

Linear equations

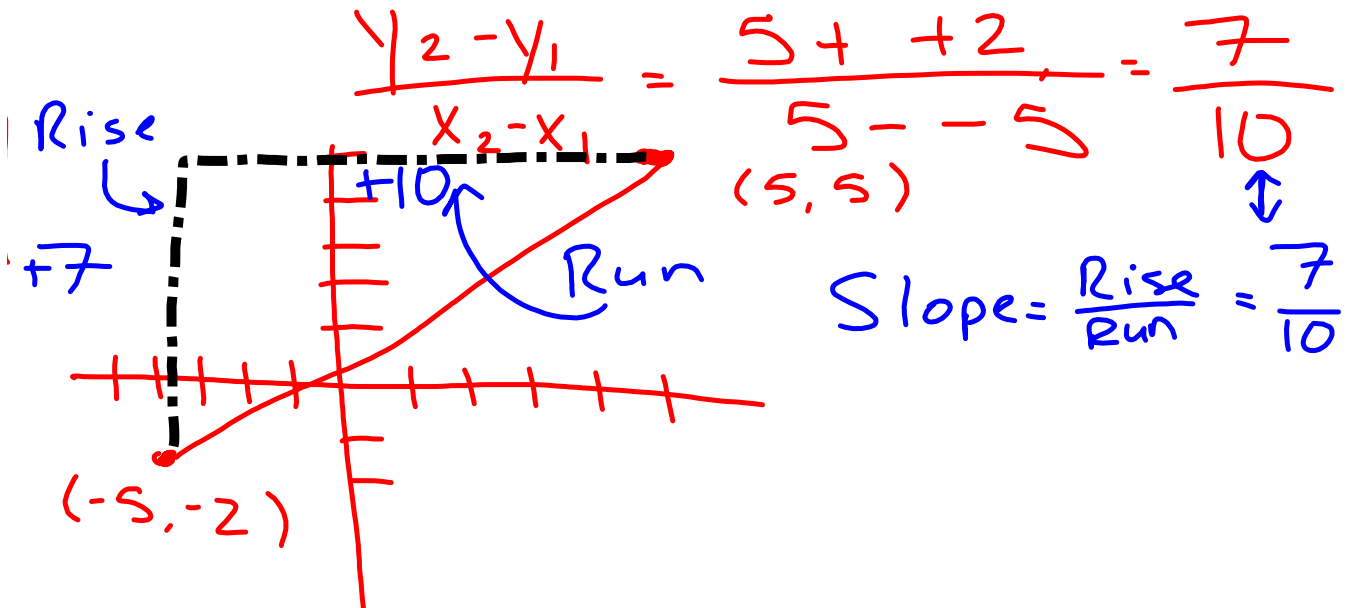
Memory Box

- (x, y)
- Slope $\frac{y_2 - y_1}{x_2 - x_1}$
- $\frac{\text{Rise}}{\text{Run}}$
- x, y Intercepts.

* Slope Δ

① $(-5, -2)$ and $(5, 5)$
 x_1, y_1 x_2, y_2

$$\text{Slope} = \frac{\text{Rise}}{\text{Run}} = \frac{y_2 - y_1}{x_2 - x_1}$$



⑩ $(3, 5)$ and $(-4, 4)$
 x_1, y_1 x_2, y_2

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 5}{-4 - 3} = \frac{-1}{-7} = \frac{1}{7}$$

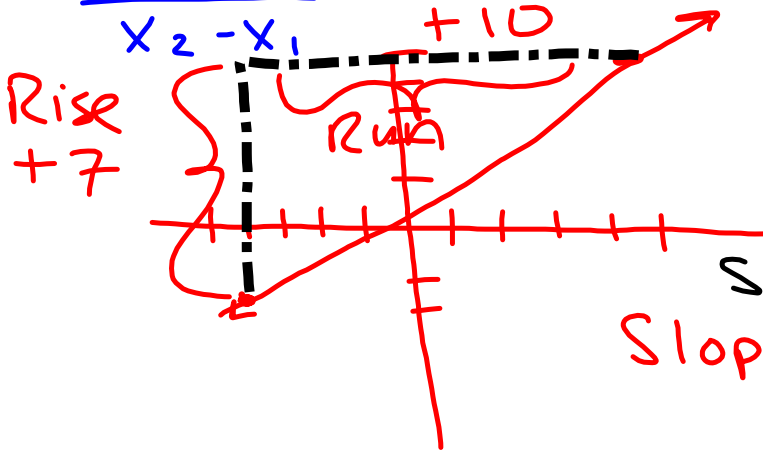
$\frac{\text{Rise}}{\text{Run}} = \frac{1}{7}$

