

# 4.7. Graphing Lines with Slope.

Feb. 12, 2007

On Graph Paper!

## Slope-Intercept Form

$$y = mx + b$$

Slope  $\rightarrow$   $m$

$(0, b)$   
 $\rightarrow$   $b$   
y-int.

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

Recall:  $2x - y = -3$  → Standard form

$$\frac{-2x}{-1} = \frac{-2x-3}{-1}$$

Get y by itself

$$y = 2x + 3$$

$y = mx + b$

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

Give the Direction of the Slope

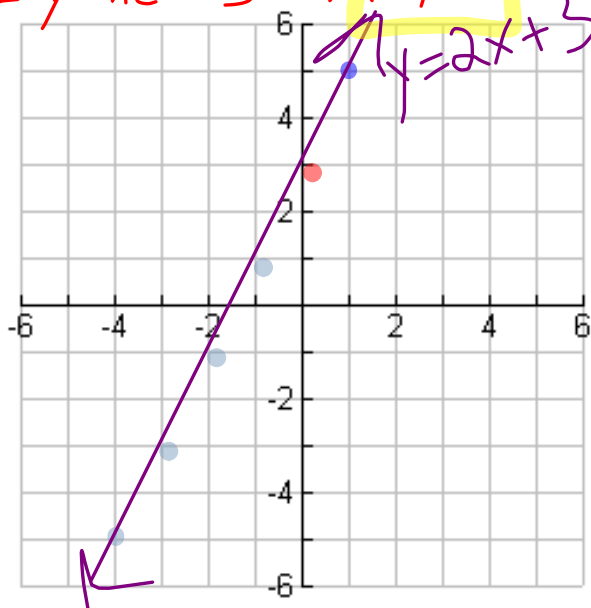
Identify the Slope

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

up 2  
Right 1

Identify the y-int.

$$b = y\text{-int} = 3 \Rightarrow (0, 3)$$



Graph:  $y = -3x + 2$

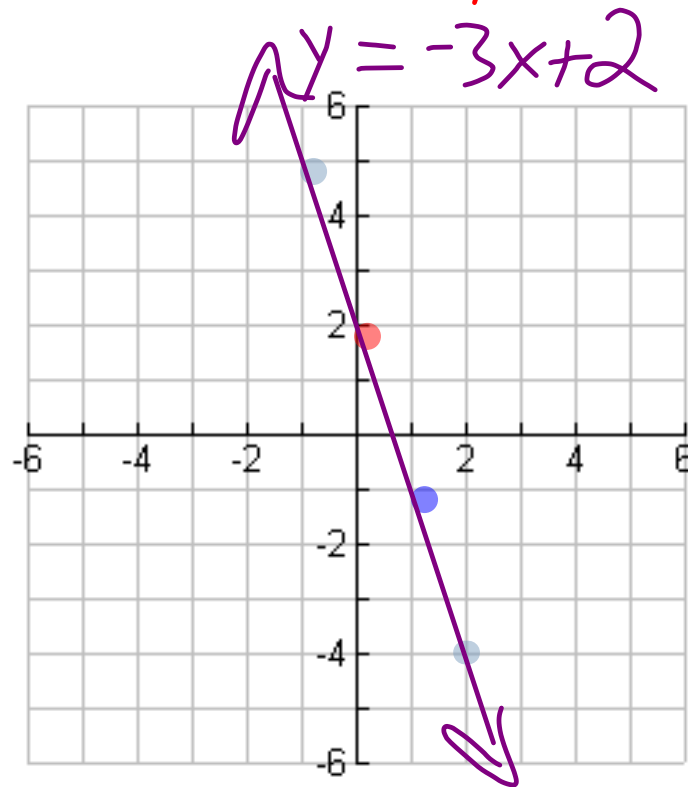
$y = mx + b$

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

$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \underline{\underline{-3}} = \frac{-3}{1}$

Down 3  
Right 1

$b = y\text{-int} = 2 \Rightarrow (0, 2)$



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

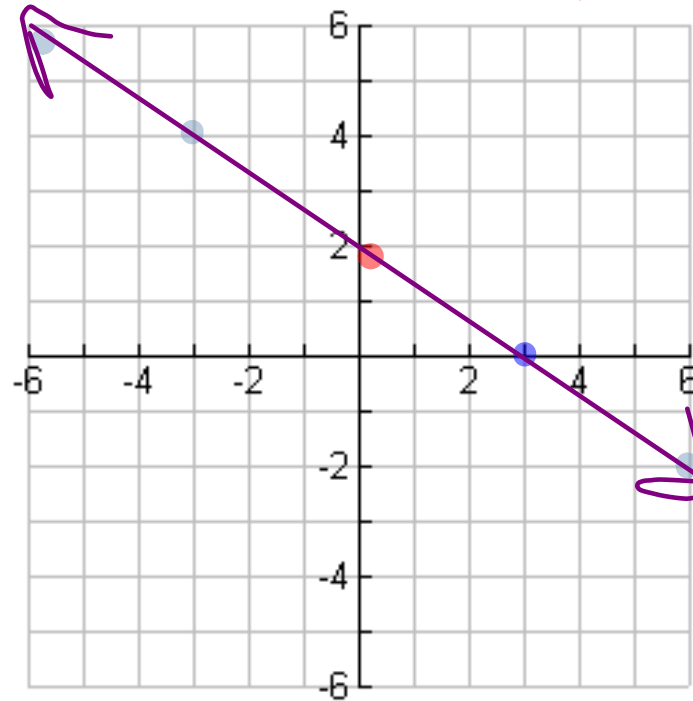
$y = mx + b$

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

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

Down 2  
Right 3

$b = y\text{-int.} = 2 \Rightarrow (0, 2)$



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

O.T.L.

① pg 246 : 1-10 (all)

11, 12, 14, 15, 35, 37, 39, 41

Same  
Coord. Plans.

## Chapter 4 Test Friday!