EUREKA MATH™

ABOUT *EUREKA MATH*	Created by the nonprofit Great Minds, *Eureka Math* helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students' mastery of math.
	Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.
ALIGNED	*Eureka Math* is the only curriculum found by EdReports.org to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. Great Minds offers detailed analyses which demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.
DATA	Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.
FULL SUITE OF RESOURCES	As a nonprofit, Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.
	The teacher–writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources

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1

ALGEBRA 1

The majority of the Algebra 1 Arizona Mathematics Standards are fully covered by the Algebra I *Eureka Math* curriculum. The areas where the Algebra 1 Arizona Mathematics Standards and Algebra I *Eureka Math* do not align will require the use of *Eureka Math* content from another course or supplemental materials. A detailed analysis of alignment is provided in the table below. With strategic placement of supplemental materials, *Eureka Math* can ensure students are successful in achieving the proficiencies of the Arizona Mathematics Standards while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

Green indicates that the Arizona standard is fully addressed in *Eureka Math*.

Yellow indicates that the Arizona standard may not be completely addressed in *Eureka Math*.

Red indicates that the Arizona standard is not addressed in *Eureka Math*.

Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Arizona standards and in *Eureka Math*.

Standards for Mathematical Practice	**Aligned Components of *Eureka Math***
1: Make sense of problems and persevere in solving them. Mathematically proficient students explain to themselves the meaning of a problem, look for entry points to begin work on the problem, and plan and choose a solution pathway. While engaging in productive struggle to solve a problem, they continually ask themselves, "Does this make sense?" to monitor and evaluate their progress and change course if necessary. Once they have a solution, they look back at the problem to determine if the solution is reasonable and accurate. Mathematically proficient students check their solutions to problems using different methods, approaches, or representations. They also compare and understand different representations of problems and different solution pathways, both their own and those of others.	Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 1, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M2: Descriptive Statistics Algebra I M3: Linear and Exponential Functions Algebra I M4: Polynomial and Quadratic Expressions, Equations, and Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions

Standards for Mathematical Practice	**Aligned Components of *Eureka Math***
2: Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations. Students can contextualize and decontextualize problems involving quantitative relationships. They contextualize quantities, operations, and expressions by describing a corresponding situation. They decontextualize a situation by representing it symbolically. As they manipulate the symbols, they can pause as needed to access the meaning of the numbers, the units, and the operations that the symbols represent. Mathematically proficient students know and flexibly use different properties of operations, numbers, and geometric objects and when appropriate they interpret their solution in terms of the context.	Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 2, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M2: Descriptive Statistics Algebra I M3: Linear and Exponential Functions Algebra I M4: Polynomial and Quadratic Expressions, Equations, and Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions

Standards for Mathematical Practice	**Aligned Components of *Eureka Math***
3: Construct viable arguments and critique the reasoning of others. Mathematically proficient students construct mathematical arguments (explain the reasoning underlying a strategy, solution, or conjecture) using concrete, pictorial, or symbolic referents. Arguments may also rely on definitions, assumptions, previously established results, properties, or structures. Mathematically proficient students make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. Mathematically proficient students present their arguments in the form of representations, actions on those representations, and explanations in words (oral or written). Students critique others by affirming or questioning the reasoning of others. They can listen to or read the reasoning of others, decide whether it makes sense, ask questions to clarify or improve the reasoning, and validate or build on it. Mathematically proficient students can communicate their arguments, compare them to others, and reconsider their own arguments in response to the critiques of others.	Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M2: Descriptive Statistics

Standards for Mathematical Practice	**Aligned Components of *Eureka Math***
4: Model with mathematics. Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. When given a problem in a contextual situation, they identify the mathematical elements of a situation and create a mathematical model that represents those mathematical elements and the relationships among them. Mathematically proficient students use their model to analyze the relationships and draw conclusions. They interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.	Lessons in every module engage students in modeling with mathematics as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M2: Descriptive Statistics Algebra I M3: Linear and Exponential Functions Algebra I M4: Polynomial and Quadratic Expressions, Equations, and Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions

