

Standard ID	Standard Text	Edgenuity Lesson Name
Practice Standards		
MP.1	Make sense of problems and persevere in solving them.	Quantitative Reasoning Dimensional Analysis Writing and Solving Equations in Two Variables Writing and Graphing Equations in Two Variables Function Notation Evaluating Functions Analyzing Graphs Point-Slope Form of a Line Writing Linear Equations Solving Mixture Problems Solving Absolute Value Equations Solving Systems: Introduction to Linear Combinations Solving Systems of Linear Equations: Linear Combinations Graphing Two-Variable Linear Inequalities Reflections and Dilations of Absolute Value Functions Exponential Functions with Radical Bases Introduction to the Quadratic Formula Describing Data Two-Way Tables Relative Frequencies and Association Box Plots Analyzing Residuals Strength of Correlation

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MP.2	Reason abstractly and quantitatively.	Quantitative Reasoning Dimensional Analysis Writing and Solving Equations in Two Variables Writing and Graphing Equations in Two Variables Introduction to Functions Function Notation Evaluating Functions Analyzing Graphs Introduction to Linear Functions Solving Linear Equations: Variable on One Side Solving Linear Equations: Variables on Both Sides Solving Mixture Problems Literal Equations Solving One-Variable Inequalities Solving Systems of Linear Equations: Substitution Step Functions Absolute Value Functions and Translations Exponential Growth Functions Exponential Decay Functions Introduction to Quadratic Functions Quadratic Functions: Standard Form Quadratic Functions: Factored Form

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MP.3	Construct viable arguments and critique the reasoning of others.	Slope of a Line Writing Linear Equations Special Linear Relationships Solving Linear Equations: Variables on Both Sides Solving Linear Equations: Distributive Property Reflections of Exponential Functions Introduction to Polynomials Solving Quadratic Equations: Factoring Solving Quadratic Equations: Square Root Property Solving Quadratic Equations: Completing the Square Solving Quadratic Equations: Completing the Square (Continued) Modeling with Quadratic Equations Regression Models
MP.4	Model with mathematics.	Writing and Solving Equations in Two Variables Writing and Graphing Equations in Two Variables Function Notation Writing Linear Equations Solving Linear Equations: Variable on One Side Solving Mixture Problems Solving One-Variable Inequalities Introduction to Compound Inequalities Solving Systems: Introduction to Linear Combinations

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MP.4	Model with mathematics. (Cont'd)	Solving Systems of Linear Equations: Linear Combinations Modeling with Systems of Linear Inequalities Exponential Growth Functions Exponential Decay Functions Modeling with Quadratic Functions Measures of Center Line of Best Fit Regression Models
MP.5	Use appropriate tools strategically.	Dimensional Analysis Slope-Intercept Form of a Line Point-Slope Form of a Line Writing Linear Equations Solving Systems of Linear Equations: Graphing Factoring Trinomials: $a = 1$ Factoring Trinomials: $a > 1$ Factoring Polynomials: Difference of Squares Quadratic Functions: Factored Form
MP.6	Attend to precision.	Dimensional Analysis
MP.7	Look for and make use of structure.	Evaluating Functions Recognizing Patterns Solving Systems of Linear Inequalities Linear Piecewise Defined Functions Absolute Value Functions and Translations Reflections and Dilations of Absolute Value Functions The Square Root Function

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MP.7	Look for and make use of structure.	
	<i>(Cont'd)</i>	
		The Cube Root Function
		Vertical Stretches and Shrinks of
		Exponential Functions
		Translations of Exponential
		Functions
		Geometric Sequences
		Adding and Subtracting
		Polynomials
		Multiplying Monomials and
		Binomials
		Multiplying Polynomials and
		Simplifying Expressions
		Factoring Polynomials: GCF
		Factoring Polynomials: Double
		Grouping
		Factoring Trinomials: $a = 1$
		Factoring Trinomials: $a = 1$
		<i>(Continued)</i>
		Factoring Trinomials: $a > 1$
		Factoring Polynomials: Difference
		of Squares
		Factoring Polynomials: Sum and
		Difference of Cubes
		Factoring Polynomials Completely
		Quadratic Functions: Vertex Form
		Completing the Square
		Completing the Square
		<i>(Continued)</i>
		Solving Quadratic Equations: Zero
		Product Property
		Solving Quadratic Equations:
		Completing the Square
		Solving Quadratic Equations:
		Completing the Square
		<i>(Continued)</i>

