

## Math A2 Curriculum

2008 - 2009

### Unit I: Operations with Polynomials (September - October)

- Multiplying Exponents
- Zero and Negative Exponents
- Division of Exponents
- Scientific Notation
- Adding/Subtracting Polynomials
- Multiplying Polynomials
- Special Products
- Factoring:
  - GCF
  - DOTS
  - TRINOMIAL
- Factoring Completely

### Unit II: Solving and Graphing Quadratic Equations (October - November)

- Solving Quadratic Equations by Finding Square Roots
- Simplifying Square Roots
- Operations with Square Roots
- Solving Polynomial Equations in Factored Form
- Solving Quadratic Word Problems

### Unit III: Graphing Quadratics (November)

- Graphing a Quadratic Equation (by hand)
- Graphing a Quadratic Equation (using graphing calculator)
- Solving a Quadratic Equation by Graphing

### Unit IV: Systems of Equations and Inequalities (December)

- Solving Algebraically
  - Substitution
  - Elimination
- Word Problems
- Solving Graphically
  - Equations
  - Inequalities
- Solving a Linear-Quadratic System

-Solving a System of Inequalities

**Unit V: Ratio, Proportion, Rational Expressions (January)**

- Simplifying Rational Expressions
- Multiplying/Dividing Rational Expressions
- Adding/Subtracting Rational Expressions
- Dividing Polynomials
- Rates, Ratios, Percents, Proportions
- Dimensional Analysis
- Pythagorean Theorem
- Trigonometry
- Direct Variation
- Relative Error

**Unit VI: Statistical Graphs (February)**

- Scatter Plots
- Line of Best Fit
- Tables and Graphs
- Measures of Central Tendencies
- Histograms
- Cumulative Frequency Histograms
- Box & Whisker Plots
- Qualitative & Quantitative Data
- Univariate & Bivariate Data
- Bias
- Correlation & Causation

**Unit VII: Probability (March)**

- Counting Principle
- Arrangements
- Permutation
- Probability
- Complement
- Sample Space
- Tree Diagrams
- Empirical Probability
- Mutually Exclusive Events
- Dependent Events
- Independent Events
- Conditional Probability

**Unit VIII: Measurement in Geometry (April)**

- Area of Geometric Figures
- Surface Area of Rectangular Prisms and Cylinders
- Area of Shaded Regions

**Review for Integrate Algebra Regents (April - June)**

- Introduction to Algebra
- Solving Equations
- Word Problems
- Graphing Equations
- Operations with Polynomials
- Solving and Graphing Quadratic Equations
- Graphing Quadratics
- Systems of Equations and Inequalities
- Ratio, Rates, Proportion, and Rational Expressions
- Statistics
- Probability
- Geometry