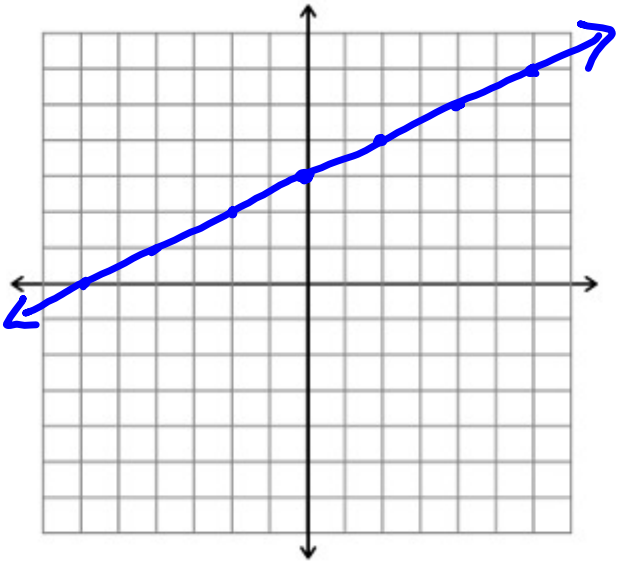
Graph the equation of the line with a slope of $\frac{1}{2}$ and y-intercept of 3.



Equation:_____

3-1: Graphing from Slope-Intercept Form

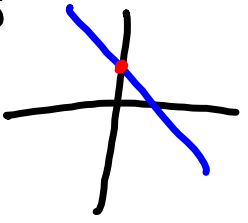
Objectives: I can graph a line from slope-intercept form

Vocab:

Slope : rate of Change of a line

$$\frac{\Delta y}{\Delta x} = \frac{\text{rise}}{\text{run}} = \frac{y-y}{x-x}$$

y-intercept : Where the line crosses the y-axis



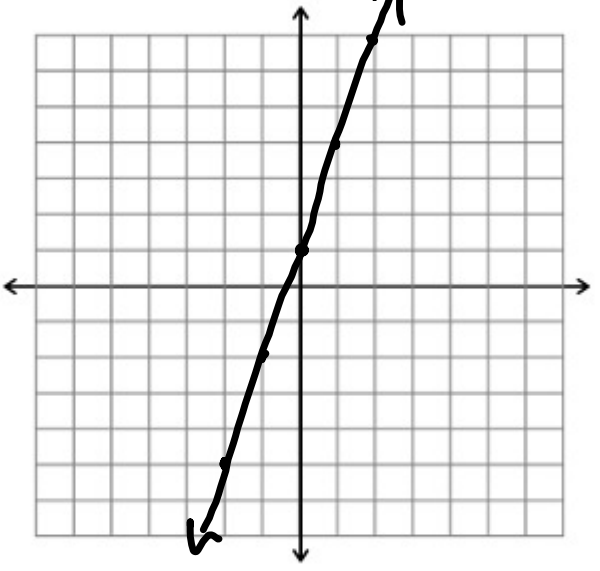
Label each part of the equation

$$y=mx+b$$

slope

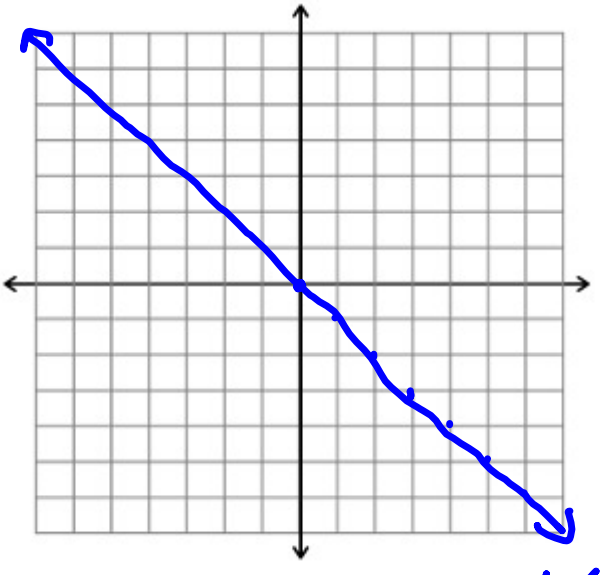
y-int

Graph the equation of the line with a slope of 3 and y-intercept of 1.



