MAC1105 Final Exam Study Guide

- Know how to find x- and y- intercepts
- Know how to find the equation of a circle
- Know how to find the radius and center of circle from given information
- Know how to define a function
- Know how to determine if a relation is function from a set of points, a graph or an equation
- Know how to find function values
- Know how to find the domain and range of a function
- Know how to determine the slope and graph lines
- Know how to find equations of lines
- Know how to find intervals where function is increasing, decreasing, or constant
- Know how to identify relative maxima or minima
- Know how to find the sum, difference, product, and quotient of two functions
- Know how to find the composition of functions
- Know how to determine types of symmetry
- Know how to determine if function is even, odd, or neither
- Know how to performs transformations of basic functions
- Know how to solve linear equation
- Know how to solve formulas for given variables
- Know how to perform computations involving complex numbers
- Know how to solve quadratic equations (factoring, square root property, completing the square, quadratic formula)
- Know how to find and interpret the Discriminant
- Know how to the vertex, axis of symmetry, and maximum or minimum value of a quadratic function
- Know how to graph quadratic equations
- Know how to solve rational and radical equations and equations with absolute value
- Know how to solve linear inequalities
- Know how to determine the end behavior of the graphs of polynomial functions
- Know how to find zeros of polynomials and their multiplicities
- Know how to graph polynomials
- Know how to apply the intermediate value theorem
- Know how to determine if one polynomial is a factor of another
- Know how to use synthetic division to find a function value
- Know how to divide polynomials
- Know how to identify and find all asymptotes
- Know how to find equations of direct, inverse, and combined variation
- Know how to solve problems involving variation
- Understand exponential and logarithmic functions and their uses
- Know how to use exponential growth and decay models
- Understand what it means to be one-to-one
- Understand inverses
- Know properties of logarithmic and exponential functions
- Know how to solve systems of equations in two and three variables