Algebra 1 Pacing Guide First Nine Weeks		
	Tennessee State Math Standards	
Module 1: Quantitative Reasoning	A1.A.REI.A.1	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
	A1.N.Q.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
	A1.N.Q.A.2	Identify, interpret, and justify appropriate quantities for the purpose of descriptive modeling. Descriptive modeling refers to understanding and interpreting graphs; identifying extraneous information; choosing appropriate units; etc.
	A1.N.Q.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
Module 2: Algebraic Models	A1.A.SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients.
	A1.A.SSE.A.1b	Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.*
	A1.A.CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear , quadratic, and exponential functions with integer exponents.
	A1.A.CED.A.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
	A1.A.CED.A.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R. Tasks are limited to linear, quadratic, piecedwise, absolute value, and exponential equations with integer exponents. Tasks have a real-world context.★

Module 2: Algebraic Models (con.)	A1.A.REI.B.2	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
Module 3: Functions and Models	A1.F.IF.B.3	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries and end behavior. Tasks are limited to linear, quadratic, absolute value, and exponential functions with domains in the integers. Tasks have a real-world context.★
	A1.F.IF.A.1	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then f(x) denotes the output of f corresponding to the input x. The graph of f is the graph of the equation y = f(x).
	A1.F.IF.A.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
	A1.A.CED.A.1	Create equations and inequalities in one variable and use them to solve problems.Tasks are limited to linear, quadratic, or exponential equations with integer exponents.
Module 4: Patterns and Arithmetic Sequences	A1.F.LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs. Tasks are limited to constructing linear and exponential functions in simple context (not multi-step).
	A1.F.BF.A.1	Determine an explicit expression, a recursive process, or steps for calculation from a context. Tasks are limited to linear, quadratic, and exponential functions with domains in the integers. Tasks have a real-world context. ★

Module 5: Linear Functions	A1.F.LE.A.1a	Recognize that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
	A1.F.LE.A.1b	Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
	A1.F.LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs. Tasks are limited to constructing linear and exponential functions in simple context (not multi-step).
	A1.A.REI.D.5	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).
	A1.F.IF.C.6b	Graph linear and quadratic functions and show intercepts, maxima, and minima.
	A1.F.IF.B.3	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries and end behavior. Tasks are limited to linear, quadratic, absolute value, and exponential functions with domains in the integers. Tasks have a real-world context.★
	F.LE.B.4	Interpret the parameters in a linear or exponential function in terms of a context. For example, the total cost of an electrician who charges 35 dollars for a house call and 50 dollars per hour would be expressed as the function $y = 50x + 35$. If the rate were raised to 65 dollars per hour, describe how the function would change. Exponential functions are limited to those with domains in the integers. Tasks have a real-world context.★
	A1.F.IF.B.5	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. Tasks are limited to linear, quadratic, piecewise-defined (including step and absolute value functions), and exponential functions with domains in the integers. Tasks have a real-world context. ★

Module 5: Linear Functions (con.)	A1.F.LE.A.1a	Recognize that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
	A1.F.LE.A.1b	Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
	A1.F.LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a table, a description of a relationship, or two input-output pairs. Tasks are limited to constructing linear and exponential functions in simple context (not multi-step).
Module 6: Forms of Linear Equations	A1.F.IF.C.6a	Graph linear and quadratic functions and show intercepts, maxima, and minima.
	A1.A.CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations with two variables on coordinate axes with labels and scales.
	A1.A.REI.D.5	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).
	A1.F.BF.B.2	Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Identifying the effect on the graph is limited to linear, quadratic, and absolute value functions. Experimenting with cases and illustrating an explanation of the effects on the graph using technology is limited to linear, quadratic, absolute value, and exponential functions with domains in the integers.
	F.LE.B.4	Interpret the parameters in a linear or exponential function in terms of a context. For example, the total cost of an electrician who charges 35 dollars for a house call and 50 dollars per hour would be expressed as the function y = 50x + 35. If the rate were raised to 65 dollars per hour, describe how the function would change. Exponential functions are limited to those with domains in the integers. Tasks have a real-world context.★

Module 6: Forms of Linear Equations (con.)	A1.F.IF.C.8	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions.) Tasks have a real-world context. Tasks are limited to linear, quadratic, piecewise-defined functions (including step functions and absolute value functions), and exponential functions with domains in the integers. ★

