

## Khan Academy Video Correlation / Alignment Algebra I

TEKS/SE	Curriculum Unit(s)	Video Title	Rationale <i>(e.g., explanation, justification, etc.)</i>
ALGI.1A – describe independent and dependent quantities in functional relationships.	1, 4	<a href="#">Word Problem Solving Strategies</a> <a href="#">Descartes and Cartesian Coordinates</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve word problems; and</li> <li>○ identify patterns, describe a coordinate plane, and plot points and lines.</li> </ul> </li> </ul>
ALGI.1B – gather and record data and use data sets to determine functional relationships between quantities.	1, 6	<a href="#">Functions as Graphs Relations and Functions</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ determine if a relation is a function from graphs and ordered pairs.</li> </ul> </li> </ul>
ALGI.1C – describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations.	1, 2, 6	<a href="#">Patterns and Equations</a> <a href="#">Equations and Inequalities</a> <a href="#">Domain and Range of a Function</a> <a href="#">Functions as Graphs</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Functions as Graphs</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Multi-Step Equations</a> <a href="#">Ratio and Proportion</a> <a href="#">Word Problem Solving 3</a> <a href="#">Solving for a Variable</a> <a href="#">Solving for a Variable 2</a> <a href="#">Simple Equations</a> <a href="#">Solving One-Step Equations</a> <a href="#">Solving One-Step Equations 2</a> <a href="#">Multi-Step Equations</a> <a href="#">Multi-step equations 1</a> <a href="#">Multi-step equations 2</a> <a href="#">Exploring linear relationships</a> <a href="#">Application problem with graph</a> <a href="#">Interpreting Linear Graphs</a> <a href="#">Solving Quadratic Equations by Factoring 3</a> <a href="#">Applications Problem Factoring Quadratics</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ simplify and evaluate expressions;</li> <li>○ solve equations;</li> <li>○ solve word problems and check solutions;</li> <li>○ find domains and ranges from equations and word problems;</li> <li>○ determine if a relation is a function.</li> <li>○ solve literal equations; and</li> <li>○ create linear equations, tables, and graphs from word problems.</li> </ul> </li> </ul>

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ALGI.1D – represent relationships among quantities using [concrete] models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities.	1, 2, 3, 10	<a href="#">Patterns and Equations</a> <a href="#">Equations and Inequalities</a> <a href="#">Domain and Range of a Function</a> <a href="#">Functions as Graphs</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Ratio and Proportion</a> <a href="#">Percent Problems</a> <a href="#">Word Problem Solving 3</a> <a href="#">Descartes and Cartesian Coordinates</a> <a href="#">Ordered pair solutions of equations</a> <a href="#">Linear Equations in Standard Form</a> <a href="#">Point-slope and standard form</a> <a href="#">The Coordinate Plane</a> <a href="#">Exploring linear relationships</a> <a href="#">Plotting (x,y) relationships</a> <a href="#">Plot ordered pairs</a> <a href="#">Application problem with graph</a> <a href="#">Interpreting Linear Graphs</a> <a href="#">Graphing a Quadratic Function</a> <a href="#">Solving Quadratic Equations by Factoring 3</a> <a href="#">Applications Problem Factoring Quadratics</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ simplify and evaluate expressions;</li> <li>○ solve word problems and check solutions;</li> <li>○ find domains and ranges from equations and word problems;</li> <li>○ identify patterns, describe a coordinate plane, plot points and lines; and</li> <li>○ write equations of lines.</li> </ul> </li> </ul>
ALGI.1E – interpret and make decisions, predictions, and critical judgments from functional relationships.	1, 2, 4, 6, 11	<a href="#">Simple Equations</a> <a href="#">Solving One-Step Equations</a> <a href="#">Solving One-Step Equations 2</a> <a href="#">Multi-Step Equations</a> <a href="#">Multi-step equations 1</a> <a href="#">Multi-step equations 2</a> <a href="#">Patterns in Sequences 1</a> <a href="#">Patterns in Sequences 2</a> <a href="#">Equations of Sequence Patterns</a> <a href="#">Finding the 100th Term in a Sequence</a> <a href="#">Basic Linear Function</a> <a href="#">Descartes and Cartesian Coordinates</a> <a href="#">Linear Function Graphs</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ solve equations;</li> <li>○ solve literal equations for a given variable;</li> <li>○ identify patterns, describe a coordinate plane, plot points and lines; and</li> <li>○ determine input and output values for functions; and</li> <li>○ use the vertical line test to determine whether a graph is a function.</li> </ul> </li> </ul>

