

**Need To Know Checklist**  
Foundations of Math and Pre-Calculus 10  
Unit 3: Relations and Functions  
Textbook: Ch 5 (pg 256-329)

Vocabulary

**Relation:** a rule that associates the elements of one set with the elements of another set

**Arrow Diagram:** used to represent a relation; the ovals show the sets, and the arrows associate elements of the first set with elements of the second set.

**Function:** A function is a special relationship between values: Each of its input values gives back exactly one output value. It is often written as " $f(x)$ " where  $x$  is the value you give it.

**Domain:** The domain of a function is the set of all possible input values (often the " $x$ " variable), which produce a valid output from a particular function. The set of first elements of a relation.

**Range:** The range is the set of all possible output values (usually the variable  $y$ , or sometimes expressed as  $f(x)$ ), which result from using a particular function. The set of second elements associated with the first elements (domain) of a relation.

**Function Notation:** Notation used to show the independent variable in a function; for example,  $f(x)$  means that the value of the function  $f$  depends on the value of the independent variable,  $x$ .

**Rate of Change:** the change in one quantity with respect to the change in another quantity (slope).

**Linear Relation:** a relation that has a straight-line graph

**Linear Function:** a linear relation whose graph is not a vertical line

**Vertical Intercept (also known as y-intercept):** the  $y$  co-ordinate of a point where a graph intersects the  $y$ -axis.

**Horizontal Intercept (also known as x-intercept):** the  $x$  co-ordinate of a point where a graph intersects the  $x$ -axis

## Checklist

- I can represent relations in different ways such as a table, an arrow diagram, a diagram or a bar graph.
- I can identify a relation from a representation such as a diagram.
- I can identify functions.
- I understand the difference between domain and range.
- I can list the elements of the domain and range
- I can use function notation to determine values.
- I can interpret a graph.
- I can sketch a graph for a given situation.
- I understand how to identify whether a graph represents a function.
- I can determine the domain and range of the graph of a function
- I understand how to use the vertical line test on graphs to identify functions.
- I can determine whether a table of values represents a linear relation.
- I can determine whether an equation represents a linear relation
- I can identify a linear relation.
- I understand how to determine the rate of change of a linear relation.
- I can determine intercepts, domain and range of the graphs of linear functions