Algebra 1 Pacing Guide Second Nine Weeks		
	Tennessee State Math Standards	
Module 7: Linear Equations and Inequalities	A1.A.CED.A.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
	A1.S.ID.C.5	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
	A1.N.Q.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
	A1.N.Q.A.2	Identify, interpret, and justify appropriate quantities for the purpose of descriptive modeling. Descriptive modeling refers to understanding and interpreting graphs; identifying extraneous information; choosing appropriate units; etc.
	A1.A.REI.D.6	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the approximate solutions using technology. Include cases where $f(x)$ and $g(x)$ are linear, quadratic, absolute value, and exponential functions. For example, $f(x) = 3x+5$ and $g(x) = x^2+1$. Exponential functions are limited to domains in the integers.★
Module 7: Linear Equations and Inequalities (con.)	A1.A.REI.D.7	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Module 9: One-Variable Data Distributions	A1.S.ID.A.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
	A1.S.ID.A.1	Represent single or multiple data sets with dot plots, histograms, stem plots (stem and leaf), and box plots.
Module 10: Linear Modeling and Regression	A1.S.ID.B.4b	Fit a linear function for a scatter plot that suggests a linear association. Emphasize linear, quadratic, and exponential models with domains in the integers.
	A1.S.ID.B.4a	Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models with domains in the integers. Tasks have a real-world context. ★
	A1.S.ID.C.5	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
	A1.S.ID.C.7	Distinguish between correlation and causation.
	F.LE.B.4	Interpret the parameters in a linear or exponential function in terms of a context. For example, the total cost of an electrician who charges 35 dollars for a house call and 50 dollars per hour would be expressed as the function $y = 50x + 35$. If the rate were raised to 65 dollars per hour, describe how the function would change. Exponential functions are limited to those with domains in the integers. Tasks have a real-world context.★
	A1.S.ID.C.6	Use technology to compute and interpret the correlation coefficient of a linear fit.

Module 11: Solving Systems of Linear Equations	A1.A.REI.C.4	Write and solve a system of linear equations in context. Solve systems both algebraically and graphically. Systems are limited to at most two equations in two variables.
Module 12: Modeling with Linear Systems	A1.A.CED.A.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
	F.LE.B.4	Interpret the parameters in a linear or exponential function in terms of a context. For example, the total cost of an electrician who charges 35 dollars for a house call and 50 dollars per hour would be expressed as the function $y = 50x + 35$. If the rate were raised to 65 dollars per hour, describe how the function would change. Exponential functions are limited to those with domains in the integers. Tasks have a real-world context.★
	A1.A.REI.D.7	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.
	A1.A.REI.B.2	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
	A1.A.REI.D.6	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the approximate solutions using technology. Include cases where $f(x)$ and $g(x)$ are linear, quadratic, absolute value, and exponential functions. For example, $f(x) = 3x+5$ and $g(x) = x^2+1$. Exponential functions are limited to domains in the integers.★
	A1.A.CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Tasks are limited to linear, quadratic, or exponential equations with integer exponents.

Module 13: Piecewise Defined Functions	A1.F.IF.C.6b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.
	A1.F.BF.B.2	Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Identifying the effect on the graph is limited to linear, quadratic, and absolute value functions. Experimenting with cases and illustrating an explanation of the effects on the graph using technology is limited to linear, quadratic, absolute value, and exponential functions with domains in the integers.

Algebra 1 Pacing Guide Third Nine Weeks		
	Tennessee State Math Standards	
Module 14: Rational Exponents and Radicals	A1.A.SSE.B.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Tasks have a real-world context. As described in the standard, there is an interplay between the mathematical structure of the expression and the structure of the situation such that choosing and producing an equivalent form of the expression reveals something about the situation.★
	A1.A.SSE.B.3c	Use the properties of exponents to rewrite exponential expressions. For example, the growth of bacteria can be modeled by either $f(t) = 3^{(t+2)}$ or $g(t) = 9(3^t)$ because the expression $3^{(t+2)}$ can be rewritten as $(3^t)(3^2) = 9(3^t)$. Tasks have a real-world context. As described in the standard, there is an interplay between the mathematical structure of the expression and the structure of the situation such that choosing and producing an equivalent form of the expression reveals something about the situation.★
	A1.A.SSE.A.1b	Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.*
Module 15: Geometric Sequences and Exponential Functions	A1.F.LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs. Tasks are limited to constructing linear and exponential functions in simple context (not multi-step).
	A1.F.LE.A.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.
	A1.F.BF.A.1a	Determine an explicit expression, a recursive process, or steps for calculation from a context. Tasks are limited to linear, quadratic, and exponential functions with domains in the integers. Tasks have a real-world context. ★