TEKS/SE	Curriculum Unit(s)	Video Title	Rationale <i>(e.g., explanation, justification, etc.)</i>
ALGI.2A – identify and sketch the general forms of linear ( $y = x$ ) and quadratic ( $y = x^2$ ) parent functions.	5, 10	<a href="#">Graphs of Quadratic Functions</a>	<ul style="list-style-type: none"> <li>• This video demonstrates how to:               <ul style="list-style-type: none"> <li>○ graph quadratic functions by finding the x-intercepts and the vertex using algebraic methods and factoring.</li> </ul> </li> </ul>
ALGI.2B – identify mathematical domains and ranges and determine reasonable domain and range values for given situations, both continuous and discrete.	1, 4, 12	<a href="#">Domain and Range of a Function</a> <a href="#">Basic Linear Function</a> <a href="#">Quadrants of Coordinate Plane</a> <a href="#">Domain of a function</a> <a href="#">Domain and Range of a Relation</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ identify domain and range from equations and word problems; and</li> <li>○ graph piecewise functions from word problems.</li> </ul> </li> </ul>
ALGI.2D– collect and analyze data, make and interpret scatter plots, fit the graph of a function to the data, interpret the results, and proceed to model, predict, and make decisions and critical judgments.	6, 12	<a href="#">Fitting a Line to Data</a>	<ul style="list-style-type: none"> <li>• This video demonstrates how to:               <ul style="list-style-type: none"> <li>○ draw scatterplots;</li> <li>○ write the equation for the line of best fit; and</li> <li>○ predict and make decisions.</li> </ul> </li> </ul>
ALGI.3A – use symbols to represent unknowns and variables.	1, 2, 3, 9	<a href="#">Variable Expressions</a> <a href="#">Order of Operations Example</a> <a href="#">Patterns and Equations</a> <a href="#">Equations and Inequalities</a> <a href="#">Domain and Range of a Function</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Problem Solving Word Problems 2</a> <a href="#">Two-Step Equations</a> <a href="#">Multi-Step Equations</a> <a href="#">Equations with Variables on Both Sides</a> <a href="#">Ratio and Proportion</a> <a href="#">Percent Problems</a> <a href="#">Word Problem Solving 3</a> <a href="#">Graphing Using Intercepts</a> <a href="#">Graphs of Linear Equations</a> <a href="#">Solving for a Variable</a> <a href="#">Solving for a Variable 2</a> <a href="#">Multi-Step Equations</a> <a href="#">Multi-step equations 1</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ simplify and evaluate expressions;</li> <li>○ solve word problems and check solutions;</li> <li>○ determine domain and range from equations and word problems;</li> <li>○ solve systems of equations;</li> <li>○ graph linear equations using the x- and y-intercepts and a table of ordered pairs; and</li> <li>○ solve literal equations.</li> </ul> </li> </ul>

