

Corresponding Section in Algebra 1 Book	PACE	Common Core Unit	Common Core Standard	ALGEBRA 1 MAP
1.1	1st Qrt	UNIT 1	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
1.2	1st Qrt	UNIT 1	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
1.3	1st Qrt	UNIT 1	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
1.3	1st Qrt	UNIT 1	N.Q.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.
1.3	1st Qrt	UNIT 1	N.Q.2	Define appropriate quantities for the purpose of descriptive modeling.
1.4	1st Qrt	UNIT 1	A.CED.1	Create equations and inequalities in one variable and use them to solve problems. Including equations that arise from linear and quadratic functions, and simple rational and exponential functions.
1.4	1st Qrt	UNIT 4	A.CED.1	Create equations and inequalities in one variable and use them to solve problems. Including equations that arise from linear and quadratic functions, and simple rational and exponential functions.
1.4	1st Qrt	UNIT 1	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
1.4	1st Qrt	UNIT 1	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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.
1.5	1st Qrt	UNIT 5	F.IF.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
1.5	1st Qrt	UNIT 1	N.Q.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.
1.6	1st Qrt	UNIT 5	F.IF.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
1.6	1st Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
1.6	1st Qrt	UNIT 1	N.Q.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.
1.6	1st Qrt	UNIT 3	S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).

1.6 all year (real life objects)	1st Qrt	UNIT 2	F.IF.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 $y = f(x)$ .
1.7	1st Qrt	UNIT 2	A.REI.10	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).
1.7	1st Qrt	UNIT 2	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
1.7	1st Qrt	UNIT 5	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
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1.7	1st Qrt	UNIT 1	N.Q.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.
2.1	1st Qrt	UNIT 5	N.RN.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.
2.1	1st Qrt	UNIT 3	S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
2.2	1st Qrt	UNIT 3	S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
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ALG 2 Book - 2.1	1st Qrt	UNIT 2	F.IF.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
3.1	1st Qrt	UNIT 1	A.REI.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
3.1	1st Qrt	UNIT 1	A.REI.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.
3.1	1st Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
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3.4	1st Qrt	UNIT 1	A.REI.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.
3.8	1st Qrt	UNIT 1	A.CED.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 $R$ .
3.8	1st Qrt	UNIT 4	A.CED.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 $R$ .
3.8	1st Qrt	UNIT 1	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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 $P$ .
4.1	2nd Qrt	UNIT 2	A.REI.10	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).
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4.2	2nd Qrt	UNIT 2	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
4.2	2nd Qrt	UNIT 5	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
4.2	2nd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
4.2	2nd Qrt	UNIT 2	F.IF.7a	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima and minima.

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4.4	2nd Qrt	UNIT 2	F.IF.6	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. Using estimation (underlying theme).
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4.4	2nd Qrt	UNIT 3	S.ID.7	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of data.
4.5	2nd Qrt	UNIT 2	A.REI.10	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).
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5.1	2nd Qrt	UNIT 4	A.CED.1	Create equations and inequalities in one variable and use them to solve problems. Including equations that arise from linear and quadratic functions, and simple rational and exponential functions.
5.1	2nd Qrt	UNIT 1	A.CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

5.1	2nd Qrt	UNIT 4	A.CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
5.1	2nd Qrt	UNIT 2	F.BF.1a	Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from a context.
5.1	2nd Qrt	UNIT 2	F.LE.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).
5.2	2nd Qrt	UNIT 1	A.CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
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Page 309/539	2nd Qrt	UNIT 2	F.BF.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.
Page 309/539	2nd Qrt	UNIT 2	F.IF.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of integers.
Page 309/539	2nd Qrt	UNIT 2	F.LE.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).
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5.6	2nd Qrt	UNIT 4	A.CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
5.6	2nd Qrt	UNIT 2	F.BF.1a	Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from a context.
5.6	2nd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
5.6	2nd Qrt	UNIT 2	F.LE.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).
5.6	2nd Qrt	UNIT 2	F.LE.5	Interpret the parameters in a linear or exponential function in terms of a context.
5.6	2nd Qrt	UNIT 3	S.ID.6a	Represent data on two quantitative variables on a scatter lot, and describe how the variables are related. Fit functions to data to solve problems in the context of the data.
5.6	2nd Qrt	UNIT 3	S.ID.6b	Represent data on two quantitative variables on a scatter lot, and describe how the variables are related. Informally assess the fit of a function by plotting and analyzing residuals.
5.6	2nd Qrt	UNIT 3	S.ID.6c	Represent data on two quantitative variables on a scatter lot, and describe how the variables are related. Fit a linear function for a scatter plot that suggests a linear association.
5.6	2nd Qrt	UNIT 3	S.ID.8	Compute Using technology) and interpret the correlation coefficient of a linear fit.
5.6	2nd Qrt	UNIT 3	S.ID.9	Distinguish between correlation and causation.
6.7	2nd Qrt	UNIT 2	A.REI.12	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of strict inequality), and graph the solution to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

