

Options EHS Algebra 2A-OR		Scope and Sequence
Unit	Lesson	Objectives
Expressions and Equations		
Simplifying Expressions		
		Identify parts of an algebraic expression
		Evaluate expressions using the order of operations and the field properties of real numbers.
		Simplify expressions using the order of operations and the field properties of real numbers.
Solving Equations		
		Simplify and solve multistep equations
		Create multistep equations in one variable and use them to solve problems.
Inequalities		
		Solve one-variable linear inequalities, including compound inequalities, and represent the solution sets graphically and algebraically.
		Create one-variable linear inequalities in one variable and use them to solve problems.
Unit Test		
Introduction to Functions		
Relations and Functions		
		Represent a relation in multiple ways, including equations, graphs, words, and tables of values.
		Determine if a relation is a function.
		Determine if the function is one-to-one.
		Determine the domain and range of a relation.
		Evaluate function rules.
Function Operations		
		Combine functions using arithmetic operations, expressing the results both algebraically and graphically.

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		Evaluate sums, differences, products, and quotients of functions.
	Composition of Functions	
		Write an expression for the composition of functions.
		Find the domain of the composition of functions.
		Evaluate the composition of functions.
	Function Inverses	
		Find the inverse of a function.
		Use composition to verify that functions are inverses.
	Rate of Change	
		Calculate the average rate of change of a function over a specified interval.
		Interpret the average rate of change of a function over a specified interval.
		Solve problems involving direct variation.
	Linear Functions	
		Determine if a function is linear.
		Represent a linear relationship numerically, algebraically, and graphically.
	Two-Variable Linear Inequalities	
		Write a linear inequality to model a relationship between two quantities.
		Interpret the solution set of a two-variable linear inequality.
		Graph two-variable linear inequalities.
	Arithmetic Series	
		Solve problems using the formula for the sum for an arithmetic series.
	Unit Test	

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Quadratics		
	Quadratic Functions	
		Find the line of symmetry and vertex of a parabola given its function rule.
		Identify a quadratic function from the function rule.
		Use key attributes of a quadratic function to solve word problems.
	Solving Quadratic Equations by Factoring	
		Find real solutions for quadratic equations using the zero product property.
		Use key attributes of a quadratic function to solve word problems.
	Quadratic Inequalities	
		Find real solutions of quadratic inequalities algebraically and graphically.
		Create quadratic inequalities in one variable and use them to solve problems.
	Completing The Square	
		Recognize the pattern of a perfect-square trinomial as the square of a binomial.
		Use the square root property to solve equations.
		Find complex solutions to quadratic equations by completing the square.
	The Quadratic Formula	
		Find real and complex solutions of quadratic equations using the quadratic formula.
		Use the discriminant to determine the number and type of roots of a quadratic equation.
	Modeling with Quadratic Equations	
		Use quadratic equations to model and solve real-world problems.
	Transformations of Quadratic Functions	

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		Use completing the square to write quadratic functions in the form $y = a(x - h)^2 + k$.
		Describe the effects of changes in a , h , and k to the graph of a function in the form $y = a(x - h)^2 + k$.
	Square Root Functions	
		Find the inverse of a quadratic function.
		Find the domain of a square root function.
	Unit Test	
Inequalities and Systems		
	Solving Linear Systems Graphically	
		Solve systems of two-variable linear equations graphically.
		Classify systems of two-variable equations as dependent, independent, consistent, or inconsistent.
		Solve systems of two-variable linear inequalities.
	Solving Linear Systems by Elimination	
		Solve systems of two-variable linear equations using elimination.
	Solving Linear Systems by Substitution	
		Solve systems of two-variable linear equations using substitution.
	Modeling with Linear Systems	
		Model and solve real-world problems using systems of linear equations and inequalities.
	Linear Programming	
		Maximize a function given constraints.
		Represent and solve real-world problems using linear programming.
	Mixed Degree Systems	

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		Solve linear-quadratic systems of equations.
		Solve quadratic-quadratic systems of equations.
		Determine the reasonableness of solutions to systems of a linear equation and a quadratic equation in two variables.
	Unit Test	
Polynomial Operations		
	Introduction to Polynomials	
		Identify and classify polynomials.
		Write polynomials in standard form.
	Addition and Subtraction of Polynomials	
		Perform addition and subtraction of polynomials.
	Laws of Exponents	
		Apply the properties of whole-number exponents to generate equivalent expressions.
	Multiplication of Polynomials	
		Perform multiplication of polynomials.
	Division of Polynomials	
		Use long division to find quotients of polynomials
		Use inverse operations to check the result of polynomial division
	Simplifying Polynomial Expressions	
		Simplify expressions involving operations with polynomials.
	Composition of Polynomial Functions	
		Write the composition of polynomial functions.

Options EHS Algebra 2A-OR		Scope and Sequence
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		Evaluate the composition of polynomial functions.
	Unit Test	
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	