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		<a href="#">Multi-step equations 2</a> <a href="#">Integer sums</a> <a href="#">Solving Quadratic Equations by Factoring 3</a> <a href="#">Applications Problem Factoring Quadratics</a>	
ALGI.3B – look for patterns and represent generalizations algebraically.	1, 10	<a href="#">Patterns in Sequences 2</a> <a href="#">Equations of Sequence Patterns</a> <a href="#">Finding the 100th Term in a Sequence</a> <a href="#">Basic Linear Function</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ create tables from visual patterns;</li> <li>○ make predictions from a sequence;</li> <li>○ write functions to represent situations; and</li> <li>○ graph piecewise functions.</li> </ul> </li> </ul>
ALGI.4A – find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations.	2, 3, 9, 11	<a href="#">Addition and Subtraction of Polynomials</a> <a href="#">Special Products of Binomials</a> <a href="#">Factoring Quadratic Expressions</a> <a href="#">Factor by Grouping and Factoring Completely</a> <a href="#">Terms coefficients and exponents in a polynomial</a> <a href="#">Simply a polynomial</a> <a href="#">Opposite of a Polynomial</a> <a href="#">Evaluating a polynomial at a given value</a> <a href="#">Adding Polynomials</a> <a href="#">Adding polynomials with multiple variables</a> <a href="#">Polynomials 2</a> <a href="#">Subtracting Polynomials</a> <a href="#">Polynomials1</a> <a href="#">Subtracting polynomials with multiple variables</a> <a href="#">Adding and Subtracting Polynomials 1</a> <a href="#">Adding and Subtracting Polynomials 2</a> <a href="#">Adding and Subtracting Polynomials 3</a> <a href="#">Multiplying Monomials</a> <a href="#">Level 1 multiplying expressions</a> <a href="#">Variable Expressions</a> <a href="#">Order of Operations Example</a> <a href="#">Patterns and Equations</a> <a href="#">Equations and Inequalities</a> <a href="#">Domain and Range of a Function</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ define and classify polynomials;</li> <li>○ add and subtract polynomials;</li> <li>○ simplify and evaluate expressions;</li> <li>○ solve equations;</li> <li>○ solve word problems and check solutions; and</li> <li>○ solve systems of equations.</li> </ul> </li> </ul>

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		<a href="#">Problem Solving Word Problems 2</a> <a href="#">One Step Equations</a> <a href="#">Two-Step Equations</a> <a href="#">Multi-Step Equations</a> <a href="#">Equations with Variables on Both Sides</a> <a href="#">Ratio and Proportion</a> <a href="#">Dividing Monomials</a> <a href="#">Multiplying and Dividing Monomials 1</a> <a href="#">Multiplying and Dividing Monomials 2</a> <a href="#">Multiplying and Dividing Monomials 3</a> <a href="#">Multiplying Binomials</a> <a href="#">Square a Binomial</a> <a href="#">Multiplying and Simplifying Rational Expressions</a> <a href="#">Multiplying Binomials with Radicals</a> <a href="#">Multiplying Monomials by Polynomials</a> <a href="#">Multiplying Polynomials</a> <a href="#">Multiplying Polynomials1</a> <a href="#">Multiplying Polynomials 1</a> <a href="#">Multiplying Polynomials 2</a> <a href="#">Multiplying Polynomials 3</a> <a href="#">Special Polynomials Products 1</a> <a href="#">Multiplication of Polynomials</a> <a href="#">More multiplying polynomials</a> <a href="#">Special Products of Polynomials 1</a> <a href="#">Special Products of Polynomials 2</a> <a href="#">Special Products of Polynomials 3</a> <a href="#">Polynomial divided by monomial</a> <a href="#">Dividing multivariable polynomial with monomial</a> <a href="#">Dividing polynomials 1</a> <a href="#">Algebraic Long Division</a> <a href="#">Dividing polynomials with remainders</a> <a href="#">New Operator Definitions</a> <a href="#">Solving Equations 2</a> <a href="#">Equations 3</a> <a href="#">Graphing a line in slope intercept form</a> <a href="#">Factoring Trinomials by Grouping 6</a> <a href="#">Factoring trinomials with a leading 1</a>	

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		<a href="#">coefficient</a> <a href="#">Factoring trinomials with a common factor</a> <a href="#">Factoring trinomials with a non-1 leading coefficient by grouping</a> <a href="#">U09_L2_T1_we1 Factoring Special Products 1</a> <a href="#">Factoring Special Products 2</a> <a href="#">U09_L2_T1_we3 Factoring Special Products 3</a> <a href="#">Factoring perfect square trinomials</a> <a href="#">Factoring Sum of Cubes</a> <a href="#">Factoring difference of squares</a> <a href="#">Solving a quadratic by factoring</a> <a href="#">Difference of Cubes Factoring</a> <a href="#">Factoring Quadratic Expressions</a> <a href="#">Quadratic Functions 3</a> <a href="#">Quadratic Equations in Standard Form</a> <a href="#">Proof of Quadratic Formula</a> <a href="#">Solving Quadratic Equations by Factoring</a> <a href="#">Solving Quadratic Equations by Factoring 2</a> <a href="#">Solving Quadratic Equations by Factoring 3</a> <a href="#">CA Algebra I: Factoring Quadratics</a> <a href="#">Solving a quadratic by factoring</a> <a href="#">Applications Problem Factoring Quadratics</a> <a href="#">Functions Part 2</a> <a href="#">Evaluating Functions</a> <a href="#">Sum of Functions</a> <a href="#">Difference of Functions</a> <a href="#">Product of Functions</a> <a href="#">Negative and Positive Exponents</a> <a href="#">Evaluating exponential expressions</a> <a href="#">Evaluating exponential expressions 2</a> <a href="#">Evaluating exponential expressions 3</a>	

