**Ch. 2 Power, Polynomial, and Rational Functions**

**2.1 Power and Radical Functions**

1) I can graph and analyze power functions.

 2) I can graph and analyze radical functions and solve radical equations.

 3) I can write a polynomial function to model a given data set using a graphing calculator.

**2.2 Polynomial Functions**

1) I can graph polynomial functions.

 2) I can use the leading term test to determine polynomial end behavior.

 3) I can identify the number of turning points and the zeros when given a function.

 4) I can model real-world data with polynomial functions.

**2.3 The Remainder and Factor Theorems**

1) I can divide polynomials using long division and synthetic division.

 2) I can use the Remainder and Factor Theorems.

**2.4 Zeros of Polynomial Functions**

1) I can find real zeroes of polynomial functions and can solve real-world polynomial equations using the zeros.

 2) I can find complex zeros of polynomial functions.

 3) I can use Descartes Rule of Signs to help determine zeros.

 4) I can write a polynomial function of least degree when given the zeros.

**2.5 Rational Functions**

1) I can analyze and graph rational functions.

 2) I can identify all asymptotes of a function.

 3) I can solve rational equations.

**2.6 Nonlinear Inequalities**

1) I can solve polynomial inequalities using test intervals and end behavior.

 2) I can solve rational inequalities.