6.7	2nd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
7.1	2nd Qrt	UNIT 1	A.CED.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.
7.1 need examples of a line going thru a circle... (geogebra)	2nd Qrt	UNIT 4	A.REI.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$ .
7.1	2nd Qrt	UNIT 2	A.REI.11	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solution of the equation $(x) = g(x)$ ; find the solutions approximately, using technology, by making a table, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.
7.1	2nd Qrt	UNIT 2	A.REI.6	Solve systems of equations exactly and approximately (e.g. with graphs), focusing on pairs of linear equations in two variables.
7.1	2nd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
7.1	2nd Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
7.2	2nd Qrt	UNIT 1	A.CED.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.
7.2 examples with geogebra	2nd Qrt	UNIT 4	A.REI.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$ .
7.2	2nd Qrt	UNIT 2	A.REI.5	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
7.2	2nd Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
7.2	2nd Qrt	UNIT 2	N.RN.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.

7.3	2nd Qrt	UNIT 1	A.CED.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.
7.3 examples with geogebra	2nd Qrt	UNIT 4	A.RE1.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$ .
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7.4	2nd Qrt	UNIT 1	A.CED.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.
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7.6	2nd Qrt	UNIT 2	A.REI.12	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of strict inequality), and graph the solution to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

8.1	3rd Qrt	UNIT 4	A.SSE.3c	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Use the properties of exponents to transform expressions for exponential functions.
8.1	3rd Qrt	UNIT 5	F.IF.8b	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions.
8.1	3rd Qrt	UNIT 2	N.RN.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
8.2	3rd Qrt	UNIT 4	A.SSE.3c	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Use the properties of exponents to transform expressions for exponential functions.
8.2	3rd Qrt	UNIT 5	F.IF.8b	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions.
8.2	3rd Qrt	UNIT 2	N.RN.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
8.3	3rd Qrt	UNIT 4	A.SSE.3c	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Use the properties of exponents to transform expressions for exponential functions.
8.3	3rd Qrt	UNIT 5	F.IF.8b	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions.
8.3	3rd Qrt	UNIT 2	N.RN.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
Page 509	3rd Qrt	UNIT 2	N.RN.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
8.4	3rd Qrt	UNIT 4	A.SSE.3c	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Use the properties of exponents to transform expressions for exponential functions.
8.4	3rd Qrt	UNIT 5	F.IF.8b	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions.
8.5	3rd Qrt	UNIT 4	A.CED.1	Create equations and inequalities in one variable and use them to solve problems. Including equations that arise from linear and quadratic functions, and simple rational and exponential functions.

8.5	3rd Qrt	UNIT 2	F.BF.1b	Write a function that describes a relationship between two quantities. Combine standard function types using arithmetic operations.
8.5	3rd Qrt	UNIT 2	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
8.5	3rd Qrt	UNIT 5	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
8.5	3rd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
8.5	3rd Qrt	UNIT 2	F.IF.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
8.5	3rd Qrt	UNIT 5	F.IF.8b	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions.
8.5	3rd Qrt	UNIT 2	F.LE.1a	Distinguish between situations that can be modeled with linear functions and with exponential functions. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
8.5	3rd Qrt	UNIT 2	F.LE.1b	Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which one quantity changes at a constant rate per unit integral relative to another.
8.5	3rd Qrt	UNIT 2	F.LE.1c	Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.
8.5	3rd Qrt	UNIT 2	F.LE.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).
8.5	3rd Qrt	UNIT 2	F.LE.5	Interpret the parameters in a linear or exponential function in terms of a context.
8.5	3rd Qrt	UNIT 4	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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 $P$ .
8.5 use geogebra &/or graphing calculator	3rd Qrt	UNIT 2	F.IF.7e	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.

8.6	3rd Qrt	UNIT 4	A.CED.1	Create equations and inequalities in one variable and use them to solve problems. Including equations that arise from linear and quadratic functions, and simple rational and exponential functions.
8.6	3rd Qrt	UNIT 2	F.BF.1b	Write a function that describes a relationship between two quantities. Combine standard function types using arithmetic operations.
8.6	3rd Qrt	UNIT 2	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
8.6	3rd Qrt	UNIT 5	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
8.6	3rd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
8.6	3rd Qrt	UNIT 2	F.IF.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
8.6	3rd Qrt	UNIT 2	F.IF.7e	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.
8.6	3rd Qrt	UNIT 5	F.IF.8b	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions.
8.6	3rd Qrt	UNIT 2	F.LE.1a	Distinguish between situations that can be modeled with linear functions and with exponential functions. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
8.6	3rd Qrt	UNIT 2	F.LE.1b	Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
8.6	3rd Qrt	UNIT 2	F.LE.1c	Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.
8.6	3rd Qrt	UNIT 2	F.LE.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).