Standards for Mathematical Practice	**Aligned Components of _Eureka Math_**
5: Use appropriate tools strategically. Mathematically proficient students consider available tools when solving a mathematical problem. They choose tools that are relevant and useful to the problem at hand. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful; recognizing both the insight to be gained and their limitations. Students deepen their understanding of mathematical concepts when using tools to visualize, explore, compare, communicate, make and test predictions, and understand the thinking of others.	Lessons in every module engage students in using appropriate tools strategically as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 5, which is specifically addressed in the following modules: Algebra I M2: Descriptive Statistics Algebra I M4: Polynomial and Quadratic Expressions, Equations, and Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions
6: Attend to precision. Mathematically proficient students clearly communicate to others using appropriate mathematical terminology, and craft explanations that convey their reasoning. When making mathematical arguments about a solution, strategy, or conjecture, they describe mathematical relationships and connect their words clearly to their representations. Mathematically proficient students understand meanings of symbols used in mathematics, calculate accurately and efficiently, label quantities appropriately, and record their work clearly and concisely.	Lessons in every module engage students in attending to precision as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 6, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M2: Descriptive Statistics Algebra I M4: Polynomial and Quadratic Expressions, Equations, and Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
7: Look for and make use of structure. Mathematically proficient students use structure and patterns to assist in making connections among mathematical ideas or concepts when making sense of mathematics. Students recognize and apply general mathematical rules to complex situations. They are able to compose and decompose mathematical ideas and notations into familiar relationships. Mathematically proficient students manage their own progress, stepping back for an overview and shifting perspective when needed.	Lessons in every module engage students in looking for and making use of structure as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 7, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M3: Linear and Exponential Functions Algebra I M4: Polynomial and Quadratic Expressions, Equations, and Functions
8: Look for and express regularity in repeated reasoning. Mathematically proficient students look for and describe regularities as they solve multiple related problems. They formulate conjectures about what they notice and communicate observations with precision. While solving problems, students maintain oversight of the process and continually evaluate the reasonableness of their results. This informs and strengthens their understanding of the structure of mathematics which leads to fluency.	Lessons in every module engage students in looking for and expressing regularity in repeated reasoning as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 8, which is specifically addressed in the following modules: Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M3: Linear and Exponential Functions

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Number and Quantity	The Real Number System	**Cluster: Use properties of rational and irrational numbers.**	
		A1.N-RN.B.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.	Algebra I M4 Lesson 13: Solving Quadratic Equations by Completing the Square
	Quantities	**Cluster: Reason quantitatively and use units to solve problems.**	
		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, include utilizing real-world context.	Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs
		A1.N-Q.A.2 Define appropriate quantities for the purpose of descriptive modeling. Include problem-solving opportunities utilizing real-world context.	Algebra I M1 Topic A: Introduction to Functions Studied this Year—Graphing Stories Algebra I M5: A Synthesis of Modeling with Equations and Functions

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.N-Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities utilizing real-world context.		Algebra I M1 Topic A: Introduction to Functions Studied this Year—Graphing Stories Algebra I M5: A Synthesis of Modeling with Equations and Functions
Algebra	Seeing Structure in Expressions	**Cluster: Interpret the structure of expressions.**		
		A1.A-SSE.A.1 Interpret expressions that represent a quantity in terms of its context.		
		a. Interpret parts of an expression, such as terms, factors, and coefficients.		Algebra I M4 Lessons 1–2: Multiplying and Factoring Polynomial Expressions Algebra I M4 Lessons 3–4: Advanced Factoring Strategies for Quadratic Expressions
		b. Interpret expressions by viewing one or more of their parts as a single entity.		Algebra I M1 Topic D: Creating Equations to Solve Problems Algebra I M3 Topic A: Linear and Exponential Sequences Algebra I M4 Lesson 6: Solving Basic One-Variable Quadratic Equations Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.A-SSE.A.2 Use structure to identify ways to rewrite numerical and polynomial expressions. Focus on polynomial multiplication and factoring patterns.		Algebra I M1 Topic B: The Structure of Expressions Algebra I M1 Lesson 17: Equations Involving Factored Expressions Algebra I M4 Topic A: Quadratic Expressions, Equations, Functions, and Their Connection to Rectangles Algebra I M4 Lessons 11–12: Completing the Square
		Cluster: Write expressions in equivalent forms to solve problems.		
		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.		
		a. Factor a quadratic expression to reveal the zeros of the function it defines.		Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 15: Using the Quadratic Formula
		b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.		Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Arithmetic with Polynomials and Rational Expressions	**Cluster: Perform arithmetic operations on 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.	Algebra I M1 Topic B: The Structure of Expressions Algebra I M4 Lessons 1–2: Multiplying and Factoring Polynomial Expressions Algebra I M4 Lessons 3–4: Advanced Factoring Strategies for Quadratic Expressions
		Cluster: Understand the relationship between zeros and factors of polynomials.	
		A1.A-APR.B.3 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. Focus on quadratic and cubic polynomials in which linear and quadratic factors are available.	Algebra II M1 Lesson 11: The Special Role of Zero in Factoring Algebra II M1 Lesson 14: Graphing Factored Polynomials