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ALG1.4B – use the commutative, associative, and distributive properties to simplify algebraic expressions.	2, 3	<a href="#">Addition and Subtraction of Polynomials</a> <a href="#">Special Products of Binomials</a> <a href="#">Terms coefficients and exponents in a polynomial</a> <a href="#">Simply a polynomial</a> <a href="#">Opposite of a Polynomial</a> <a href="#">Evaluating a polynomial at a given value</a> <a href="#">Adding Polynomials</a> <a href="#">Adding polynomials with multiple variables</a> <a href="#">Polynomials 2</a> <a href="#">Subtracting Polynomials</a> <a href="#">Polynomials1</a> <a href="#">Subtracting polynomials with multiple variables</a> <a href="#">Adding and Subtracting Polynomials 1</a> <a href="#">Adding and Subtracting Polynomials 2</a> <a href="#">Adding and Subtracting Polynomials 3</a> <a href="#">Multiplying Monomials</a> <a href="#">Level 1 multiplying expressions</a> <a href="#">Variable Expressions</a> <a href="#">Order of Operations Example</a> <a href="#">Patterns and Equations</a> <a href="#">Equations and Inequalities</a> <a href="#">Domain and Range of a Function</a> <a href="#">Word Problem Solving Plan 1</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Distributive Property Example 1</a> <a href="#">Two-Step Equations</a> <a href="#">Multi-Step Equations</a> <a href="#">Equations with Variables on Both Sides</a> <a href="#">Ratio and Proportion</a> <a href="#">Multiplying and Simplifying Rational Expressions</a> <a href="#">Multiplying Binomials with Radicals</a> <a href="#">Multiplying Monomials by Polynomials</a> <a href="#">Monomial Greatest Common Factor</a> <a href="#">Factor polynomials using the GCF</a> <a href="#">Factoring and the Distributive Property</a> <a href="#">Factoring and the Distributive Property 2</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ simplify and evaluate expressions;</li> <li>○ combine like terms;</li> <li>○ solve word problems and check solutions;</li> <li>○ multiply, divide, and factor polynomial expressions; and</li> <li>○ identify domain and range from equations and word problems.</li> </ul> </li> </ul>

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		<a href="#">Factoring and the Distributive Property 3</a> <a href="#">Factoring Trinomials by Grouping 1</a> <a href="#">Factoring Trinomials by Grouping 2</a> <a href="#">U09_L1_T2_we3 Factoring Trinomials by Grouping 3</a> <a href="#">Factoring Trinomials by Grouping 4</a> <a href="#">Factoring Trinomials by Grouping 5</a> <a href="#">Equation Special Cases</a> <a href="#">Quadratic Equations in Standard Form</a> <a href="#">Proof of Quadratic Formula</a>	
ALGI.4C – connect equation notation with function notations, such as $y = x+1$ and $f(x) = x+1$ .	4	<a href="#">Linear Equations in Slope Intercept Form</a> <a href="#">Introduction to functions</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ determine a linear equation; and</li> <li>○ identify functions.</li> </ul> </li> </ul>
ALGI.5A – determine whether or not given situations can be represented by linear functions.	4, 5	<a href="#">Recognizing Linear Functions</a> <a href="#">Functional Relationships 1</a> <a href="#">Testing if a relationship is a function</a> <a href="#">Functions (Part III)</a> <a href="#">Basic Linear Function</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ determine whether a table represents a linear function.</li> </ul> </li> </ul>
ALGI.5B – determine the domain and range for linear functions in given situations.	5	<a href="#">Domain and Range of a Function</a>	<ul style="list-style-type: none"> <li>• This video demonstrates how to:               <ul style="list-style-type: none"> <li>○ identify domain and range from equations and word problems.</li> </ul> </li> </ul>
ALGI.5C – use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions.	5	<a href="#">Graphs of Linear Equations</a> <a href="#">Algebra: Linear Equations 2</a> <a href="#">Solving Equations 1</a> <a href="#">Two-Step Equations</a> <a href="#">Slope and Y-intercept Intuition</a> <a href="#">Algebra: Slope and Y-intercept intuition</a> <a href="#">CA Algebra I: Slope and Y-intercept</a> <a href="#">Graphs of Linear Equations</a> <a href="#">Graphing a Basic Function</a> <a href="#">Recognizing Linear Functions</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve and check equations;</li> <li>○ graph linear equations;</li> <li>○ identify transformations; and</li> <li>○ identify multiple representations of linear functions.</li> </ul> </li> </ul>
ALGI.6A – develop the concept of slope as rate of change and determine slopes from graphs, tables, and algebraic representations.	5	<a href="#">Equations of Sequence Patterns</a> <a href="#">Slope of a line</a> <a href="#">Linear Equations in Slope Intercept Form</a> <a href="#">Slope Example</a> <a href="#">Slope and Rate of Change</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ use slope and rate of change;</li> <li>○ determine y-intercept algebraically; and</li> <li>○ determine the slope of a line using a graph;</li> </ul> </li> </ul>

