

CURRICULUM OVERVIEW

Blended Learning Library

Algebra I Resources



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Algebra I Resources Overview

The Blended Learning Library is a supplemental resource which may be used by teachers in conjunction with the subjects of Math 7, Math 8, Algebra I, Geometry, and Algebra II. They are not meant to serve as individual, stand-alone courses. These resources serve as a library of additional material to supplemental the respective course should a teacher decide to use them.

Unit 1: Foundations of Algebra		
Algebra I Resources	Assignments	
	1. Course Overview	8. Adding and Subtracting Rational Numbers
	2. Translating with Algebraic Expressions	9. Dividing Integers
	3. Using the Order of Operations	10. Absolute Value and the Order of Operations
	4. Evaluating Expressions	11. Properties of Addition and Multiplication
	5. Real Numbers and The Number Line	12. Combining Like Terms
	6. Converting between Decimals and Fractions	13. Simplifying Expressions
	7. The Multiplicative Inverse	
Unit 2: Linear Equations		
Algebra I Resources	Assignments	
	1. Translating Algebraic Sentences	8. Solving Literal Equations
	2. Solutions	9. Writing Equations
	3. Multiplication Property of Equality	10. Solving Word Problems
	4. Solving Two-Step Equations	11. Consecutive Integer Problems
	5. Solving Multi-Step Equations	12. Age Problems
	6. Linear Equations--Possible Solution Sets	13. Error in Measurement
	7. Solving Equations with Parentheses	14. Mixture Problems
Unit 3: Functions		
Algebra I Resources	Assignments	
	1. The Abscissa and Ordinate	8. Finding Slope Algebraically
	2. Relations	9. Writing Equations in General Form
	3. Inputs and Outputs	10. Slope-Intercept Form
	4. Graphing Functions on the Coordinate Plane	11. Writing Linear Equations (1)
	5. Writing a Function Rule	12. Writing Linear Equations (2)
	6. Sequences	13. Parallel and Perpendicular Lines
	7. Direct Variations	
Unit 4: Inequalities		
Algebra I Resources	Assignments	
	1. Set Builder Notation	8. Graphing Linear Inequalities
	2. Solving Inequalities by Addition	9. Solving Absolute Value Equations and Inequalities
	3. Solving Inequalities by Multiplication	10. Graphing Absolute Value Inequalities on the Number Line
	4. Solving Multi-Step Inequalities	11. Graphing Absolute Value Inequalities on the Coordinate Plane
	5. Translating Inequalities	
	6. Union and Intersection	
	7. Compound Inequalities	

Unit 5: Linear Systems	
Algebra I Resources	Assignments
	<ol style="list-style-type: none"> 1. Systems of Linear Equations 2. Solve a System by Graphing 3. Systems of Inequalities Solutions 4. Solving by Substitution 5. Solving by Elimination 6. Solving with Determinants 7. Solving Systems with Fractions 8. Solving Word Problems with Two Unknowns 9. Solving Money Problems 10. Solving Mixture Problems

Unit 6: Polynomials	
Algebra I Resources	Assignments
	<ol style="list-style-type: none"> 1. Adding and Subtracting Polynomials 2. Simplifying Polynomial Expressions 3. Multiplying Polynomials 4. The FOIL Method 5. Dividing by a Monomial 6. Dividing by a Polynomial 7. Prime Factorization and the GCF 8. Factoring Polynomials 9. Factoring by Grouping 10. Factoring Trinomials (1) 11. Factoring Trinomials (2) 12. The Difference of Two Squares 13. Factoring Polynomials Completely

Unit 7: Exponential and Radical Functions	
Algebra I Resources	Assignments
	<ol style="list-style-type: none"> 1. Negative Exponents 2. Evaluating Exponential Expressions 3. Writing Numbers in Scientific Notation 4. Properties of Exponents (1) 5. Properties of Exponents (2) 6. Properties of Exponents (3) 7. Geometric Sequences 8. Simplifying Perfect Roots 9. Multiplying Radicals 10. Rationalizing the Denominator 11. Combining Like Radicals 12. Radical Equations

Unit 8: Quadratics	
Algebra I Resources	Assignments
	<ol style="list-style-type: none"> 1. The Pythagorean Theorem and Irrational Numbers 2. Circle Equations 3. Midpoint of a Line Segment 4. Quadratic Equations 5. Graphing Parabolas 6. Graphing Quadratic Functions in General Form 7. Graphing Quadratic Inequalities 8. Solving Quadratic Equations by Factoring 9. The Square Root Property 10. Solving Word Problems Using a Quadratic Equation 11. Solving Quadratic Equations by Completing the Square (1) 12. Solving Quadratic Equations by Completing the Square (2) 13. The Quadratic Formula 14. Solving Quadratic Equations Using the Quadratic Formula

Unit 9: Rational Expressions	
Algebra I Resources	Assignments
	<ol style="list-style-type: none"> 1. Writing a Rational Expression in Lowest Terms 2. Multiplying and Dividing Rational Expressions 3. Adding and Subtracting Rational Expressions (1) 4. Adding and Subtracting Rational Expressions (2) 5. Solving Proportions 6. Solving Equations That Contain Fractions 7. Simplifying Complex Fractions 8. Solving Inequalities That Contain Fractions 9. Distance and Pipe Flow Problems 10. Unknown Number Problems

Algebra I Resources	Unit 10: Probability and Statistics	
	Assignments	
	1. Mean, Median, and Mode	5. Permutations
	2. Range and Interquartile Range	6. Combinations
	3. Scatter Plots	7. Introduction to Probability
	4. Listing Outcomes and the Multiplication Principle	8. Mutually Exclusive and Inclusive Events