Module 15: Geometric Sequences and Exponential Functions (con.)	A1.F.IF.A.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
Module 16: Exponential Equations and Models	A1.A.CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Tasks are limited to linear, quadratic, or exponential equations with integer exponents.
	A1.A.SSE.B.3c	Use the properties of exponents to rewrite exponential expressions. For example, the growth of bacteria can be modeled by either $f(t) = 3^{(t+2)}$ or $g(t) = 9(3^t)$ because the expression $3^{(t+2)}$ can be rewritten as $(3^t)(3^2) = 9(3^t)$. Tasks have a real-world context. As described in the standard, there is an interplay between the mathematical structure of the expression and the structure of the situation such that choosing and producing an equivalent form of the expression reveals something about the situation.★
	A1.A.REI.D.6	Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the approximate solutions using technology. Include cases where f(x) and g(x) are linear, quadratic, absolute value, and exponential functions. For example, $f(x) = 3x+5$ and $g(x) = x^2+1$. Exponential functions are limited to domains in the integers.★
	A1.F.BF.A.1	Write a function that describes a relationship between two quantities. Tasks have a real-world context. Tasks are limited to linear, quadratic, and exponential functions with domains in the integers.★
	A1.F.LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs. Tasks are limited to constructing linear and exponential functions in simple context (not multi-step).
	A1.F.IF.B.4	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.★
	A1.F.LE.A.1c	Recognize situations in which a quantity grows or decays by a constant factor per unit interval relative to another.

Module 16: Exponential Equations and Models (con.)	A1.S.ID.B.4a	Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models with domains in the integers. Tasks have a real-world context.
	A1.A.CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
	A1.S.ID.B.4a	Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models with domains in the integers. Tasks have a real-world context.
	A1.F.LEA.1a	Recognize that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
	A1.F.LEA.1b	Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
	A1.F.LE.A.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.
Module 17: Adding and Subtracting Polynomials	A1.A.SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients.
	A1.A.SSE.A.1b	Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.
	A1.A.SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, recognize $53^2 – 47^2$ as a difference of squares and see an opportunity to rewrite it in the easier-to-evaluate form (53+47)(53-47). See an opportunity to rewrite $a^2 + 9a + 14$ as $(a + 7)(a + 2)$. Tasks are limited to numerical expressions and polynomial expressions in one variable.

Module 17: Adding and Subtracting Polynomials (con.)	A1.A.APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
	A1.A.CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Tasks are limited to linear, quadratic, or exponential equations with integer exponents.
Module 18: Multiplying Polynomials	A1.A.APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
	A1.A.SSE.A.1	Interpret expressions that represent a quantity in terms of its context.★
	A1.A.CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Tasks are limited to linear, quadratic, or exponential equations with integer exponents.
Module 19: Graphing Quadratic Functions	A1.F.BF.B.2	Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Identifying the effect on the graph is limited to linear, quadratic, and absolute value functions. Experimenting with cases and illustrating an explanation of the effects on the graph using technology is limited to linear, quadratic, absolute value, and exponential functions with domains in the integers.
	A1.F.IF.A.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.