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		<a href="#">Algebra: Slope</a> <a href="#">Algebra: Slope 2</a> <a href="#">Algebra: Slope 3</a> <a href="#">Graphical Slope of a Line</a> <a href="#">Slope of a Line 2</a> <a href="#">Slope of a Line 3</a> <a href="#">Hairier Slope of Line</a> <a href="#">Graphing a line in slope intercept form</a>	
ALGI.6B – interpret the meaning of slope and intercepts in situations using data, symbolic representations, or graphs.	5	<a href="#">Graphing Using Intercepts</a> <a href="#">Linear Equations in Slope Intercept Form</a>	<ul style="list-style-type: none"> <li>● These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ graph linear equations using x- and y-intercepts and a table of ordered pairs.</li> </ul> </li> </ul>
ALGI.6C – investigate, describe, and predict the effects of changes in $m$ and $b$ on the graph of $y = mx + b$ .	5	<a href="#">Algebra: graphing lines 1</a> <a href="#">Parallel Lines</a> <a href="#">Parallel Lines 2</a> <a href="#">Parallel lines 3</a> <a href="#">Perpendicular Lines</a> <a href="#">Perpendicular lines 2</a> <a href="#">Parallel Line Equation</a>	<ul style="list-style-type: none"> <li>● These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ graph lines of linear equations by creating tables; and</li> <li>○ determine whether lines are parallel.</li> </ul> </li> </ul>
ALGI.6D – graph and write equations of lines given characteristics such as two points, a point and a slope, or a slope and y-intercept.	5	<a href="#">Graphs of Linear Equations</a> <a href="#">Linear Equations in Point Slope Form</a> <a href="#">Point-slope and standard form</a> <a href="#">Equations of Parallel and Perpendicular Lines</a> <a href="#">Algebra: Equation of a line</a> <a href="#">Graphing Using Intercepts</a> <a href="#">Graphing using X and Y intercepts</a> <a href="#">Graphs Using Slope-Intercept Form</a> <a href="#">Equation of a line 1</a> <a href="#">Equation of a line 2</a> <a href="#">Equation of a Line hairier example</a> <a href="#">Equation of a line 3</a> <a href="#">Converting to slope-intercept form</a>	<ul style="list-style-type: none"> <li>● These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ graph linear equations;</li> <li>○ determine the equation of a line in point-slope form;</li> <li>○ identify slopes and equations of parallel and perpendicular lines; and</li> <li>○ convert from standard form of linear equation to slope-intercept form.</li> </ul> </li> </ul>

