### Chapter 2

* is an absolute value function that has domain and range
* The graph is comprised by two functions, and it’s defined as , . The graph is symmetric about the y-axis.
* Every input in an absolute value returns an output that is non-negative.

### Chapter 3

* This chapter introduces the graphical characteristics of a function:
  + x-intercepts and y-intercepts
  + Domain and range
  + Intervals of decrease and intervals of increase
  + even/odd symmetry
  + End behaviour
  + Continuity and discontinuity
* The students must be able to distinguish these characteristics and list all these characteristics of a given function.

Chapter 4

* transformations on a function ,
  + The value of determines whether there’s a reflection in the x-axis and whether the graph is being vertically stretched or compressed.
    - If , the graph is being vertically stretched by the factor
    - If , the graph is reflected in the x-axis
    - If , the graph is being vertically compressed by the factor
  + The value of determines whether there’s a reflection on the y-axis, and whether the graph is being horizontally stretched or compressed.
    - If , the graph is compressed horizontally by the factor
    - If , the graph is reflected in the y-axis
    - If , the graph is stretched horizontally by the factor
  + The value of determines whether there is a horizontal translation.
    - If , there’s a translation to the right
    - If , there’s a translation to the left
  + The value of determines whether there is a vertical translation.
    - If the graph is translated up
    - If the graph is translated down
* Use the mapping rule to find the point on the graph with transformation.

### Chapter 5

* The inverse function of is
* To find the inverse function, write the function equation using instead of , interchange and , and solve for
* If represents a point on the graph, then represents the point on the graph of the corresponding
* The domain of the function is the range of its inverse, and the range of the function is the domain of its inverse.

### Chapter 6

* Piecewise function: the function that is defined by two or more pieces.
* Since each of a piecewise function is defined for the specific interval in the domain of the function, the piecewise function can be continuous or not.

### Chapter 7

* Two functions can be added, subtracted, or multiplied algebraically by adding, subtracting, or multiplying the expressions, which then create a new function.