AP Calculus – Summer Assignments 2, 3, 4

Watch each of the videos listed below. Take notes as you watch, make a list of the vocabulary words and know the definitions. Each of the Concepts to Master is a concept that has been covered in Algebra 2 or Pre-Calculus.

Assignment 2

https://www.youtube.com/watch?v=2-nJz8_scyU&t=137s

Concepts to Master
- Definition of a function
- Function value
- Domain
- Range
- Independent variable
- Dependent variable
- Implied domain (Be able to determine from equation and graph)
- Piecewise defined function
- Symmetry (even and odd functions)
- Increasing
- Decreasing

Assignment 3

https://www.youtube.com/watch?v=vd4P1Gg7U2k&t=470s

Concepts to Master
- Characteristics of the modeling functions (Make sure that you are able to recognize each of the following from their respective equations as well as from the function's graphical representation.)
  - Linear
  - Quadratic
  - Cubic
  - Polynomial
  - Power
  - Root
  - Rational
  - Algebraic
  - Trigonometric
  - Exponential
  - Logarithmic
- Fit a math model to a real-world phenomenon
- Interpolation and Extrapolation

Assignment 4

https://www.youtube.com/watch?v=n_RHIecbw-Y&t=82s

Concepts of Master
- Translations and stretching of functions
- Reflection
- Combining functions