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ALGI.6E – determine the intercepts of graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations.	5	<a href="#">Graphing Using Intercepts Algebra: Linear Equations 2</a> <a href="#">Solving Equations 1</a> <a href="#">Two-Step Equations</a> <a href="#">X and Y intercepts</a> <a href="#">X and Y intercepts 2</a> <a href="#">Graphing Using Intercepts</a> <a href="#">Graphing using X and Y intercepts</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve and check equations;</li> <li>○ graph linear equations using the x- and y-intercepts; and</li> <li>○ determine the x- and y-intercept of an equation.</li> </ul> </li> </ul>
ALGI.6F– interpret and predict the effects of changing slope and y-intercept in applied situations.	5	<a href="#">Algebra: graphing lines 1</a> <a href="#">Direct Variation Models</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ graph linear equations.</li> </ul> </li> </ul>
ALGI.6G – relate direct variation to linear functions and solve problems involving proportional change.	2	<a href="#">Direct Variation 1</a> <a href="#">Proportionality Constant for Direct Variation</a> <a href="#">Direct Variation Application</a> <a href="#">Direct Variation Models</a> <a href="#">Direct Variation 1</a> <a href="#">Direct and Inverse Variation</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve direct variation problems involving proportional change.</li> </ul> </li> </ul>
ALGI.7A – analyze situations involving linear functions and formulate linear equations or inequalities to solve problems.	2, 3, 5	<a href="#">Equations and Inequalities Algebra: Linear Equations 2</a> <a href="#">Solving Equations 1</a> <a href="#">Two-Step Equations</a> <a href="#">Multi-Step Equations</a> <a href="#">Multi-step equations 1</a> <a href="#">Multi-step equations 2</a> <a href="#">Integer sums</a> <a href="#">Multi-Step Inequalities 3</a> <a href="#">Absolute value inequalities Example 1</a> <a href="#">Absolute Value Inequalities Example 2</a> <a href="#">Absolute value inequalities example 3</a> <a href="#">Graphing Inequalities</a> <a href="#">Graphing Inequalities 1</a> <a href="#">Word Problem Solving 4</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve word problems;</li> <li>○ solve and graph one variable inequalities;</li> <li>○ solve and graph absolute value inequalities;</li> <li>○ determine whether various points are solutions to inequalities; and</li> <li>○ solve problems involving linear functions.</li> </ul> </li> </ul>

TEKS/SE	Curriculum Unit(s)	Video Title	Rationale <i>(e.g., explanation, justification, etc.)</i>
<p>ALGI.7B – investigate methods for solving linear equations and inequalities using [concrete] models, graphs, and the properties of equality, select a method, and solve the equations and inequalities.</p>	<p>2, 3, 5, 8</p>	<p><a href="#">Graphing Using Intercepts</a>  <a href="#">Multi-Step Inequalities 3</a>  <a href="#">Absolute value inequalities Example 1</a>  <a href="#">Absolute Value Inequalities Example 2</a>  <a href="#">Absolute value inequalities example 3</a>  <a href="#">Graphing Inequalities</a>  <a href="#">Graphing Inequalities 1</a>  <a href="#">Solving and graphing linear inequalities in two variables 1</a>  <a href="#">Graphing linear inequalities in two variables 2</a>  <a href="#">Graphing Linear Inequalities in Two Variables Example 2</a>  <a href="#">Graphing linear inequalities in two variables 3</a>  <a href="#">CA Algebra I: Graphing Inequalities</a>  <a href="#">Graphing Inequalities 2</a>  <a href="#">Solving systems by substitution 1</a>  <a href="#">Graphing systems of inequalities</a>  <a href="#">Graphing systems of inequalities 2</a>  <a href="#">Graphing systems of inequalities 3</a>  <a href="#">System of Inequalities Application</a>  <a href="#">Graphing Systems of Equations</a>  <a href="#">Consistent and Inconsistent Systems</a>  <a href="#">Independent and Dependent Systems</a>  <a href="#">The Substitution Method</a>  <a href="#">Substitution Method 2</a>  <a href="#">Solving Linear Systems by Graphing</a>  <a href="#">Special Types of Linear Systems</a>  <a href="#">U06_L3_T1_we3 Graphing Systems of Inequalities</a>  <a href="#">Graphical System of Inequalities</a>  <a href="#">Testing Solutions for a System of Inequalities</a></p>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to: <ul style="list-style-type: none"> <li>○ solve one variable inequalities;</li> <li>○ solve and graph absolute value inequalities;</li> <li>○ determine whether various points are solutions to inequalities; and</li> <li>○ solve systems of equations and inequalities.</li> </ul> </li> </ul>

