

Test 3 Study guide

Graph absolute value and polynomial equations using the vertical and horizontal shifting, reflection over an axis and vertical stretching/compression.

Determine symmetry with respect to the x -axis, y -axis and the origin.

Evaluating and graphing a piecewise function at various values of the domain.

Finding a difference quotient for a linear or quadratic function

Finding where a function is increasing, decreasing, or constant given the graph (Interval Notation)

Finding local and absolute extrema (Max/Min).

Horizontal line test

Determine whether functions are Odd or Even.

Find the sum, difference, product, quotient and composition of 2 functions.

Determine whether two functions are inverses of each other (discrete, linear, and rational).

Finding, evaluating, and interpreting an inverse function for a given linear relationship.

Solving Quadratic Equations (exact and approximate answers).

Writing a quadratic equation given the roots and the leading coefficient

Solving word problems modelled by Quadratic Functions (use of Max/Min).

Use the graphing calculator to find zeros, intercepts and max/min of Quadratic Functions.

Range of a quadratic function

Writing Quadratic function both in general and standard forms.

Writing the equation of a quadratic function given its graph

Identify polynomial functions.

Finding zeros and their multiplicities given polynomials in factored form.

Finding a polynomial function given its zeros.

Determine end behavior of polynomial function.

Dividing a polynomial by a monomial or binomial.

Polynomial long division

Use of synthetic division and the factor theorem in polynomial division.

Use graphing calculator to find extrema and solve word problems involving polynomial functions.

Finding the intercepts, asymptotes, domain, and range from the graph of a rational function

Graphing a rational function with one or two vertical asymptotes.

Matching graphs with rational functions