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MP.7	Look for and make use of structure.	
	<i>(Cont'd)</i>	
		Solving Quadratic Equations: Quadratic Formula
		Solving Linear-Quadratic Systems
		Standard Deviation
MP.8	Look for and express regularity in repeated reasoning.	
		Recognizing Patterns
		Introduction to Linear Functions
		Solving Absolute Value Equations
N-RN	The Real Number System	
	Extend the properties of exponents to rational exponents.	
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.	
		Exponential Functions with Radical Bases
N-RN.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.	
		Exponential Functions with Radical Bases
		The Cube Root Function
	Use properties of rational and irrational numbers.	
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.	
		Solving Quadratic Equations: Completing the Square
N-Q	Quantities	
	Reason quantitatively and use units to solve problems.	
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.	
		Dimensional Analysis
		Line of Best Fit
		Quantitative Reasoning
		Writing and Graphing Equations in Two Variables

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N-Q.2	Define appropriate quantities for the purpose of descriptive modeling.	Dimensional Analysis Quantitative Reasoning
N-Q.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	Dimensional Analysis
A-SSE	Seeing Structure in Expressions	
	Interpret the structure of expressions	
A-SSE.1	Interpret expressions that represent a quantity in terms of its context.	
A-SSE.1.a	Interpret parts of an expression, such as terms, factors, and coefficients.	Introduction to Polynomials Multiplying Polynomials and Simplifying Expressions
A-SSE.1.b	Interpret complicated expressions by viewing one or more of their parts as a single entity.	Factoring Polynomials: GCF
A-SSE.2	Use the structure of an expression to identify ways to rewrite it.	Factoring Polynomials Completely Factoring Polynomials: Difference of Squares Factoring Polynomials: Double Grouping Factoring Polynomials: GCF Factoring Polynomials: Sum and Difference of Cubes Factoring Trinomials: $a = 1$ Factoring Trinomials: $a = 1$ (Continued) Factoring Trinomials: $a > 1$ Introduction to Polynomials
	Write expressions in equivalent forms to solve problems	
A-SSE.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.	
A-SSE.3.a	Factor a quadratic expression to reveal the zeros of the function it defines.	Quadratic Functions: Standard Form

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A-SSE.3.b	Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.	
		Completing the Square
		Completing the Square
		(Continued)
A-SSE.3.c	Use the properties of exponents to transform expressions for exponential functions.	
		Exponential Decay Functions
		Exponential Functions with Radical
		Bases
A-APR	Arithmetic with Polynomials and Rational Expressions	
	Perform arithmetic operations on polynomials	
A-APR.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.	
		Adding and Subtracting
		Polynomials
		Multiplying Monomials and
		Binomials
		Multiplying Polynomials and
		Simplifying Expressions
A-CED	Creating Equations	
	Create equations that describe numbers or relationships	
A-CED.1	Create equations and inequalities in one variable and use them to solve problems.	
		Introduction to Compound
		Inequalities
		Solving Absolute Value Equations
		Solving Linear Equations:
		Distributive Property
		Solving Linear Equations: Variable
		on One Side
		Solving Linear Equations: Variables
		on Both Sides
		Solving Mixture Problems
		Solving One-Variable Inequalities
		Solving Rate Problems

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A-CED.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Writing and Graphing Equations in Two Variables Writing and Solving Equations in Two Variables
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.	Introduction to Compound Inequalities Modeling with Systems of Linear Equations Modeling with Systems of Linear Inequalities Modeling with Two-Variable Linear Inequalities Regression Models Solving Absolute Value Equations Solving Linear Equations: Distributive Property Solving Mixture Problems Solving Rate Problems Solving Systems of Linear Equations: Linear Combinations Solving Systems of Linear Equations: Substitution Solving Systems: Introduction to Linear Combinations Writing and Solving Equations in Two Variables
A-CED.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.	Literal Equations