TEKS/SE	Curriculum Unit(s)	Video Title	Rationale <i>(e.g., explanation, justification, etc.)</i>
ALGI.7C – interpret and determine the reasonableness of solutions to linear equations and inequalities.	2, 3, 8	<a href="#">Multi-Step Inequalities 3</a> <a href="#">Absolute value inequalities Example 1</a> <a href="#">Absolute Value Inequalities Example 2</a> <a href="#">Absolute value inequalities example 3</a> <a href="#">Graphing Inequalities</a> <a href="#">Graphing Inequalities 1</a> <a href="#">Interpreting Linear Graphs</a> <a href="#">Ordered Pair Solutions of Equations 2</a> <a href="#">Testing a solution for a system of equations</a> <a href="#">CA Algebra I: Systems of Inequalities</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve one variable inequalities;</li> <li>○ solve and graph absolute value inequalities;</li> <li>○ determine whether various points are solutions to equations and inequalities; and</li> <li>○ interpret linear graphs.</li> </ul> </li> </ul>
ALGI.8A – analyze situations and formulate systems of linear equations in two unknowns to solve problems.	7, 8	<a href="#">Patterns and Equations</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Equation Special Cases</a> <a href="#">Solving systems by graphing</a> <a href="#">Solving systems by elimination</a> <a href="#">Solving systems by elimination 3</a> <a href="#">Problem Solving Word Problems 2</a> <a href="#">Graphical Systems Application Problem</a> <a href="#">Substitution Method 3</a> <a href="#">U06_L3_T1_we3 Graphing Systems of Inequalities</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ write systems of equations from data in tables and word problems;</li> <li>○ solve word problems by setting up systems of equations; and</li> <li>○ solve systems of equations.</li> </ul> </li> </ul>
ALGI.8B – solve systems of linear equations using [concrete] models, graphs, tables, and algebraic methods.	7, 8	<a href="#">Patterns and Equations</a> <a href="#">Word Problem Solving Strategies</a> <a href="#">Equation Special Cases</a> <a href="#">Solving systems by graphing</a> <a href="#">Solving systems by graphing 3</a> <a href="#">Why we do the same thing to both sides basic systems</a> <a href="#">Solving systems by elimination</a> <a href="#">Solving systems by elimination 2</a> <a href="#">Solving systems by substitution 1</a> <a href="#">Solving systems by substitution 2</a> <a href="#">Solving systems by substitution 3</a> <a href="#">Problem Solving Word Problems 2</a> <a href="#">Addition Elimination Method 1</a> <a href="#">Addition Elimination Method 2</a> <a href="#">Addition Elimination Method 3</a> <a href="#">Addition Elimination Method 4</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ write and solve systems of equations.</li> </ul> </li> </ul>

