

Name

4.2

# Use Linear Equations in Slope-Intercept Form

Alg I

I can write an equation of a line using points on the line.

Example 1:

1)  $(6, 3)$   $m=2$

$$\boxed{y=2x-9}$$

$$y = mx + b$$

$$3 = 2(6) + b$$

$$3 = 12 + b$$

$$\begin{array}{r} -12 \\ -12 \end{array}$$

$$b = -9$$

Ch. 3 Quiz

Example 2:

2)  $(1, -2)$   $(-5, 4)$

$$m = \frac{4 - (-2)}{-5 - 1} = \frac{6}{-6} = -1$$

$$y = mx + b$$

$$-2 = -1(1) + b$$

$$\begin{array}{r} -2 \\ +1 \\ +1 \end{array}$$

$$b = -1$$

$$\boxed{y = -x - 1}$$

Example 3:

3)  $f(-2) = 10$   $f(4) = -2$

$$m = \frac{-2 - 10}{4 - (-2)} = \frac{-12}{6} = -2$$

$(-2, 10)$

$(4, -2)$

$$y = mx + b$$

$$10 = -2(-2) + b$$

$$10 = 4 + b$$

$$\begin{array}{r} -4 \\ -4 \end{array}$$

$$b = 6$$

$$\boxed{y = -2x + 6}$$