Equation:_____

Graph the equation of the line with a slope of -1 and y-intercept of 0.



Equation: $y = -1x + 0$ $y = -x$

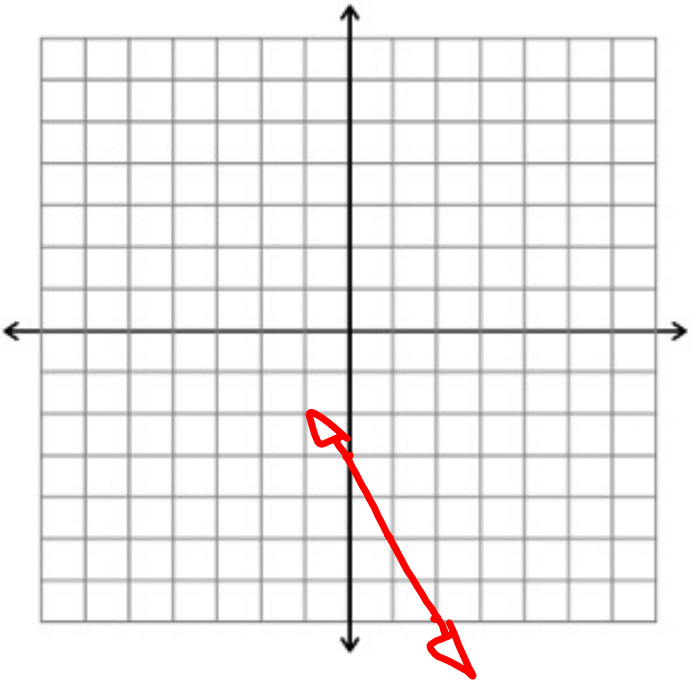
Graph the equation

$y = -2x - 3$

(hint: determine slope and y-int)

y-int = -3

$M = \frac{-2}{1}$



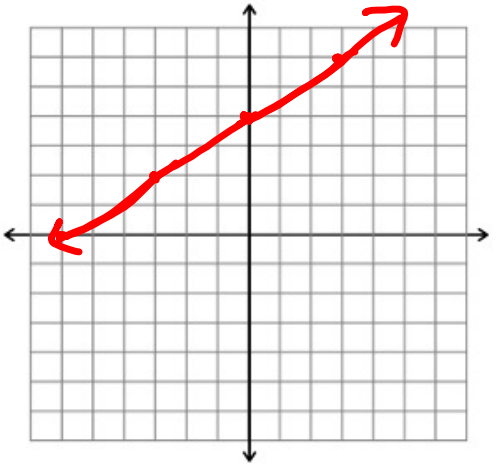
Graph the equation

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

(hint: determine m and b)

y-int = 4

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



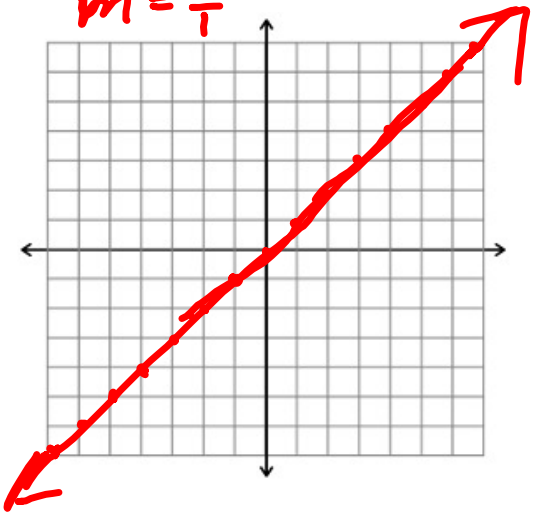
Notes Example:

Graph the equation

$y = x$

(hint: determine slope and y-int)

b = 0
m = 1/1

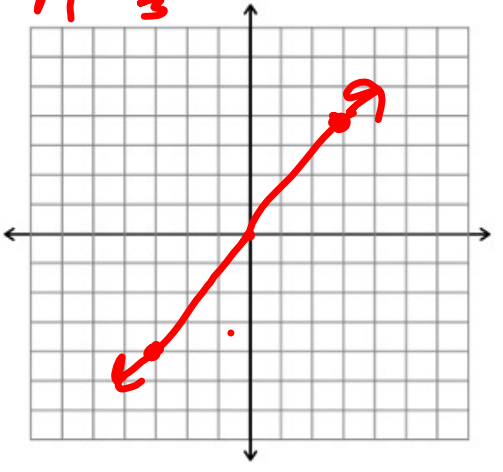


Graph the equation

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

(hint: determine slope and y-int)

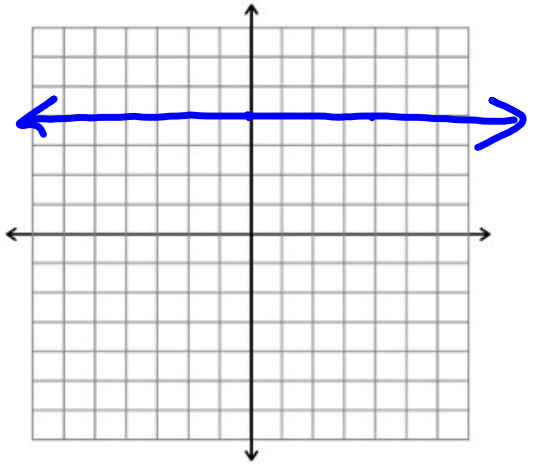
b = 0
m = 4/3



Notes Example:

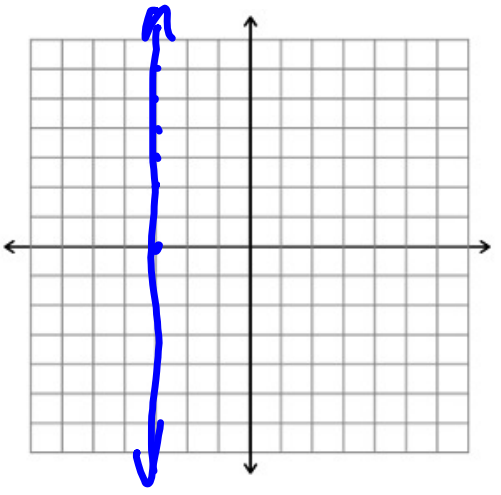
Graph the equation

$y=5$



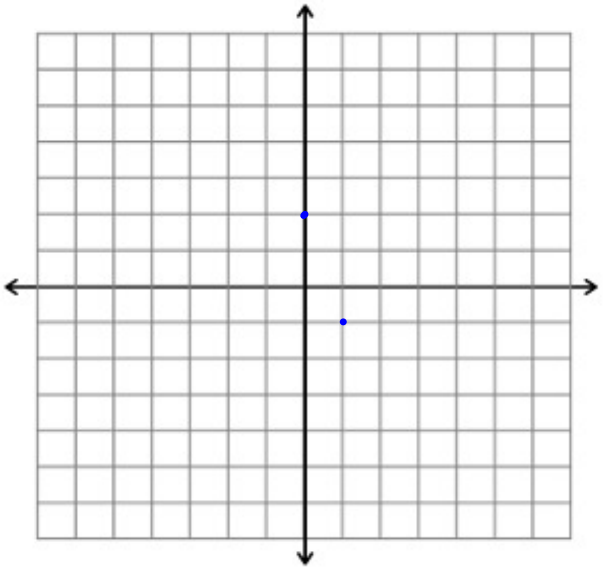
Graph the equation

$x=-3$



Graph the equation $3x + y = 2$

(hint: put in slope-intercept form before graphing)



$3x + y = 2$

$-3x \quad -3x$

$y = -3x + 2$