Norwalk Community College
Learning Outcomes for MAT 172 – College Algebra

After completing College Algebra, the student should be able to:

- Analyze the graph of a function to determine its domain and range, intervals where the function is increasing, decreasing, and constant, and find its maxima and minima.

- Add, subtract, multiply, divide, and compose functions, including finding the inverse.

- Determine the symmetry of a graph of a function. Perform transformations on functions, including translations, reflections, stretching, and shrinking.

- Perform arithmetic on complex numbers

- Solve quadratic equations and analyze the graphs of quadratic functions to determine the domain, range, vertex, and axis of symmetry.

- Solve equations containing absolute value

- Analyze a polynomial function to determine the zeros, the end behavior of its graph,

- Solve polynomial and rational inequalities

- Graph exponential and logarithmic functions and determine their properties.

- Use the properties of exponents and logarithms to solve equations

- Solve application problems which can be modeled on exponential growth or decay.

- Solve systems of linear equations in two or three variables and non-linear systems.

- Solve applications problems using systems of equations.

- Expand powers of binomials using the Binomial Theorem.