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Creating Equations	**Cluster: Create equations that describe numbers or relationships.**	
		A1.A-CED.A.1 Create equations and inequalities in one variable and use them to solve problems. Include problem-solving opportunities utilizing real-world context. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).	Algebra I M1 Lesson 18: Equations Involving a Variable Expression in the Denominator Algebra I M1 Topic D: Creating Equations to Solve Problems Algebra I M4 Lesson 6: Solving Basic One-Variable Quadratic Equations Algebra I M4 Lesson 7: Creating and Solving Quadratic Equations in One Variable Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		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.	Algebra I M1 Lesson 5: Two Graphing Stories Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables Algebra I M1 Lesson 23: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities Algebra I M1 Lesson 28: Federal Income Tax Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lessons 23–24: Modeling with Quadratic Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		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 non-viable options in a modeling context.	Algebra I M1 Lesson 15: Solution Sets of Two or More Equations (or Inequalities) Joined by "And" or "Or" Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities Algebra I M1 Lesson 27: Recursive Challenge Problem— The Double and Add 5 Game Algebra I M3 Topic B: Functions and Their Graphs Algebra I M3 Lesson 24: Piecewise and Step Functions in Context
		A1.A-CED.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.	Algebra I M1 Lesson 19: Rearranging Formulas

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Reasoning with Equations and Inequalities	**Cluster: Understand solving equations as a process of reasoning and explain the reasoning.**	
		A1.A-REI.A.1 Explain each step in solving linear and quadratic equations 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.	Algebra I M1 Lesson 12: Solving Equations Algebra I M1 Lesson 13: Some Potential Dangers when Solving Equations Algebra I M1 Lesson 17: Equations Involving Factored Expressions Algebra I M1 Lesson 18: Equations Involving a Variable Expression in the Denominator
		Cluster: Solve equations and inequalities in one variable.	
		A1.A-REI.B.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.A-REI.B.4 Solve quadratic equations in one variable.		
		a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - k)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.		Algebra I M4 Lesson 13: Solving Quadratic Equations by Completing the Square Algebra I M4 Lesson 14: Deriving the Quadratic Formula
		b. Solve quadratic equations by inspection (e.g., $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Focus on solutions for quadratic equations that have real roots. Include cases that recognize when a quadratic equation has no real solutions.		Algebra I M4 Lesson 5: The Zero Product Property Algebra I M4 Lesson 6: Solving Basic One-Variable Quadratic Equations Algebra I M4 Lesson 7: Creating and Solving Quadratic Equations in One Variable Algebra I M4 Lesson 13: Solving Quadratic Equations by Completing the Square Algebra I M4 Lesson 14: Deriving the Quadratic Formula Algebra I M4 Lesson 15: Using the Quadratic Formula Algebra II M1 Lesson 31: Systems of Equations Algebra II M1 Lesson 38: Complex Numbers as Solutions to Equations

