

Sec. 5.1 Rate of Change and Slope

Vocabulary

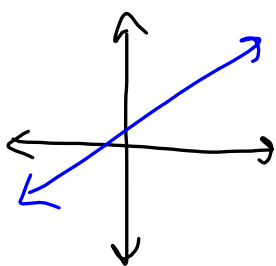
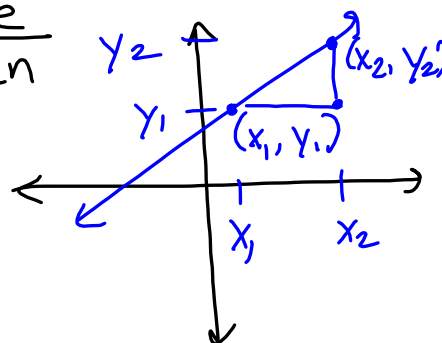
- rate of change: shows the relationship between two quantities

$$\text{rate of change} = \frac{\text{change in the dependent variable (y)}}{\text{change in the independent variable (x)}}$$

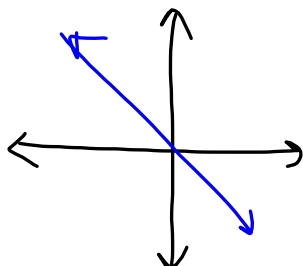
- slope: $\frac{\text{vertical change}}{\text{horizontal change}} = \frac{\text{rise}}{\text{run}}$

$$(x_1, y_1) \quad (x_2, y_2)$$

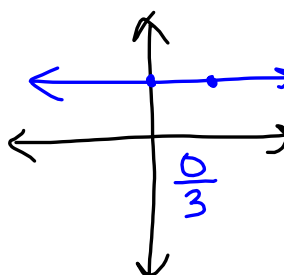
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$



slope: positive

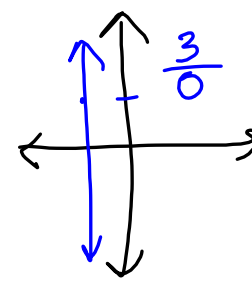


negative



0

Horizontal
0 = slope
 $y = b$



undefined

Vertical
Undefined slope
 $x = a$