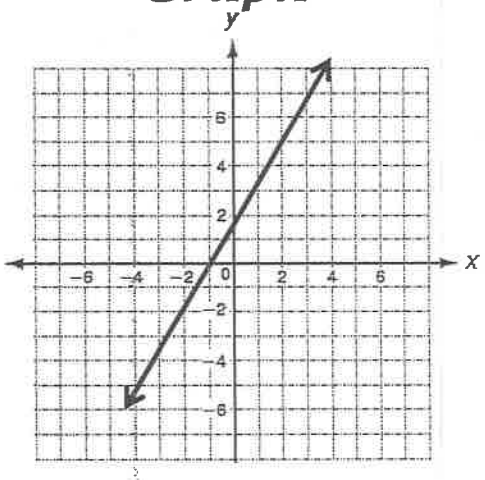
KEY

I can find SLOPE (M) from...

Graph



Table

x	$f(x)$ y
-1	-2
2	4
4	8
5	10
8	16

Ordered Pairs

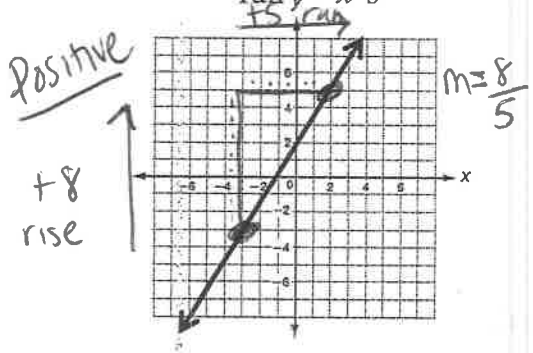
(2, -3)
(5, -6)

Equation

$y = -2x + 5$

SLOPE (M)

$$M = \frac{\text{rise}}{\text{run}} = \frac{y's}{x's}$$



1. Pick 2 pretty points
2. Draw right triangle to connect points
3. Count rise ↕ & run ↔ and write $\frac{\text{rise}}{\text{run}}$

** ***Check your slope!*** **

Positive Slope

Negative Slope

SLOPE (M)

$$M = \frac{\Delta y}{\Delta x} = \frac{\text{change in y}}{\text{change in x}}$$

RATIO – Division!

x	y
-1	-2
2	4
4	8
5	10
8	16

+3, +2, +1, +3 / +6, +4, +2, +6

$\frac{6}{3} = 2$

$\frac{4}{2} = 2$

$\frac{2}{1} = 2$

$\frac{6}{3} = 2$

$m = 2$

SLOPE (M)

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

*Remember, y goes **first** (on top)!*

*This is **opposite** of graphing ordered pairs, where you go x first (x, y).*

Ex: Find the slope of the line that passes through the points (2, -3) (5, -6)

x_1, y_1, x_2, y_2

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{-6-(-3)}{5-2} = \frac{-3}{3} = -1$

$m = -1$

SLOPE (M)

Slope-Intercept Form

$$y = Mx + B$$

Equation of a Line!

m is slope!

may have to re-write equation so it is in $y = mx + b$ form

Ex: Find the slope:

$y = -2x + 5$
$y = mx + b$ $m = -2$

$y = \frac{1}{4}x + 3$
$y = mx + b$ $m = \frac{1}{4}$

$y = x$
$y = mx + b$

$m = 1$

Rate of Change **RATIO** **Steepness of a Line**