Module 19: Graphing Quadratic Functions (con.)	A1.F.IF.B.3	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries and end behavior. Tasks are limited to linear, quadratic, absolute value, and exponential functions with domains in the integers. Tasks have a real-world context.★
	A1.F.IF.C.6a	Graph linear and quadratic functions and show intercepts, maxima, and minima.
	A1.F.BF.A.1	Write a function that describes a relationship between two quantities. Tasks have a real-world context. Tasks are limited to linear, quadratic, and exponential functions with domains in the integers.★
	A1.F.IF.C.7	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
Module 20: Connecting Intercepts, Zeros, and Factors	A1.F.IF.C.6a	Graph linear and quadratic functions and show intercepts, maxima, and minima.
	A1.A.REI.B.3	Solve quadratic equations and inequalities in one variable.
	A1.A.APR.B.2	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. Graphing is limited to linear and quadratic polynomials.
	A1.A.REI.D.6	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the approximate solutions using technology. Include cases where $f(x)$ and $g(x)$ are linear, quadratic, absolute value, and exponential functions. For example, $f(x) = 3x+5$ and $g(x) = x^2+1$. Exponential functions are limited to domains in the integers.★
	A1.A.APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Module 20: Connecting Intercepts, Zeros, and Factors (con.)	A1.A.SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, recognize $53^2 - 47^2$ as a difference of squares and see an opportunity to rewrite it in the easier-to-evaluate form (53+47)(53-47). See an opportunity to rewrite $a^2 + 9a + 14$ as (a + 7)(a + 2). Tasks are limited to numerical expressions and polynomial expressions in one variable.
	A1.A.SSE.B.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Tasks have a real-world context. As described in the standard, there is an interplay between the mathematical structure of the expression and the structure of the situation such that choosing and producing an equivalent form of the expression reveals something about the situation.★

Algebra 1 Pacing Guide Fourth Nine Weeks		
	Tennessee State Math Standards	
Module 21: Using Factors to Solve Quadratic Equations	A1.A.SSE.B.3a	Factor a quadratic expression to reveal the zeros of the function it defines.
	A1.A.SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, recognize $53^2 - 47^2$ as a difference of squares and see an opportunity to rewrite it in the easier-to-evaluate form (53+47)(53-47). See an opportunity to rewrite $a^2 + 9a + 14$ as $(a + 7)(a + 2)$. Tasks are limited to numerical expressions and polynomial expressions in one variable.
Module 22: Using Square Roots to Solve Quadratic Equations	A1.A.REI.B.3b	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, knowing and applying the quadratic formula, and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions. Tasks do not require students to write solutions for quadratic equations that have roots with nonzero imaginary parts. However, tasks can require the student to recognize cases in which a quadratic equation has no real solutions. Note: solving a quadratic equation by factoring relies on the connection between zeros and factors of polynomicals. This is formally assessed in Algebra II.
	A1.A.REI.B.3a	Use the method of completing the square to rewrite any quadratic equation in x into an equation of the form $(x – p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
	A1.A.SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, recognize $53^2 - 47^2$ as a difference of squares and see an opportunity to rewrite it in the easier-to-evaluate form (53+47)(53-47). See an opportunity to rewrite $a^2 + 9a + 14$ as $(a + 7)(a + 2)$. Tasks are limited to numerical expressions and polynomial expressions in one variable.
	A1.A.SSE.B.3a	Factor a quadratic expression to reveal the zeros of the function it defines.

Module 23: Linear, Exponential, and Quadratic Models	A1.A.CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations with two variables on coordinate axes with labels and scales.
	A1.F.IF.B.3	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries and end behavior. Tasks are limited to linear, quadratic, absolute value, and exponential functions with domains in the integers. Tasks have a real-world context.★
	A1.F.IF.B.4	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.★
	F-LE.1b	Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
	A1.F.IF.B.5	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. Tasks are limited to linear, quadratic, piecewise-defined (including step and absolute value functions), and exponential functions with domains in the integers. Tasks have a real-world context. ★
	A1.F.LE.A.1	Distinguish between situations that can be modeled with linear functions and with exponential functions.
	A1.F.LE.A.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.

Module 24: Functions and Inverses (Inverses not listed in Algebra 1.)		Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. (Not listed for Algebra 1)
Module 24: Functions and Inverses (Inverses not listed in Algebra 1.) (con.)	A1.F.BF.B.2	Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Identifying the effect on the graph is limited to linear, quadratic, and absolute value functions. Experimenting with cases and illustrating an explanation of the effects on the graph using technology is limited to linear, quadratic, absolute value, and exponential functions with domains in the integers.
	A1.A.CED.A.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R. Tasks are limited to linear, quadratic, piecedwise, absolute value, and exponential equations with integer exponents. Tasks have a real-world context.★
	A1.F.IF.B.4	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.★
	A1.F.IF.C.6b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

Major Content	Standards for Major Content in Algebra 1 are highlighted in the light green color.
Supporting Content	Standards for Supporting Content in Algebra 1 are not highlighted.
★	Mathematical Modeling and tasks have a real-world context.