

Function Terminology

Independent Variable – Is located on the x-axis and is the variable that causes the change to happen.

Dependent Variable – Is located on the y-axis and is the variable that is being changed.

Domain – The complete set of possible x-values.

- Where the function exists
- Where the function is defined
- Where the x-value has a y-value (a point exists)

Range – The set of possible y-values.

Extrema – The relative maximum and minimum points of a graph.

- **Maximum**
 - The highest point on a graph.
 - The point with the largest y-value
- **Minimum**
 - The lowest point on a graph
 - The point with the smallest y-value

x-intercept – The point where the graph intersects the x-axis.

$$(x, 0)$$

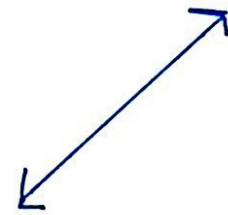
y-intercept – The point where the graph intersects the y-axis.

$$(0, y)$$

Slope – The change in y divided by the change in x. (rise/run)

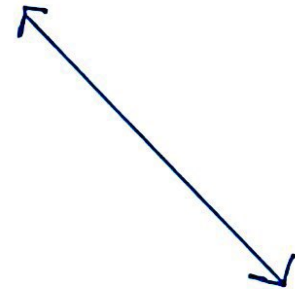
▪ **Increasing**

- The graph goes up from left to right.
- Positive slope



▪ **Decreasing**

- The graph goes down from left to right.
- Negative slope



▪ **Zero Slope**

- The graph is flat from left to right.
- Neither increasing nor decreasing.



▪ **Steepness**

- More Steep – Changing at a faster rate.
- Less Steep – Changing at a slower rate.
- **No Steepness** – No change.

