**Ch. 1 Functions from a Calculus Perspective**

* 1. **Functions**

1. I can describe subsets of real numbers.
2. I can write sets numbers in set-builder notation and interval notation.
3. I can identify and evaluate functions and state their domains.
   1. **Analyzing Graphs of Functions and Relations**
4. I can use graphs of functions to estimate function values and find domains, ranges, y-intercepts, and zeros of functions.
5. I can explore symmetries of graphs, and identify even and odd functions.
   1. **Continuity, End Behavior, and Limits**
6. I can use the limits to determine the continuity of a function, and apply the Intermediate Value Theorem to continuous functions.
7. I can approximate zeroes by looking at tables and graphs.
8. I can use limits to describe end behavior of functions.
   1. **Extrema and Average Rates of Change**
9. I can determine intervals on which functions are increasing, constant, or decreasing, and determine maxima and minima functions.
10. I can identify all relative and absolute extrema of a function by hand and using a calculator.
11. I can determine the average rate or change of a function.
    1. **Parent Functions and Transformations**
12. I can identify, graph, and describe parent functions.
13. I can identify, describe, and graph transformations of parent functions**.** 
    1. **Function Operations and Composition of Functions**
14. I can perform operations with functions.
15. I can find compositions of functions, with or without restricted domains.
16. I can decompose a composite function.
    1. **Inverse Relations and Functions**
17. I can use the Horizontal Line Test to determine inverse functions.
18. I can find inverse functions algebraically and graphically.
19. I can verify if functions are inverses of each other.