Algebra I
Notes Section 4.1
Write Linear Equations in Slope-Intercept Form

Big Ideas
1. How to identify the slope and y-intercept when an equation is in slope- intercept form.
2. How to find the slope and y-intercept from a graph and then write an equation.
3. How to write a function in slope-intercept form when given values of f(x).

EXAMPLE 1   Write an equation of the line with the following slope and y-intercept.
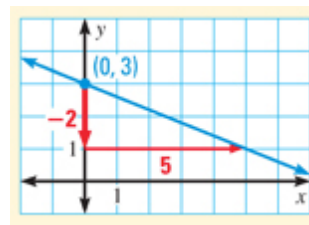
a) m = -2

   b = 5

_____

b) m = 4

   b = 0

_____

c) m = 0

   b = -3

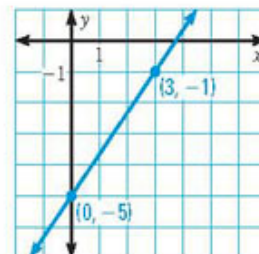_____

EXAMPLE 2   Write an equation that represents the line shown.

a)

(0, 3)
−2
5

b)

(3, −1)
(0, −5)

EXAMPLE 3   Write an equation for the linear function with the following values.

a) f(0)=5   and   f(4)=17   b) f(8)=4   and   f(0)=-2

EXAMPLE 4   A recording studio charges musicians an initial fee of $50 to record an album. Studio time costs an additional $35 per hour.

a) Write an equation that gives the total cot of an album as a function of studio time (in hours).

m: _____

b: _____

b) Find the total cost of recording an album that takes 10 hours of studio time.