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A-REI	Reasoning with Equations and Inequalities	
	Understand solving equations as a process of reasoning and explain the reasoning	
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.	
		Literal Equations
		Solving Linear Equations: Variable on One Side
		Solving Linear Equations: Variables on Both Sides
	Solve equations and inequalities in one variable	
A-REI.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	
		Literal Equations
		Solving Absolute Value Equations
		Solving Linear Equations: Distributive Property
		Solving Linear Equations: Variable on One Side
		Solving Linear Equations: Variables on Both Sides
		Solving Mixture Problems
		Solving One-Variable Inequalities
		Solving Rate Problems
A-REI.4	Solve quadratic equations in one variable.	
A-REI.4.a	Use the method of completing the square to transform 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.	
		Introduction to the Quadratic Formula
		Solving Quadratic Equations: Completing the Square
		Solving Quadratic Equations: Completing the Square
		(Continued)

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A-REI.4.b	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 .	Introduction to the Quadratic Formula Modeling with Quadratic Equations Solving Quadratic Equations: Completing the Square Solving Quadratic Equations: Completing the Square (Continued) Solving Quadratic Equations: Factoring Solving Quadratic Equations: Quadratic Formula Solving Quadratic Equations: Square Root Property Solving Quadratic Equations: Zero Product Property
Solve systems of equations		
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.	Solving Systems: Introduction to Linear Combinations
A-REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Modeling with Systems of Linear Equations Solving Systems of Linear Equations: Graphing Solving Systems of Linear Equations: Linear Combinations Solving Systems of Linear Equations: Substitution Solving Systems: Introduction to Linear Combinations
A-REI.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.	

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Solving Linear-Quadratic Systems

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Represent and solve equations and inequalities graphically		
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).	Writing and Graphing Equations in Two Variables
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 solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.	Solving Linear Equations: Variable on One Side Solving Linear Equations: Variables on Both Sides Solving Linear-Quadratic Systems
A-REI.12	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.	Graphing Two-Variable Linear Inequalities Modeling with Systems of Linear Inequalities Modeling with Two-Variable Linear Inequalities Solving Systems of Linear Inequalities
F-IF Interpreting Functions		
Understand the concept of a function and use function notation		
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 $y = f(x)$.	Analyzing Graphs Analyzing Tables Introduction to Functions Introduction to Linear Functions Point-Slope Form of a Line

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F-IF.1	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element <i>(Cont'd)</i>	Slope-Intercept Form of a Line Writing Linear Equations
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.	Absolute Value Functions and Translations Evaluating Functions Function Notation Line of Best Fit Linear Piecewise Defined Functions Recognizing Patterns Reflections and Dilations of Absolute Value Functions Regression Models Step Functions The Cube Root Function The Square Root Function
F-IF.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.	Geometric Sequences Recognizing Patterns Special Linear Relationships
Interpret functions that arise in applications in terms of the context		
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.	Analyzing Graphs Analyzing Tables Completing the Square Completing the Square (Continued) Introduction to Quadratic Functions Modeling with Quadratic Functions

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F-IF.4	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms (<i>Cont'd</i>)	Quadratic Functions: Factored Form Quadratic Functions: Vertex Form Special Linear Relationships
F-IF.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.	Absolute Value Functions and Translations Analyzing Graphs Introduction to Linear Functions Linear Piecewise Defined Functions Point-Slope Form of a Line Reflections and Dilations of Absolute Value Functions Slope-Intercept Form of a Line Special Linear Relationships Step Functions The Cube Root Function The Square Root Function Writing Linear Equations
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.	Introduction to Linear Functions Performance Task: Super Survey Simulator Point-Slope Form of a Line Slope of a Line Slope-Intercept Form of a Line Writing Linear Equations

