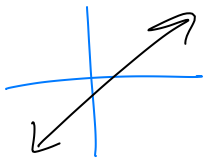
positive

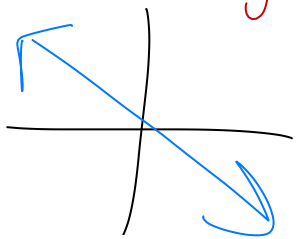
x_1 y_1
(1, 7)
x_2 y_2
(2, 10)



$\frac{10-7}{2-1} = \boxed{3}$

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

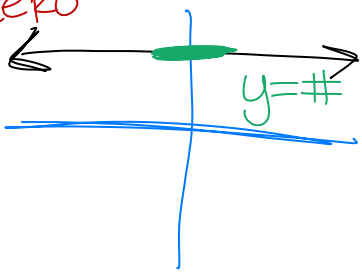
negative



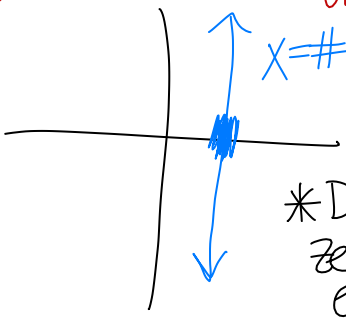
Slope
m

Zero

$m = 0$



undefined



* Divide by ZERO

ERROR

undefined

Compare the two functions below. Determine which function has a "greater rate of change."

Function 1

x	y
1	2
2	4
3	6
4	8

+2, +2, +2

$m = 2$

Function 2

$y = mx + b$

$y = 3x - 4$

$m = 3$

greater Rate of Change (slope)

Function 1

(x_1, y_1) and (x_2, y_2)

(3, 8) and (4, 2)

Higher slope $\frac{2-8}{4-3} = -6$

Function 2

$y = -3x + 7$

$m = -3$

Function 1

x	y
2	0
4	6
6	12
8	18

+2, +2, +2 / +6, +6, +6

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

Function 2

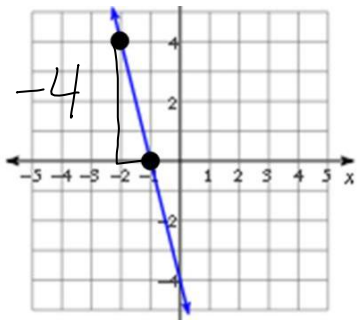
$y = -10x - 4$

Steeper

$m = -10$

Function 1

(4, 0) and (2, 10)

Steeper $\frac{10-0}{2-4} = -5$

Function 2