



Capital School District Math Curriculum – Algebra 3 with Trigonometry College Prep

This course is designed to strengthen the understanding of Algebra 2 concepts and extend them to a mathematical level which will prepare a student to compete at the college level in a pre-calculus or calculus program designed for non-math majors. This course will include a study of both algebraic and transcendental function (trigonometric, inverse trigonometric, logarithmic and exponential), sequence and series, matrices, and topics from discrete mathematics including probability, statistics, combinatorics, and curve fitting.

This year your child's curriculum will include the following:

Marking Period 1

- Real Numbers, relations, and functions, lines and linear models
- Mathematical patterns, arithmetic sequences, geometric sequences

Marking Period 2

- Solving equations graphically and solving quadratic equations algebraically
- Applications of equations, other types of equations, and inequalities
- Functions, graphs of functions, quadratic functions
- Graphs and transformations, operations on functions, inverse functions

Marking Period 3

- Polynomial functions, real zeros, graphs of polynomial functions and polynomial models
- Rational functions
- Complex numbers and The Fundamental Theorem of Algebra
- Radicals and rational functions, exponential functions, applications of exponential functions, common and natural logarithmic functions
- Properties and laws of logarithms, solving exponential and logarithmic equations, exponential, logarithmic, and other models

Marking Period 4

- Right-triangle trigonometry, trigonometric applications, angles and radian measure, trigonometric functions, basic trigonometric identities
- Graphs of the sine, cosine, and tangent functions, graphs of the cosecant, secant, and cotangent functions, periodic graphs and amplitude, periodic graphs and phase shifts
- Solving systems of equations, matrices, matrix operations, matrix operations for square systems