

Precalculus

Functions

The list below contains the specific *learning targets* for the unit on functions. Before the unit test, you should be able to place a check next to each statement as being true.

- I can determine domain and range for relations and functions.
- I can determine the following characteristics in the graphs of common functions:
 - x - and y -intercepts
 - horizontal and vertical asymptotes
 - relative and absolute extrema
 - increasing and decreasing behavior
 - concavity
 - end behavior
- I can evaluate and graph piecewise functions.
- I can algebraically and graphically determine if a function is even, odd, or neither.
- I can use transformations to graph new functions from common parent functions.
- I can use compositions to verify two functions are inverses of each other.
- I can find the inverse of a function.

Textbook Assignments

The exercises below are from *Precalculus: A Graphing Approach* by Hungerford, Jovell, and Mayberry. These specific problems are the bare minimum that should be completed after each lesson, but you are encouraged to attempt more if needed.

- 3.1 Function Notation **pg 148: 9-33 (mult. of 3)**
- 3.1 Domain of Functions **pg 148: 39-42, 50-62**
- 3.2 Graphs of Functions **pg 160: 1-14, 57, 58**
- 3.2 Increasing and Decreasing Behavior / Concavity **pg 160: 17, 19, 24, 25, 36, 39**
- 3.2 Piecewise Functions **pg 160: 41-50**
- 3.4 Transformations **pg 182: 1-9, 22, 23, 25, 26, 31, 32, 56**
- 3.4a Even and Odd Functions **pg 189: 25-38**
- 3.5 Composition **pg 196: 10, 11, 14, 21, 22, 29, 31-36, 39, 42**
- 3.6 Even and Odd Functions **pg 212: 9-27 (mult. of 3), 47, 50**

Assignments are subject to change in class.