

# Writing Linear Equations (notes)

Thursday, May 15, 2014

Slope-Intercept form:

$$y = m \cdot x + b$$

Write the equation of the lines in *slope-intercept* form with the given information

Ex: Slope = 3  
y-intercept = -4

$$y = m x + b$$
$$y = 3 x - 4$$

Ex: slope = 1  
y-intercept = 0

$$y = m x + b$$
$$y = 1 x + 0 \rightarrow \boxed{y = x}$$

Ex: slope = 0  
y-int = 6

$$y = m x + b$$
$$y = 0 x + 6 \rightarrow \boxed{y = 6}$$

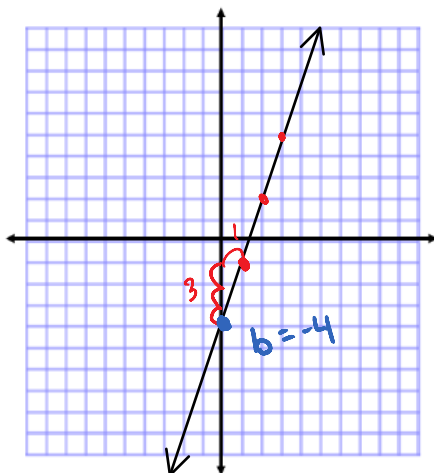
horizontal line  $\longleftrightarrow$

Ex: slope = undefined  
x-int = -4

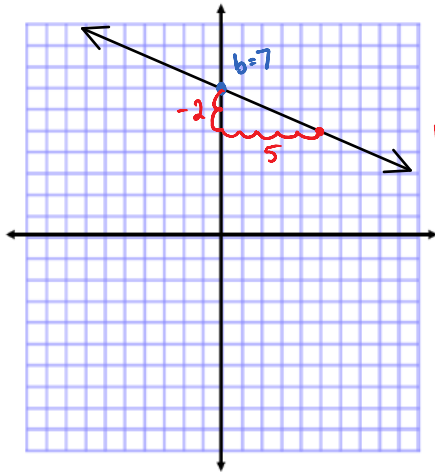
$$\boxed{x = -4}$$

vertical line  $\updownarrow$

Write the equation of the line with the given graph



$$y = m x + b$$
$$m = \frac{3}{1}$$
$$b = -4$$
$$y = \frac{3}{1} x - 4$$
$$\boxed{y = 3 x - 4}$$



$$y = mx + b$$
$$m = -\frac{2}{5}$$
$$b = 7$$

$$y = -\frac{2}{5}x + 7$$