Math 121 Student Learning Outcomes

By the end of the course, students will be able to

A. Understand the concept of a function
1. Apply the definition of a function
2. Identify domain and range. Interpret in context when appropriate.
3. Use function notation to evaluate functions.

B. Build New Functions from Existing Functions
1. Use graphing transformations
2. Use function arithmetic
3. Find inverse functions

C. Build and Analyze Graphs
1. Understand the relationship between a function's equation, table and graph.
2. Identify or sketch the following key features of a graph: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; slope; vertex; and end behavior.
3. Create graphs using key features.
4. Write the equation of a function or circle given its graph based on the key features shown. (reverse of above outcome)
5. Interpret key features of functions in context.

D. Apply Algebraic Techniques
1. Evaluate numeric expressions in exact form and find decimal approximations for irrational numbers.
2. Solve equations and inequalities
3. Simplify algebraic expressions to analyze functions and graphs.