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		Cluster: Solve systems of equations.	
		A1.A-REI.C.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.	Algebra I M1 Lesson 23: Solution Sets to Simultaneous Equations
		A1.A-REI.C.6 Solve systems of linear equations exactly and approximately, focusing on pairs of linear equations in two variables. Include problem solving opportunities utilizing real-world context.	Algebra I M1 Lessons 22–23: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities Algebra I M4 Lesson 24: Modeling with Quadratic Functions
		Cluster: Represent and solve equations and inequalities graphically.	
		A1.A-REI.D.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.	Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.A-REI.D.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). Focus on cases where $f(x)$ and/or $g(x)$ are linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).		Algebra I M3 Lesson 16: Graphs Can Solve Equations Too Algebra II M1 Lesson 36: Overcoming a Third Obstacle to Factoring—What If There Are No Real Number Solutions? Algebra II M3 Lesson 24: Solving Exponential Equations
		A1.A-REI.D.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.		Algebra I M1 Lesson 21: Solution Sets to Inequalities with Two Variables Algebra I M1 Lesson 22: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
Functions	Interpreting Functions	**Cluster: Understand the concept of a function and use function notation.**		
		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 $y = f(x)$.		Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns? Algebra I M3 Lesson 12: The Graph of the Equation $y = f(x)$
		A1.F-IF.A.2 Evaluate a function for inputs in the domain, and interpret statements that use function notation in terms of a context.		Algebra I M3: Linear and Exponential Functions
		A1.F-IF.A.3 Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.		Algebra I M3 Lesson 2: Recursive Formulas for Sequences Algebra I M3 Lesson 3: Arithmetic and Geometric Sequences Algebra I M3 Lesson 4: Why Do Banks Pay YOU to Provide Their Services?

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		Cluster: Interpret functions that arise in applications in terms of the context.	
		A1.F-IF.B.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. Include problem-solving opportunities utilizing real-world context. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).	Algebra I M3 Lesson 13: Interpreting the Graph of a Function Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Topic D: Using Functions and Graphs to Solve Problems Algebra I M4 Lesson 8: Exploring the Symmetry in Graphs of Quadratic Functions Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 10: Interpreting Quadratic Functions from Graphs and Tables Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways Algebra I M5: A Synthesis of Modeling with Equations and Functions

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.F-IF.B.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.		Algebra I M3 Topic B: Functions and Their Graphs Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M5 Lesson 1: Analyzing a Graph Algebra I M5 Lesson 4: Modeling a Context from a Graph
		A1.F-IF.B.6 Calculate and interpret the average rate of change of a continuous function (presented symbolically or as a table) on a closed interval. Estimate the rate of change from a graph. Include problem-solving opportunities utilizing real-world context. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).		Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M3 Topic D: Using Functions and Graphs to Solve Problems Algebra I M4 Lesson 8: Exploring the Symmetry in Graphs of Quadratic Functions Algebra I M4 Lesson 10: Interpreting Quadratic Functions from Graphs and Tables Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways Algebra I M5 Lesson 4: Modeling a Context from a Graph Note: Supplemental material is necessary to address absolute value.

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		Cluster: Analyze functions using different representations.	
		A1.F-IF.C.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).	Algebra I M3 Lesson 11: The Graph of a Function Algebra I M3 Lesson 12: The Graph of the Equation $y = f(x)$ Algebra I M3 Lesson 16: Graphs Can Solve Equations Too Algebra I M3 Lesson 19: Four Interesting Transformations of Functions Algebra I M4 Lesson 8: Exploring the Symmetry in Graphs of Quadratic Functions Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Topic C: Function Transformations and Modeling

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.F-IF.C.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.		
		a. Use the process of factoring and completing the square of a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.		Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Topic B: Using Different Forms for Quadratic Functions Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$ Algebra I M4 Lesson 23: Modeling with Quadratic Functions
		A1.F-IF.C.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).		Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways Note: Supplemental material is necessary to address absolute value.

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Building Functions	**Cluster: Build a function that models a relationship between two quantities.**	
		A1.F-BF.A.1 Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from real-world context. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).	Algebra I M3: Linear and Exponential Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions Note: Supplemental material is necessary to address absolute value.
		Cluster: Build new functions from existing functions.	
		A1.F-BF.B.3 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. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).	Algebra I M3 Topic C: Transformations of Functions Algebra I M4 Lesson 19: Translating Graphs of Functions Algebra I M4 Lesson 20: Stretching and Shrinking Graphs of Functions Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$ Note: Supplemental material is necessary to address absolute value.

