

5.1. Slope-Intercept form

Graph Paper,
But Not Required

Nov. 28, 2006

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

$$y = mx + b$$

→ generic equation

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

Write the equation of the line
with

$$\text{slope} = 3$$

$$\text{y-int} = 7$$

$$y = mx + b$$

$$y = 3x + 7$$

w/

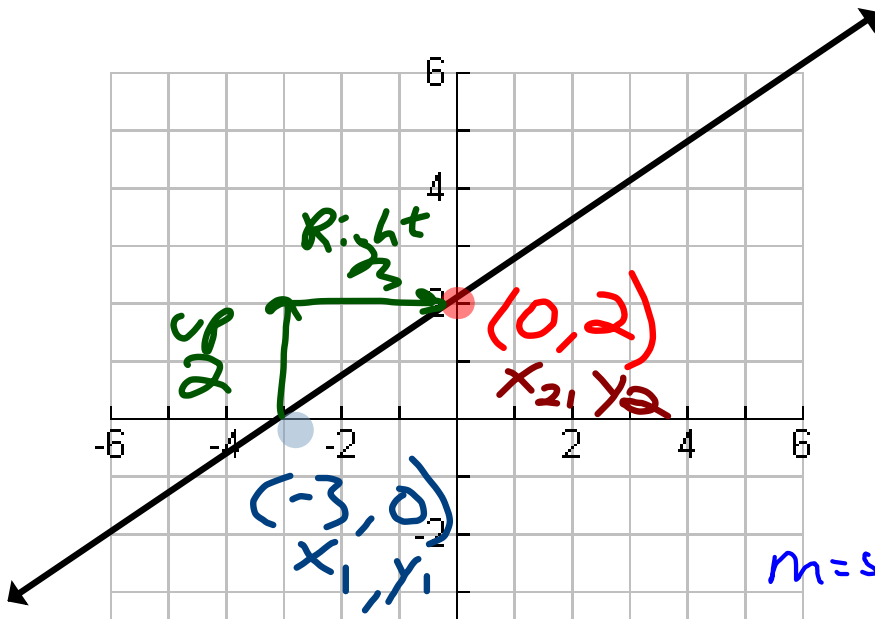
$$\text{y-int} = -8$$

$$m = \frac{5}{2}$$

$$y = mx + b$$

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

Write the equation of the line:



We know Slope Intercept

$$y = mx + b$$

We need to know...

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

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

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

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

Write the equation of the line:

$$y = mx + b$$

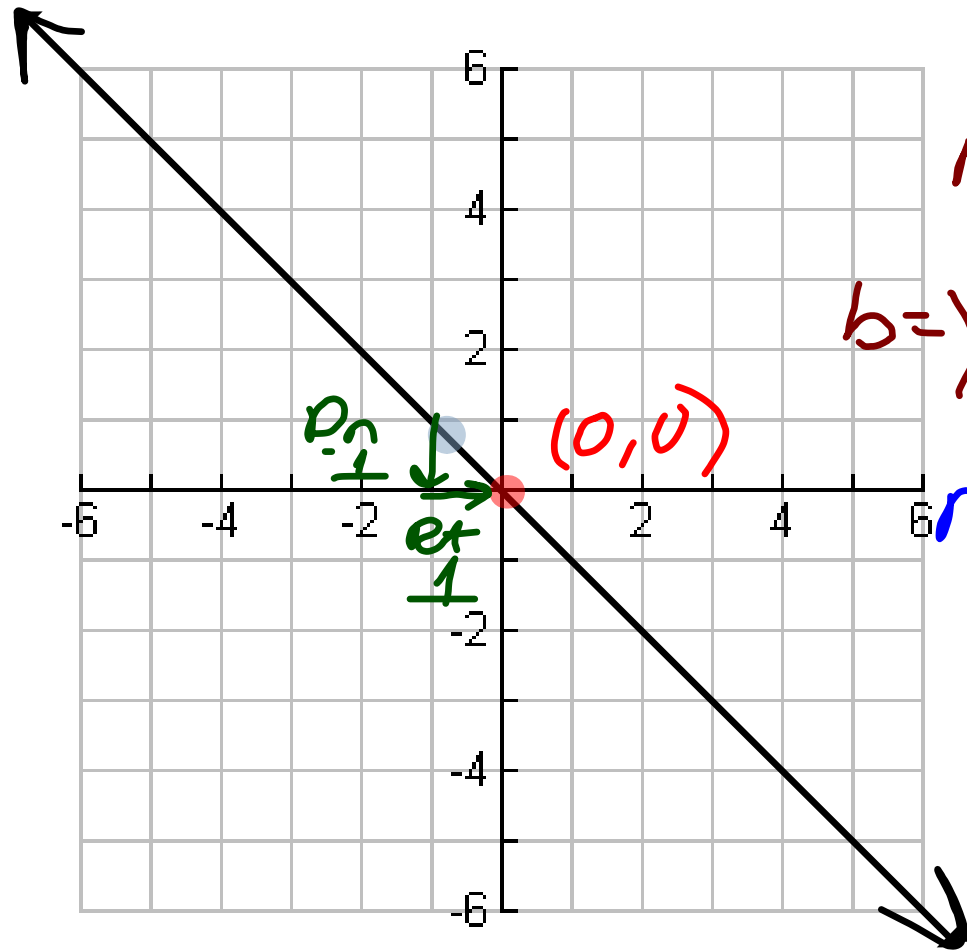
$$m = \text{slope} = \underline{\hspace{2cm}}$$

