

## COURSE: Advanced Algebra *and* Advanced Algebra with Lab

Month	Key Idea	Unit	Concepts	Skills	Assessments
September	Mathematical Reasoning  Number and Numeration  Operations  Modeling/ Multiple Representation  Measurement  Patterns/Functions	Polynomials and Rational Expressions	Operations with Polynomial Expressions  First Degree Equations, Inequalities, Systems  Factoring  Quadratics  Operations with Rational Expressions  Complex Fractions	Greatest common factor Difference of squares Factorable trinomials Factoring by grouping Equations with rational expressions, including proportions Linear/Quadratic Systems with and without extraneous solutions	Homework Quizzes Exams
October	Mathematical Reasoning  Number and Numeration  Operations  Modeling/ Multiple Representation  Measurement  Uncertainty	Real and complex numbers	Radicals Imaginary Numbers Complex Numbers Quadratic Equations Radical Equations	Simplification All operations Conjugate Additive multiplicative inverses Absolute value Quadratic Formula First and Second Degree Systems of Equations Vertexes Discriminant Sum and Product of Roots Quadratic Inequalities Completing the Square	Homework Quizzes Exams





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<p>Reasoning</p> <p>Number and Numeration</p> <p>Operations</p> <p>Modeling/ Multiple Representation</p> <p>Measurement</p> <p>Uncertainty</p> <p>Patterns/Functions</p>	<p>Statistics</p>          <p>Sequences and Series</p>	<p>and Empirical</p> <p>Permutations</p> <p>Combinations</p> <p>Sample Space and Events</p> <p>Binomial Theorem</p> <p>Statistics</p> <p>Regression Models</p>          <p>Arithmetic and Geometric</p> <p>Sequences and Series</p> <p>Finite Sums</p>	<p>Probability of at least vs at most</p> <p>Binomial expansion</p> <p>Finding exact terms</p> <p>Summation Notation</p> <p>Measures of central tendency and dispersion on samples and population</p> <p>Normal distribution</p> <p>Grouped data</p> <p>Linear, Power, Exponential and Log Regressions</p> <p>Collection of data and factors effecting outcome of samples</p> <p>Interpolation and extrapolation</p> <p>Correlation coefficient and regression analysis</p>          <p>Determining common difference and ratios</p> <p>Finding specific terms</p> <p>Applications of recursive definitions</p> <p>Determining Finite sums of arithmetic and geometric series</p>	<p>Quizzes</p> <p>Exams</p>
<p>May/June</p>	<p>Regents Review</p>	<p>See above topics</p>	<p>See above topics</p>	<p>Review of past regents Exams</p>