Slope Formula

$y = mx + b$ ← slope

$\frac{\Delta y}{\Delta x} = \frac{y_1 - y_2}{x_1 - x_2} = \text{slope}$

Example

$(3, 5)$

$(6, 10)$

x_1, y_1

Be Consistent!

$\frac{10-5}{6-3} = \boxed{\frac{5}{3}}$ $\left\{ \frac{5-10}{3-6} = \frac{-5}{-3} = \boxed{\frac{5}{3}} \right.$

More Slope

Read graph L → R

uphill → positive $\frac{5}{6}$

downhill → negative $-\frac{5}{6}$

$\boxed{\Delta y = 0}$ $m = \frac{0}{6} = 0$

no rise
no slope
no "hill"

$\boxed{\Delta x = 0}$ $m = \frac{5}{0} =$ undefined slope

no run
cliff