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

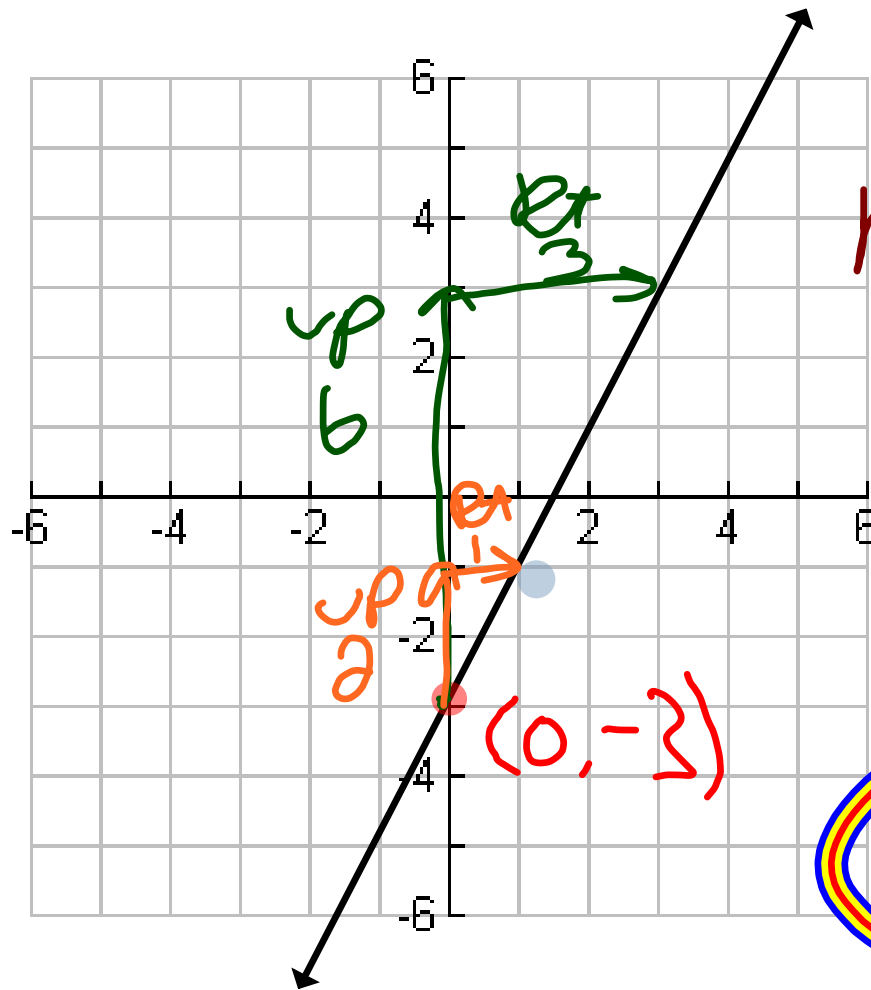
$$m = \frac{\text{rise}}{\text{run}} = \frac{-1}{1} = -1$$

$$y = -1x + 0$$

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



Write the equation of the line:



$$y = mx + b$$

$$m = \text{slope} = \frac{2}{1}$$

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

$$m = \frac{\text{rise}}{\text{run}} = \frac{6}{3} = 2$$

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

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.