

MATH CURRICULUM SUMMARY

The purpose of the Math Curriculum summary is to present an overview of the Algebra III and Trigonometry curriculum. Parents are the intended audience of the Math Curriculum summary.

Basic Algebra

- Simplify integral and fractional Exponents
- Simplify Radicals
- Add, subtract, and multiply Polynomial expressions
- Factor all 2, 3, and 4 termed polynomials
- Add, subtract and multiply rational expressions

Polynomial and Rational Functions

- Solve and graph polynomial and rational functions algebraically and graphically
- Identify and graph linear, quadratic, absolute value, piece-wise, square root, and polynomial functions
- Identify vertical and horizontal asymptotes
- Identify circles, parabolas, ellipses, and hyperbolas in standard and graphing form
- Identify critical features of each conic section
- Sketch each conic using graphing calculator where appropriate

Equations and Inequalities

- Solve linear, quadratic and quadratic type, radical, and rational equations and inequalities algebraically and graphically
- Applying quadratics to word problem situations
- Add, subtract, multiply, and divide complex numbers
- Find line / curve of best fit and linear and quadratic models

Trigonometry

- Introduce unit circle and circular functions
- Identify and graph the 6 trig functions
- Introduce triangle trigonometry
- Use the law of sines, cosines, and area of triangle formulas in word problems
- Introduce and derive trig identities
- Develop, graph and find inverse trig functions and their values

Functions & their Graphs

- Lines in the plan
- Functions – domain, range, intercepts, symmetry
- Identify functions vs. relations
- Find composite and inverse functions
- Graph all forms of functions
- Solve using variation and proportionality
- Find max and min and apply to real world situations

Exponents and Logarithms

- Apply the laws of exponents and logarithms
- Solve exponential and logarithmic equations in real life situations