

Name: _____

Finding the Slope

$$\text{Formula: slope } m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Example: $(4, 3)$ and $(8, 6)$

$$\begin{array}{l} \uparrow \quad \uparrow \\ x_1 \quad y_1 \end{array} \quad \begin{array}{l} \uparrow \quad \uparrow \\ x_2 \quad y_2 \end{array} \quad \begin{array}{l} \text{rise} = y_2 - y_1 \\ = 6 - 3 \\ = 3 \end{array} \quad \begin{array}{l} \text{run} = x_2 - x_1 \\ = 8 - 4 \\ = 4 \end{array} \quad m = \frac{3}{4}$$

Use the given points to find the slope of the line.

Ⓐ $(0, 0)$ and $(5, 2)$

$$\begin{array}{l} \text{rise} = \underline{\quad} - \underline{\quad} \\ = \underline{\quad} \end{array} \quad \begin{array}{l} \text{run} = \underline{\quad} - \underline{\quad} \\ = \underline{\quad} \end{array}$$
$$m = \underline{\quad}$$

Ⓑ $(1, 2)$ and $(-3, 4)$

$$\begin{array}{l} \text{rise} = \underline{\quad} - \underline{\quad} \\ = \underline{\quad} \end{array} \quad \begin{array}{l} \text{run} = \underline{\quad} - \underline{\quad} \\ = \underline{\quad} \end{array}$$
$$m = \underline{\quad}$$

Ⓒ $(5, 2)$ and $(6, 5)$

$$\begin{array}{l} \text{rise} = \underline{\quad} - \underline{\quad} \\ = \underline{\quad} \end{array} \quad \begin{array}{l} \text{run} = \underline{\quad} - \underline{\quad} \\ = \underline{\quad} \end{array}$$
$$m = \underline{\quad}$$

Finding the Slope

d) $(-4, 5)$ and $(1, 7)$

$$\begin{aligned} \text{rise} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} \text{run} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$m = \underline{\hspace{2cm}}$$

e) $(3, 4)$ and $(8, 6)$

$$\begin{aligned} \text{rise} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} \text{run} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$m = \underline{\hspace{2cm}}$$

f) $(2, 1)$ and $(5, 4)$

$$\begin{aligned} \text{rise} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} \text{run} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$m = \underline{\hspace{2cm}}$$

g) $(-3, 1)$ and $(4, 6)$

$$\begin{aligned} \text{rise} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} \text{run} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$m = \underline{\hspace{2cm}}$$

h) $(-1, 4)$ and $(6, 7)$

$$\begin{aligned} \text{rise} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} \text{run} &= \underline{\quad} - \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$m = \underline{\hspace{2cm}}$$

ANSWERS

Finding the Slope

Ⓐ (0,0) and (5,2)

$$\begin{aligned} \text{rise} &= \underline{2} - \underline{0} & \text{run} &= \underline{5} - \underline{0} \\ &= \underline{2} & &= \underline{5} \end{aligned}$$

$$m = \underline{\frac{2}{5}}$$

Ⓔ (3,4) and (8,6)

$$\begin{aligned} \text{rise} &= \underline{6} - \underline{4} & \text{run} &= \underline{8} - \underline{3} \\ &= \underline{2} & &= \underline{5} \end{aligned}$$

$$m = \underline{\frac{2}{5}}$$

Ⓑ (1,2) and (-3,4)

$$\begin{aligned} \text{rise} &= \underline{4} - \underline{2} & \text{run} &= \underline{-3} - \underline{1} \\ &= \underline{2} & &= \underline{-4} \end{aligned}$$

$$m = \underline{\frac{2}{-4} \text{ or } -\frac{2}{4}}$$

Ⓕ (2,1) and (5,4)

$$\begin{aligned} \text{rise} &= \underline{4} - \underline{1} & \text{run} &= \underline{5} - \underline{2} \\ &= \underline{3} & &= \underline{3} \end{aligned}$$

$$m = \underline{\frac{3}{3} \text{ or } 1}$$

Ⓒ (5,2) and (6,5)

$$\begin{aligned} \text{rise} &= \underline{5} - \underline{2} & \text{run} &= \underline{6} - \underline{5} \\ &= \underline{3} & &= \underline{1} \end{aligned}$$

$$m = \underline{\frac{3}{1} \text{ or } 3}$$

Ⓖ (-3,1) and (4,6)

$$\begin{aligned} \text{rise} &= \underline{6} - \underline{1} & \text{run} &= \underline{4} - \underline{-3} \\ &= \underline{5} & &= \underline{7} \end{aligned}$$

$$m = \underline{\frac{5}{7}}$$

Ⓓ (-4,5) and (1,7)

$$\begin{aligned} \text{rise} &= \underline{7} - \underline{5} & \text{run} &= \underline{1} - \underline{-4} \\ &= \underline{2} & &= \underline{5} \end{aligned}$$

$$m = \underline{\frac{2}{5}}$$

Ⓗ (-1,4) and (6,7)

$$\begin{aligned} \text{rise} &= \underline{7} - \underline{4} & \text{run} &= \underline{6} - \underline{-1} \\ &= \underline{3} & &= \underline{7} \end{aligned}$$

$$m = \underline{\frac{3}{7}}$$