

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

4.4 Day 2

Date: _____

Find the missing coordinate when given the slope.

Ex. 1) $\begin{matrix} x & y \\ (2, & 3) \end{matrix}$ and $\begin{matrix} x & y \\ (x, & 9) \end{matrix}$; $m = \frac{3}{2}$

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

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

$$6-3x = -12$$

$$\begin{array}{r} 6-3x = -12 \\ -6 \quad \quad -6 \\ \hline -3x = -18 \\ \quad \quad \quad -3 \quad \quad -3 \\ \hline \quad \quad \quad x = 6 \end{array}$$

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

Ex. 2) $\begin{matrix} x & y \\ (0, & y) \end{matrix}$ and $\begin{matrix} x & y \\ (-2, & 1) \end{matrix}$; $m = -8$

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

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

$$-16 = y-1$$

$$\begin{array}{r} -16 = y-1 \\ +1 \quad \quad +1 \\ \hline \quad \quad \quad y = -15 \end{array}$$

Ex. 4) $\begin{matrix} x & y \\ (x, & 9) \end{matrix}$ and $\begin{matrix} x & y \\ (-1, & 19) \end{matrix}$; $m = 5$

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

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

$$5x+5 = -10$$

$$\begin{array}{r} 5x+5 = -10 \\ -5 \quad \quad -5 \\ \hline 5x = -15 \\ \quad \quad \quad 5 \quad \quad 5 \\ \hline \quad \quad \quad x = -3 \end{array}$$

Homework: