

NOTES:

Write the equation of the line given the slope and y-intercept. (Use:  $y = mx + b$ )

1) Slope =  $-\frac{5}{3}$ , y-intercept =  $-4$

$$y = mx + b$$

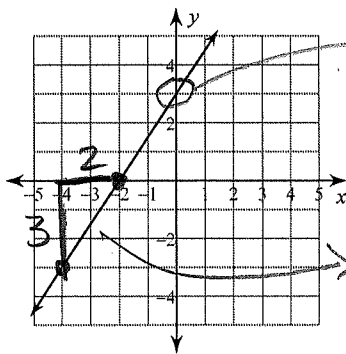
$$y = -\frac{5}{3}x + -4$$

or

$$y = -\frac{5}{3}x - 4$$

Write the equation of the line by calculating the slope and observing the y-intercept. (Use:  $y = mx + b$ )

2)



y-int = "b" = 3

slope triangle  
rise = 3  
run = 2

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

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

Write the equation of the line through the given point with the given slope. (Use:  $y - y_1 = m(x - x_1)$ )

3) through:  $(2, -1)$ , slope =  $-1$

$$y - y_1 = m(x - x_1)$$

$y - -1 = -1(x - 2)$

$$y + 1 = -1(x - 2)$$

Write the equation of the line through the given points. (Use:  $y - y_1 = m(x - x_1)$ ) (HINT: label your points and calculate the slope first).

4) through:  $(1, 1)$  and  $(3, -4)$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-4 - 1}{3 - 1} = -\frac{5}{2}$$

$$y - y_1 = m(x - x_1)$$

$$y - 1 = -\frac{5}{2}(x - 1)$$