

Scope and Sequence

Subject: Math

Grade: HS

Course: College Algebra

<u>Unit 1</u>	<u>Unit 2</u>	<u>Unit 3</u>	<u>Unit 4</u>
Unit Title: Number System Duration: 10 days	Unit Title: Functions, Equations, and Graphs Duration: 15 days	Unit title: Linear Systems Duration: 11 days	Unit title: Quadratic Functions and Equations Duration: 15 days
Algebraic Expressions	Relations and Functions	Solving Systems Using Tables and Graphs	Quadratic Functions and Transformations
Solving Equations	Linear Functions and Slope-Intercept Form	Solving Systems Algebraically	Standard Form of a Quadratic Function
Solving Inequalities	More About Linear Equations	Systems of Inequalities	Factoring Quadratic Expressions
Absolute Value Equations and Inequalities	Absolute Value Functions and Graphs	Linear Programming	Simplifying Radicals
	Two-Variable Inequalities		Quadratic Equations
			Completing the Square
			The Quadratic Formula
			Complex Numbers

<u>Unit 5</u>	<u>Unit 6</u>	<u>Unit 7</u>	<u>Unit 8</u>
Unit Title: Polynomials and Polynomial Functions Duration: 15 days	Unit Title: Polynomials and Polynomial Functions Duration: 5 days	Unit Title: Exponential and Logarithmic Functions Duration: 20 days	Unit Title: Rational Functions Duration: 10 days
Polynomial Functions	Roots and Radical Expressions	Exploring Exponential Models	Direct Variation
Polynomials, Linear Factors and Zeros	Multiplying and Dividing Radical Expressions	Properties of Exponential Functions & graphs	Inverse/indirect Variation
Solving Polynomial Equations	Binomial Expressions	Logarithmic Functions as Inverses	The Reciprocal Function
Dividing Polynomials	Rational Exponents	Properties of Logarithms	Rational Functions and Their Graphs
The Fundamental Theorem of Algebra	Solving Square Root and Other Radical Equations	Exponential and Logarithmic Equations	Rational Expressions
		Special logarithmic properties proofs	Adding and Subtracting Rational Expressions

		Natural Logs	Solving Rational Equations
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<u>Unit 9</u>	<u>Unit 10</u>		
Unit Title Sequences and Series Duration: 8 days	Unit Title: Periodic Functions and Trigonometry Duration: 12 days		
Mathematical Patterns	Special Right Triangles		
Arithmetic Sequences	Trig. Ratios Review		
Geometric Sequences	Angles and the Unit Circle		
Geometric Series	Radian Measure		
	The Sine Function		
	Graphical Interpretation of Periodic Functions		
	The Cosine Function		
	Translating Sine and Cosine Function		
	Reciprocal Trigonometric Functions		