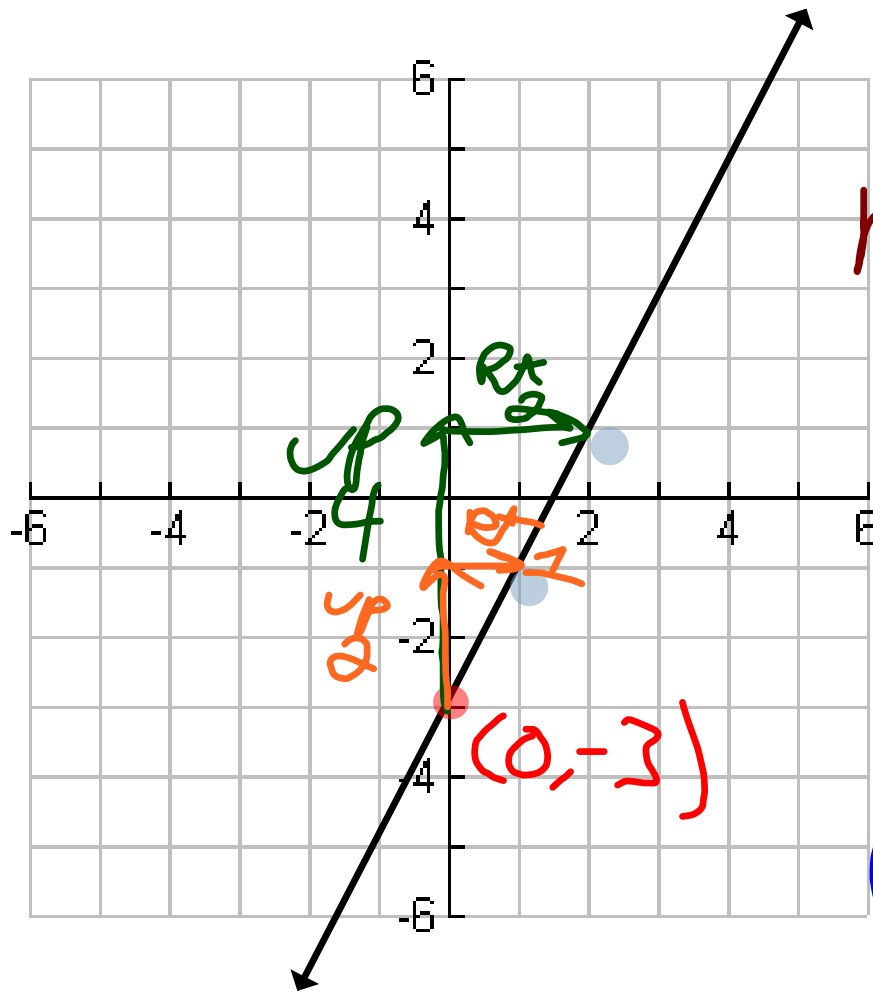
Write the equation of the line:

$$y = mx + b$$

$$m = \text{slope} = 2$$

$$b = \text{y-int} = -3$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{4}{2} = 2$$



$$\underline{\underline{y = 2x - 3}}$$

O.T.L.

①

Pg 272: 1-3, 13, 16,

18-25(a), 34-39(a)

22-25: write the slope, y-int, &
the eqn of
the line.