

Rate of Change/Slope
measures the steepness of a line
4 ways to find

1. Table

x	y
2	4
0	2
-2	0
-4	-2

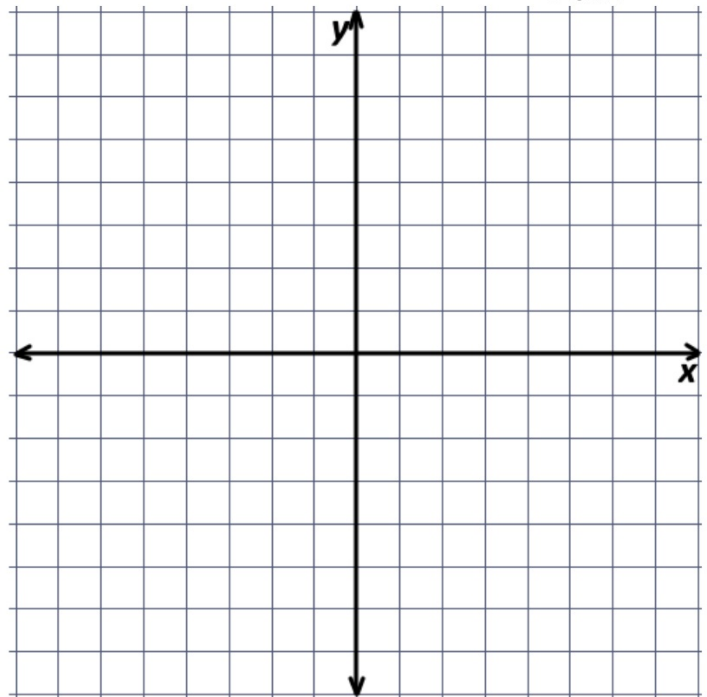
$$\frac{\Delta y's}{\Delta x's}$$

2. Equation
 $y = mx + b$

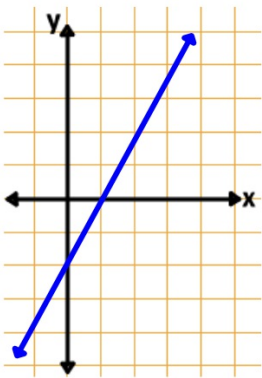
4. Formula

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

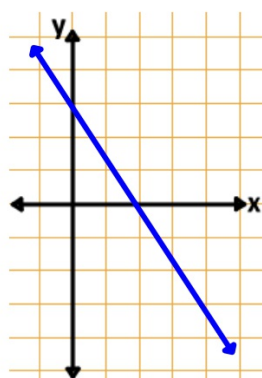
3. Graph $\frac{\text{rise}}{\text{run}}$



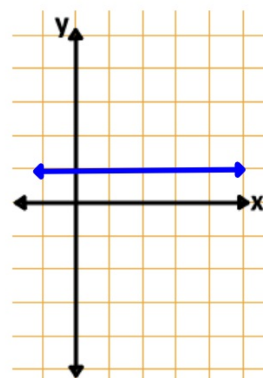
4 types of slope



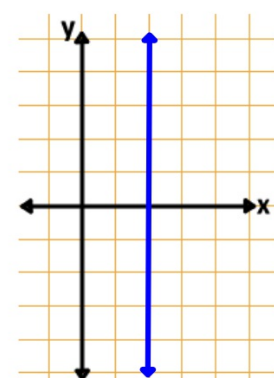
positive



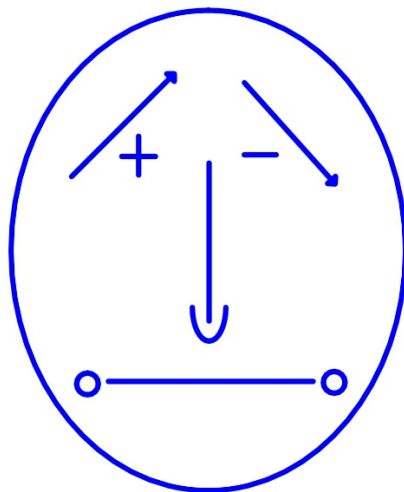
negative



zero



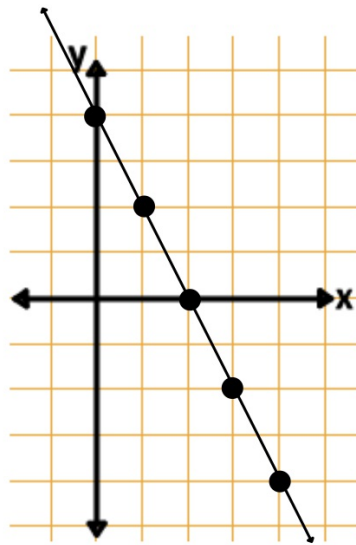
undefined



Find the slope of each linear function.

1) $y = -4x - 5$

2)



3)

x	y
5	20
7	16
9	12
11	8

4) $(2, -5)$ $(-3, 5)$

6) A climber is on a hike. After 2 hours he is at an altitude of 400 ft. After 6 hours, he is at an altitude of 700 feet. What is rate of change in feet/hour?

7) Michael started a saving account with \$300. After 4 weeks, he had \$400. What is the rate of change in savings per week?