8.6	3rd Qrt	UNIT 2	F.LE.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.
8.6	3rd Qrt	UNIT 2	F.LE.5	Interpret the parameters in a linear or exponential function in terms of a context.
9.1	3rd Qrt	UNIT 4	A.APR.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under operations of addition, subtraction, and multiplication; add, subtract, multiply polynomials.
9.1	3rd Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.1	3rd Qrt	UNIT 5	F.BF.1b	Write a function that describes a relationship between two quantities. Combine standard function types using arithmetic operations.
9.2	3rd Qrt	UNIT 4	A.APR.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under operations of addition, subtraction, and multiplication; add, subtract, multiply polynomials.
9.2	3rd Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.2	3rd Qrt	UNIT 4	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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.
9.3	3rd Qrt	UNIT 4	A.APR.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under operations of addition, subtraction, and multiplication; add, subtract, multiply polynomials.
9.3	3rd Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.3	3rd Qrt	UNIT 4	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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.
9.3	3rd Qrt	UNIT 4	A.SSE.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$
10.1	3rd Qrt	UNIT 2	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
10.1	3rd Qrt	UNIT 5	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
10.1	3rd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>

10.1	3rd Qrt	UNIT 2	F.IF.7a	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima and minima.
10.1	3rd Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
10.2	3rd Qrt	UNIT 2	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
10.2	3rd Qrt	UNIT 5	F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , 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. <i>Include recognizing even and odd function from their graphs and algebraic expressions.</i>
10.2	3rd Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
10.2	3rd Qrt	UNIT 2	F.IF.7a	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima and minima.
10.2	3rd Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
10.3	3rd Qrt	UNIT 4	A.REI.4a	Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation into an equation of the form $(x-p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
10.3	3rd Qrt	UNIT 4	A.REI.4b	Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g. for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers $a$ and $b$ .
10.3	3rd Qrt	UNIT 5	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
10.3	3rd Qrt	UNIT 2	F.IF.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

10.3	3rd Qrt	UNIT 2	F.IF.7a	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima and minima.
10.3	3rd Qrt	UNIT 2	F.LE.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.
after 10.3	3rd Qrt	UNIT 5	F.IF.7a	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima and minima.
9.4	4th Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.5	4th Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.6	4th Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.6	4th Qrt	UNIT 4	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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.
9.7	4th Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.7	4th Qrt	UNIT 4	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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.
9.7	4th Qrt	UNIT 4	A.SSE.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$
9.8	4th Qrt	UNIT 4	A.SSE.1a	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.
9.8	4th Qrt	UNIT 4	A.SSE.1b	Interpret expressions that represent a quantity in terms of its context. 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.
9.8	4th Qrt	UNIT 4	A.SSE.3a	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Factor a quadratic expression to reveal the zeros of the function it defines.
9.8	4th Qrt	UNIT 4	A.SSE.3b	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Complete the square in a quadratic expression to reveal the max or min value of the function it defines.
9.8	4th Qrt	UNIT 5	F.IF.8a	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.

9.8	4th Qrt	UNIT 2	F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions).
10.4	4th Qrt	UNIT 4	A.REI.4a	Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation into an equation of the form $(x-p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
10.4	4th Qrt	UNIT 4	A.REI.4b	Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g. for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm i$ for real numbers $a$ and $b$ .
10.4	4th Qrt	UNIT 5	F.IF.8a	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
10.5	4th Qrt	UNIT 4	A.REI.4a	Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation into an equation of the form $(x-p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
10.5	4th Qrt	UNIT 4	A.REI.4b	Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g. for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm i$ for real numbers $a$ and $b$ .
10.5	4th Qrt	UNIT 4	A.SSE.3b	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Complete the square in a quadratic expression to reveal the max or min value of the function it defines.
10.5	4th Qrt	UNIT 5	F.IF.8a	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
10.6	4th Qrt	UNIT 4	A.REI.4a	Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation into an equation of the form $(x-p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
10.6	4th Qrt	UNIT 4	A.REI.4b	Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g. for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm i$ for real numbers $a$ and $b$ .
10.8	4th Qrt	UNIT 5	F.BF.1a	Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from a context.
10.8	4th Qrt	UNIT 2	F.LE.1a	Distinguish between situations that can be modeled with linear functions and with exponential functions. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.

10.8	4th Qrt	UNIT 2	F.LE.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.
11.1	4th Qrt	UNIT 2	F.IF.4	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. <i>Key features include: intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative max and mi; symmetries; end behavior; and periodicity.</i>
after 11.1	4th Qrt	UNIT 5	F.IF.7b	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.
13.6	4th Qrt	UNIT 3	S.ID.2	Use statistics appropriate o the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
13.6	4th Qrt	UNIT 3	S.ID.5	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
13.7	4th Qrt	UNIT 3	S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
13.7	4th Qrt	UNIT 3	S.ID.2	Use statistics appropriate o the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
13.7	4th Qrt	UNIT 3	S.ID.5	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
13.8	4th Qrt	UNIT 3	S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
13.8	4th Qrt	UNIT 3	S.ID.2	Use statistics appropriate o the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
13.8	4th Qrt	UNIT 3	S.ID.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
13.8	4th Qrt	UNIT 3	S.ID.5	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
A2 Book P 426, 16-21	4th Qrt	UNIT 5	F.BF.4a	Find Inverse functions. Solve an equation of the form $f(x) = c$ for a simple function that has an inverse and write an expression for the inverse.