TEKS/SE	Curriculum Unit(s)	Video Title	Rationale <i>(e.g., explanation, justification, etc.)</i>
		<a href="#">Three Equation Application Problem</a> <a href="#">Solving Linear Systems by Graphing</a> <a href="#">Solving Linear Systems by Substitution</a> <a href="#">Special Types of Linear Systems</a>	
ALGI.8C – interpret and determine the reasonableness of solutions to systems of linear equations.	7, 8	<a href="#">Solving systems by graphing 2</a>	<ul style="list-style-type: none"> <li>• This video demonstrates how to:               <ul style="list-style-type: none"> <li>○ solve a system of equations by graphing.</li> </ul> </li> </ul>
ALGI.9A – determine the domain and range for quadratic functions in given situations.	10, 11	<a href="#">Domain and Range of a Function Given a Formula</a> <a href="#">Quadratic Functions 1</a> <a href="#">Quadratic Functions 2</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ determine the equation of a quadratic function given a table of values; and</li> <li>○ identify the vertex, axis of symmetry, and identify the direction of opening of a parabola.</li> </ul> </li> </ul>
ALGI.9D – analyze graphs of quadratic functions and draw conclusions.	10, 11	<a href="#">Applying Quadratic Functions 1</a> <a href="#">Graphing a Quadratic Function</a> <a href="#">Graphs of Quadratic Functions</a> <a href="#">Quadratic Functions 3</a> <a href="#">Domain of a Radical Function</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ identify important information in a word problem to graph a quadratic function;</li> <li>○ graph quadratic functions; and</li> <li>○ identify restrictions on domain.</li> </ul> </li> </ul>
ALGI.10A – solve quadratic equations using [concrete] models, tables, graphs, and algebraic methods.	11	<a href="#">Factoring Special Products</a> <a href="#">Quadratic Functions 3</a> <a href="#">Applying Quadratic Functions 1</a> <a href="#">Applying Quadratic Functions 2</a> <a href="#">Applying Quadratic Functions 3</a> <a href="#">Graphing a Quadratic Function</a> <a href="#">Solving a quadratic by factoring</a> <a href="#">Solving Quadratic Equations by Square Roots</a> <a href="#">Completing the square</a> <a href="#">Graphs of Quadratic Functions</a> <a href="#">Quadratic Functions 3</a> <a href="#">Quadratic Formula 1</a> <a href="#">Solving Quadratic Equations by Factoring</a> <a href="#">Solving Quadratic Equations by Factoring 2</a> <a href="#">Solving Quadratic Equations by Factoring 3</a> <a href="#">Solving a quadratic by factoring</a> <a href="#">Applications Problem Factoring Quadratics</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ solve quadratic equation by factoring and other algebraic methods;</li> <li>○ graph quadratic functions; and</li> <li>○ graph a quadratic function using a table of values;</li> </ul> </li> </ul>

TEKS/SE	Curriculum Unit(s)	Video Title	Rationale <i>(e.g., explanation, justification, etc.)</i>
ALGI.10B – make connections among the solutions (roots) of quadratic equations, the zeros of their related functions, and the horizontal intercepts (x-intercepts) of the graph of the function.	11	<a href="#">Quadratic Functions 3</a> <a href="#">Solving a quadratic by factoring</a> <a href="#">Graphs of Quadratic Functions</a> <a href="#">Quadratic Functions 3</a> <a href="#">Solving a quadratic by factoring</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ graph a quadratic function;</li> <li>○ solve quadratic equations by factoring and other algebraic methods.</li> </ul> </li> </ul>
ALGI.11A – use patterns to generate the laws of exponents and apply them in problem-solving situations.	9, 12	<a href="#">Understanding Exponents</a> <a href="#">Understanding Exponents 2</a> <a href="#">Exponent Rules 1</a> <a href="#">Exponent Rules 2</a> <a href="#">Level 1 Exponents</a> <a href="#">Level 2 Exponents</a> <a href="#">Negative Exponent Intuition</a> <a href="#">Zero, Negative, and Fractional Exponents</a> <a href="#">Exponent Rules Part 1</a> <a href="#">Exponent Rules Part 2</a> <a href="#">Exponent Properties 1</a> <a href="#">Exponent Properties 2</a> <a href="#">Exponent Properties 3</a> <a href="#">Exponent Properties 4</a> <a href="#">Exponent Properties 5</a> <a href="#">Exponent Properties 6</a> <a href="#">Exponent Properties 7</a> <a href="#">Exponent Properties Involving Products</a> <a href="#">Negative and Positive Exponents</a> <a href="#">Exponent Properties Involving Quotients</a> <a href="#">Simplifying Expressions with Exponents</a> <a href="#">Simplifying Expressions with Exponents 2</a> <a href="#">Simplifying Expressions with Exponents 3</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate:               <ul style="list-style-type: none"> <li>○ basic understanding of exponents;</li> <li>○ power rule, negative exponents, and zero power; and</li> <li>○ properties of exponents</li> </ul> </li> </ul>
ALGI.11B – analyze data and represent situations involving inverse variation using models, tables, graphs, or algebraic methods.	12	<a href="#">Linear Algebra: Introduction to the inverse of a function</a> <a href="#">Direct and Inverse Variation</a> <a href="#">Recognizing Direct and Inverse Variation</a> <a href="#">Direct Inverse and Joint Variation</a>	<ul style="list-style-type: none"> <li>• These videos demonstrate how to:               <ul style="list-style-type: none"> <li>○ determine the inverse of a function; and</li> <li>○ solve problems involving inverse and joint variation.</li> </ul> </li> </ul>