Name: _____

## Finding the Slope

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

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

$\begin{matrix} \uparrow & \uparrow \\ x_1 & y_1 \end{matrix}$  $\begin{matrix} \uparrow & \uparrow \\ x_2 & y_2 \end{matrix}$

rise $= y_2 - y_1$

$= 6 - 3$

$= 3$

run $= x_2 - x_1$

$= 8 - 4$

$= 4$

$m = \dfrac{3}{4}$

---

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

(a) $(\,0\,,\,0\,)$ and $(\,5\,,\,2\,)$

rise = _____ – _____          run = _____ – _____

= _____                              = _____

$m =$ _____

---

(b) $(\,1\,,\,2\,)$ and $(\,-3\,,\,4\,)$

rise = _____ – _____          run = _____ – _____

= _____                              = _____

$m =$ _____

---

(c) $(\,5\,,\,2\,)$ and $(\,6\,,\,5\,)$

rise = _____ – _____          run = _____ – _____

= _____                              = _____

$m =$ _____

# Finding the Slope

(d) (-4,5) and (1,7)      **r i s e** = _____ – _____      **r u n** = _____ – _____

= _____                                              = _____

*m* = _____

---

(e) (3,4) and (8,6)      **r i s e** = _____ – _____      **r u n** = _____ – _____

= _____                                              = _____

*m* = _____

---

(f) (2,1) and (5,4)      **r i s e** = _____ – _____      **r u n** = _____ – _____

= _____                                              = _____

*m* = _____

---

(g) (-3,1) and (4,6)      **r i s e** = _____ – _____      **r u n** = _____ – _____

= _____                                              = _____

*m* = _____

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(h) (-1,4) and (6,7)      **r i s e** = _____ – _____      **r u n** = _____ – _____

= _____                                              = _____

*m* = _____

# ANSWERS

## Finding the Slope

**a** $(0,0)$ and $(5,2)$

rise = $\underline{2}$ – $\underline{0}$     run = $\underline{5}$ – $\underline{0}$

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

$m = \dfrac{2}{5}$

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

rise = $\underline{6}$ – $\underline{4}$     run = $\underline{8}$ – $\underline{3}$

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

$m = \dfrac{2}{5}$

**b** $(1,2)$ and $(-3,4)$

rise = $\underline{4}$ – $\underline{2}$     run = $\underline{-3}$ – $\underline{1}$

= $\underline{2}$                 = $\underline{-4}$

$m = \dfrac{2}{-4}$ or $-\dfrac{2}{4}$

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

rise = $\underline{4}$ – $\underline{1}$     run = $\underline{5}$ – $\underline{2}$

= $\underline{3}$                 = $\underline{3}$

$m = \dfrac{3}{3}$ or $1$

**c** $(5,2)$ and $(6,5)$

rise = $\underline{5}$ – $\underline{2}$     run = $\underline{6}$ – $\underline{5}$

= $\underline{3}$                 = $\underline{1}$

$m = \dfrac{3}{1}$ or $3$

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

rise = $\underline{6}$ – $\underline{1}$     run = $\underline{4}$ – $\underline{-3}$

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

$m = \dfrac{5}{7}$

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

rise = $\underline{7}$ – $\underline{5}$     run = $\underline{1}$ – $\underline{-4}$

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

$m = \dfrac{2}{5}$

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

rise = $\underline{7}$ – $\underline{4}$     run = $\underline{6}$ – $\underline{-1}$

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

$m = \dfrac{3}{7}$

KH