Slope Worksheet

① $(-5, -2)$ $(5, 5)$
 x_1 y_1 x_2 y_2

$$\frac{y_2 - y_1}{x_2 - x_1} = \text{Slope}$$

$$\frac{5 - -2}{5 - -5} =$$



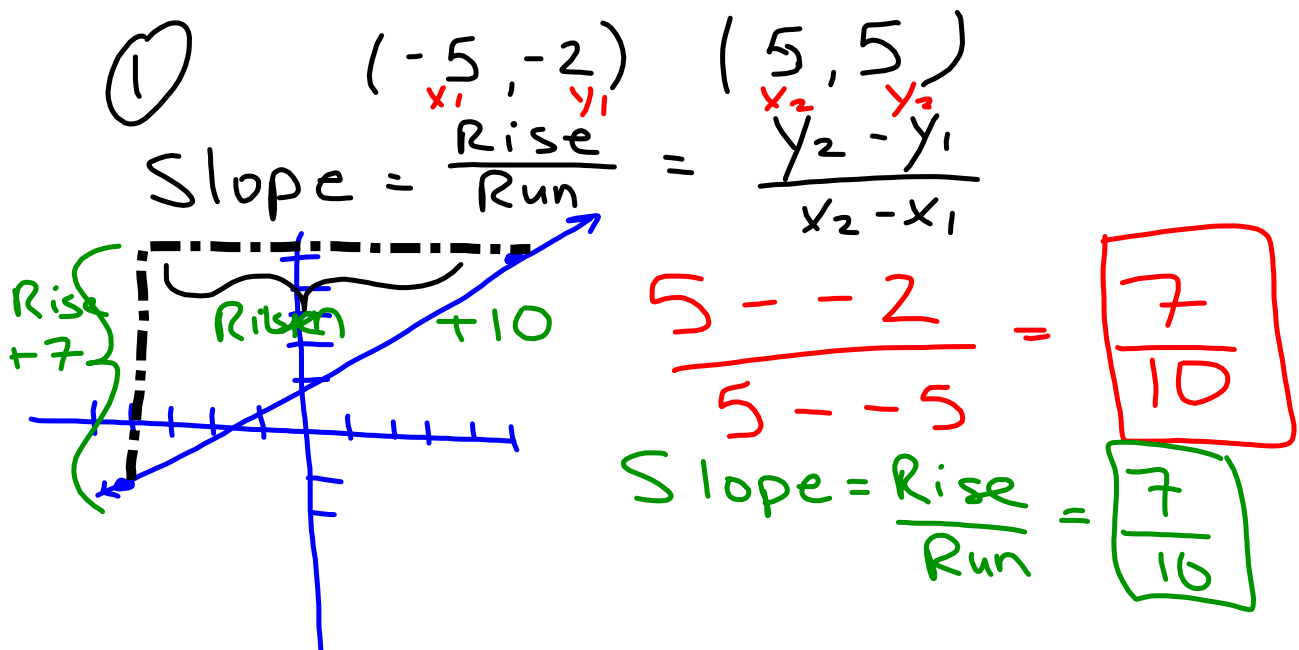
Slope = $\frac{\text{Rise}}{\text{Run}}$
Slope = $\frac{7}{10}$

$\frac{7}{10}$

② $(3, -5)$ $(-3, 5)$
 x_1, y_1 x_2, y_2

Slope $\frac{y_2 - y_1}{x_2 - x_1}$

$$\frac{5 - (-5)}{-3 - 3} = \frac{10}{-6} = \boxed{\frac{5}{-3}}$$



$$\begin{array}{ccc} \textcircled{2} & (3, -5) & (-3, 5) \\ & x_1 \quad y_1 & x_2 \quad y_2 \end{array}$$
$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - (-5)}{-3 - 3} = \frac{10}{-6} = \boxed{\frac{5}{-3}}$$

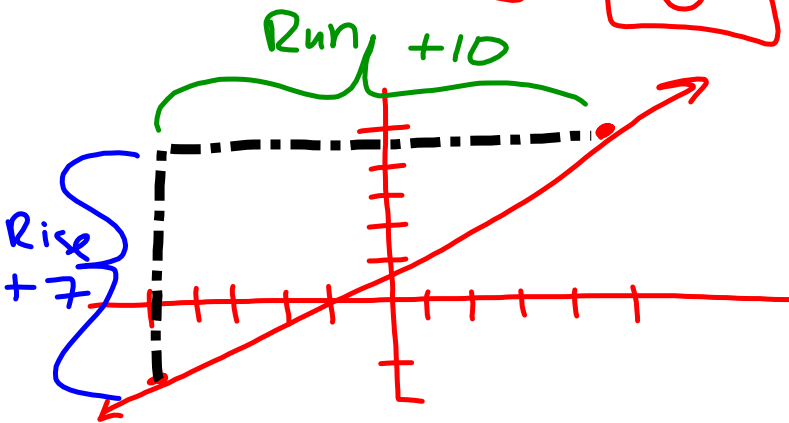
$$\textcircled{1} \quad \begin{array}{cc} (-5, -2) & (5, 5) \\ x_1 \ y_1 & x_2 \ y_2 \end{array}$$

$$\text{Slope} = \frac{\text{Rise}}{\text{Run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{5 - (-2)}{5 - (-5)} = \frac{7}{10}$$

$$\text{Slope} = \frac{\text{Rise}}{\text{Run}}$$

$$\frac{7}{10}$$



$$\textcircled{2} \quad \begin{array}{cc} (3, -5) & (-3, 5) \\ x_1 \ y_1 & x_2 \ y_2 \end{array}$$

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - (-5)}{-3 - 3} = \frac{10}{-6}$$