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Linear, Quadratic, and Exponential Models	**Cluster: Construct and compare linear, quadratic, and exponential models and solve problems.**	
		A1.F-LE.A.1 Distinguish between situations that can be modeled with linear functions and with exponential functions.	
		a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.	Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates
		b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.	Algebra I M3 Lesson 5: The Power of Exponential Growth Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M5: A Synthesis of Modeling with Equations and Functions
		c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.	Algebra I M3 Lesson 5: The Power of Exponential Growth Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M3 Lesson 7: Exponential Decay Algebra I M5: A Synthesis of Modeling with Equations and Functions

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		A1.F-LE.A.2 Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or input/output pairs.	Algebra I M3: Linear and Exponential Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions Algebra II M3 Lesson 1: Integer Exponents
		A1.F-LE.A.3 Observe, using graphs and tables, that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically.	Algebra I M3 Lesson 5: The Power of Exponential Growth Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again
		Cluster: Interpret expressions for functions in terms of the situation they model.	
		A1.F-LE.B.5 Interpret the parameters in a linear or exponential function with integer exponents utilizing real-world context.	Algebra I M3 Topic D: Using Functions and Graphs to Solve Problems

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Statistics and Probability	**Interpreting Categorical and Quantitative Data**	**Cluster: Summarize, represent, and interpret data on a single count or measurement variable.**	
		A1.S-ID.A.1 Represent real-value data with plots for the purpose of comparing two or more data sets.	Algebra I M2: Descriptive Statistics
		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.	Algebra I M2 Lesson 3: Estimating Centers and Interpreting the Mean as a Balance Point Algebra I M2 Topic B: Describing Variability and Comparing Distributions
		A1.S-ID.A.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of outliers if present.	Algebra I M2: Descriptive Statistics

Conceptual Category	Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
		Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables.	
		A1.S-ID.B.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.	Algebra I M2 Topic C: Categorical Data on Two Variables
		A1.S-ID.B.6 Represent data on two quantitative variables on a scatter plot, and describe how the quantities are related.	
		a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Focus on linear models.	Algebra I M2 Lessons 12–13: Relationships Between Two Numerical Variables Algebra I M2 Lesson 19: Interpreting Correlation Algebra I M2 Lesson 20: Analyzing Data Collected on Two Variables Algebra I M5 Lesson 7: Modeling a Context from Data
		b. Informally assess the fit of a function by plotting and analyzing residuals.	Algebra I M2 Topic D: Numerical Data on Two Variables

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		Cluster: Interpret linear models.		
		A1.S-ID.C.7 Interpret the slope as a rate of change and the constant term of a linear model in the context of the data.		Algebra I M2 Lesson 14: Modeling Relationships with a Line
		A1.S-ID.C.8 Compute and interpret the correlation coefficient of a linear relationship.		Algebra I M2 Lesson 19: Interpreting Correlation Algebra I M2 Lesson 20: Analyzing Data Collected on Two Variables Algebra I M5 Lesson 7: Modeling a Context from Data
		A1.S-ID.C.9 Distinguish between correlation and causation.		Algebra I M2 Lesson 11: Conditional Relative Frequencies and Association Algebra I M2 Lesson 19: Interpreting Correlation Algebra I M2 Lesson 20: Analyzing Data Collected on Two Variables
	Conditional Probability and the Rules of Probability	**Cluster: Understand independence and conditional probability and use them to interpret data.**		
		A1.S-CP.A.1 Describe events as subsets of a sample space using characteristics of the outcomes, or as unions, intersections, or complements of other events.		Algebra II M4 Topic A: Probability

Conceptual Category	Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
		A1.S-CP.A.2 Use the Multiplication Rule for independent events to understand that two events *A* and *B* are independent if the probability of *A* and *B* occurring together is the product of their probabilities, and use this characterization to determine if they are independent.		Algebra II M4 Lesson 6: Probability Rules