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F-IF.7	Analyze functions using different representations Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.	
F-IF.7.a	Graph linear and quadratic functions and show intercepts, maxima, and minima.	Completing the Square Completing the Square (Continued) Introduction to Quadratic Functions Modeling with Quadratic Functions Point-Slope Form of a Line Quadratic Functions: Factored Form Quadratic Functions: Standard Form Quadratic Functions: Vertex Form Slope-Intercept Form of a Line
F-IF.7.b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	Absolute Value Functions and Translations Linear Piecewise Defined Functions Performance Task: Construct and Analyze Piecewise Functions Reflections and Dilations of Absolute Value Functions Step Functions The Square Root Function
F-IF.7.e	Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.	Exponential Decay Functions Exponential Growth Functions Reflections of Exponential Functions Translations of Exponential Functions Vertical Stretches and Shrinks of Exponential Functions

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F-IF.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	
F-IF.8.a	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.	Completing the Square Completing the Square (Continued) Modeling with Quadratic Functions
F-IF.8.b	Use the properties of exponents to interpret expressions for exponential functions.	Reflections of Exponential Functions
F-IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).	Introduction to Linear Functions Quadratic Functions: Factored Form
F-BF	Building Functions	
F-BF.1	Build a function that models a relationship between two quantities	
F-BF.1	Write a function that describes a relationship between two quantities.	
F-BF.1.a	Determine an explicit expression, a recursive process, or steps for calculation from a context.	Geometric Sequences Recognizing Patterns Special Linear Relationships
F-BF.1.b	Combine standard function types using arithmetic operations.	Translations of Exponential Functions
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.	Geometric Sequences Special Linear Relationships

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	Build new functions from existing functions	
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.	Absolute Value Functions and Translations Quadratic Functions: Vertex Form Reflections and Dilations of Absolute Value Functions Reflections of Exponential Functions The Cube Root Function The Square Root Function Translations of Exponential Functions Vertical Stretches and Shrinks of Exponential Functions
F-BF.4	Find inverse functions.	
F-BF.4.a	Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse.	Evaluating Functions
F-LE	Linear, Quadratic, and Exponential Models	
	Construct and compare linear, quadratic, and exponential models and solve problems	
F-LE.1	Distinguish between situations that can be modeled with linear functions and with exponential functions.	
F-LE.1.a	Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.	Exponential Growth Functions Introduction to Linear Functions
F-LE.1.b	Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.	Introduction to Linear Functions Point-Slope Form of a Line Slope of a Line Slope-Intercept Form of a Line Writing Linear Equations

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F-LE.1.c	Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.	
		Exponential Decay Functions Exponential Growth Functions
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 (include reading these from a table).	
		Geometric Sequences Special Linear Relationships
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.	
		Exponential Growth Functions
	Interpret expressions for functions in terms of the situation they model	
F-LE.5	Interpret the parameters in a linear or exponential function in terms of a context.	
		Exponential Decay Functions Exponential Growth Functions Reflections of Exponential Functions Translations of Exponential Functions Vertical Stretches and Shrinks of Exponential Functions
S-ID	Interpreting Categorical and Quantitative Data	
	Summarize, represent, and interpret data on a single count or measurement variable	
S-ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).	
		Box Plots Measures of Center
S-ID.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.	
		Box Plots Measures of Center Standard Deviation

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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).	Box Plots Describing Data Measures of Center Standard Deviation
Summarize, represent, and interpret data on two categorical and quantitative variables		
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.	Relative Frequencies and Association Two-Way Tables
Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.		
S-ID.6.a	Fit a function to the data; use functions fitted to data to solve problems in the context of the data.	Analyzing Residuals Line of Best Fit Regression Models
S-ID.6.b	Informally assess the fit of a function by plotting and analyzing residuals.	Analyzing Residuals
S-ID.6.c	Fit a linear function for a scatter plot that suggests a linear association.	Analyzing Residuals Line of Best Fit Regression Models Strength of Correlation
Interpret linear models		
S-ID.7	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	Line of Best Fit Regression Models
S-ID.8	Compute (using technology) and interpret the correlation coefficient of a linear fit.	Strength of Correlation
S-ID.9	Distinguish between correlation and causation.	Strength of Correlation