$$m = \frac{y-y}{x-x}$$

4.4 Day 2 Date: _____

Find the missing coordinate when given the slope.

Ex. 1) (2, 3) and (x, 9); $m=\frac{3}{2}$.

x y x y

$$\frac{3}{2} = \frac{3-9}{2-x}$$

$$\frac{2-x}{1} \cdot \frac{3}{2} = \frac{-6}{1} \cdot \frac{2-x}{1}$$

$$6-3x = -12$$

$$-6 \quad -6$$

$$-3x = -18$$

$$\frac{-3x}{-3} = \frac{-18}{-3}$$

$$x = 6$$

Ex. 2) (0, y) and (-2, 1); m=-8

x y x y

$$\frac{-8}{1} = \frac{y-1}{0-(-2)}$$

$$\frac{2}{1} \cdot \frac{-8}{1} = \frac{y-1}{2} \cdot \frac{2}{1}$$

$$-16 = y-1$$

$$+1 \quad +1$$

$$y = -15$$

Ex. 3) (5, 4) and (-5, y); $m=\frac{3}{5}$.

Ex. 4) (x, 9) and (-1, 19); m=5

x y x y

$$\frac{5}{1} = \frac{9-19}{x-(-1)}$$

$$\frac{x+1}{1} \cdot \frac{5}{1} = \frac{-10}{x+1} \cdot \frac{x+1}{1}$$

$$5x+5 = -10$$

$$-5 \quad -5$$

$$\frac{5x}{5} = \frac{-15}{5}$$

$$x = -3$$

Homework: