EUREKA MATH™

GREAT MINDS

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

ALGEBRA I MATHEMATICS

The majority of the Algebra I Arkansas Mathematics Standards are fully covered by the Algebra I *Eureka Math* curriculum. The areas where the Algebra I Arkansas Mathematics Standards and Algebra I *Eureka Math* do not align will require the use of *Eureka Math* content from other courses. A detailed analysis of alignment is provided in the table below.

INDICATORS

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

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

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

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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
The Real Number System	**Cluster: Use properties of rational and irrational numbers**	
	AR.Math.Content.HSN.RN.B.3 Explain why: ▪ The sum/difference or product/quotient (where defined) of two *rational numbers* is *rational* ▪ The sum/difference of a *rational number* and an *irrational number* is *irrational* ▪ The product/quotient of a nonzero *rational number* and an *irrational number* is *irrational* ▪ The product/quotient of two nonzero *rational numbers* is a nonzero *rational*	Algebra I M4 Lesson 13: Solving Quadratic Equations by Completing the Square
	AR.Math.Content.HSN.RN.B.4 ▪ Simplify *radical expressions* ▪ Perform operations (add, subtract, multiply, and divide) with *radical expressions* ▪ Rationalize denominators and/or numerators	Geometry M2 Topic D: Applying Similarity to Right Triangles Algebra II M1 Lesson 9: Radicals and Conjugates Algebra II M3 Lesson 4: Properties of Exponents and Radicals

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Quantities	**Cluster: Reason quantitatively and use units to solve problems**	
	AR.Math.Content.HSN.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	Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs
	AR.Math.Content.HSN.Q.A.2 Define appropriate quantities for the purpose of descriptive modeling (i.e., use units appropriate to the problem being solved)	Algebra I M1 Topic A: Introduction to Functions Studied this Year—Graphing Stories Algebra I M5: A Synthesis of Modeling with Equations and Functions
	AR.Math.Content.HSN.Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities	Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs Algebra I M5: A Synthesis of Modeling with Equations and Functions

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Seeing Structure in Expressions	**Cluster: Interpret the structure of expressions**	
	AR.Math.Content.HSA.SSE.A.1 Interpret *expressions* that represent a quantity in terms of its context ▪ Interpret parts of an *expression* using appropriate vocabulary, such as *terms, factors*, and *coefficients* ▪ Interpret complicated *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 Topic A: Quadratic Expressions, Equations, Functions, and Their Connection to Rectangles Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$
	AR.Math.Content.HSA.SSE.A.2 Use the structure of an *expression* to identify ways to rewrite it	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Write expressions in equivalent forms to solve problems	
	AR.Math.Content.HSA.SSE.B.3 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 ▪ Complete the square in a quadratic expression to reveal the *maximum* or *minimum* value of the function it defines	Algebra I M3 Lesson 23: Newton's Law of Cooling 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 15: Using the Quadratic Formula Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra II M3 Lesson 26: Percent Rate of Change
Arithmetic with Polynomials and Rational Expressions	**Cluster: Perform arithmetic operations on polynomials**	
	AR.Math.Content.HSA.APR.A.1 ▪ Add, subtract, and multiply *polynomials* ▪ Understand that *polynomials*, like the integers, are closed under addition, subtraction, and multiplication	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Understand the relationship between zeros and factors of polynomials	
	AR.Math.Content.HSA.APR.B.3 ▪ Identify *zeros* of *polynomials* (linear, quadratic only) when suitable factorizations are available ▪ Use the *zeros* to construct a rough graph of the function defined by the *polynomial*	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 Algebra II M1 Lesson 11: The Special Role of Zero in Factoring Algebra II M1 Lesson 14: Graphing Factored Polynomials
	Cluster: Use polynomial identities to solve problems	
	AR.Math.Content.HSA.APR.C.4 Prove polynomial identities and use them to describe numerical relationships	Algebra II M1 Topic A: Polynomials—From Base Ten to Base X
	Cluster: Rewrite rational expressions	
	AR.Math.Content.HSA.APR.D.7 ▪ Add, subtract, multiply, and divide by nonzero rational expressions ▪ Understand that rational expressions, like the integers, are closed under addition, subtraction, and multiplication	Algebra II M1 Lesson 22: Equivalent Rational Expressions Algebra II M1 Lesson 23: Comparing Rational Expressions Algebra II M1 Lesson 24: Multiplying and Dividing Rational Expressions Algebra II M1 Lesson 25: Adding and Subtracting Rational Expressions

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Creating Equations	**Cluster: Create equations that describe numbers or relationships**	
	AR.Math.Content.HSA.CED.A.1 Create *equations* and *inequalities* in one *variable* and use them to solve problems	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	AR.Math.Content.HSA.CED.A.2 ▪ Create *equations* in two or more *variables* to represent relationships between quantities ▪ Graph equations, in two *variables*, on a *coordinate plane*	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

Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	AR.Math.Content.HSA.CED.A.3 ▪ Represent and interpret constraints by *equations* or *inequalities*, and by *systems of equations* and/or *inequalities* ▪ Interpret solutions as viable or nonviable options in a modeling and/or real-world 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
	AR.Math.Content.HSA.CED.A.4 Rearrange *literal equations* using the properties of equality		Algebra I M1 Lesson 19: Rearranging Formulas

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**	
	AR.Math.Content.HSA.REI.A.1 Assuming that *equations* have a solution, construct a solution and justify the reasoning used	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
	AR.Math.Content.HSA.REI.A.2 Solve simple rational and radical equations in one *variable*, and give examples showing how *extraneous solutions* may arise.	Algebra II M1 Lesson 22: Equivalent Rational Expressions Algebra II M1 Lesson 23: Comparing Rational Expressions Algebra II M1 Lesson 26: Solving Rational Equations Algebra II M1 Lesson 27: Word Problems Leading to Rational Equations Algebra II M1 Lesson 28: A Focus on Square Roots Algebra II M1 Lesson 29: Solving Radical Equations

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Solve equations and inequalities in one variable	
	AR.Math.Content.HSA.REI.B.3 Solve linear equations, inequalities, and *absolute value equations* in one *variable*, including *equations* with *coefficients* represented by letters	Algebra I M1: Relationships Between Quantities and Reasoning with Equations and Their Graphs
	AR.Math.Content.HSA.REI.B.4 Solve quadratic equations in one variable ▪ 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 ▪ Solve quadratic equations (as appropriate to the initial form of the equation) by: ▫ Inspection of a graph ▫ Taking square roots ▫ Completing the square ▫ Using the quadratic formula ▫ Factoring	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Solve systems of equations and inequalities graphically	
	AR.Math.Content.HSA.REI.C.5 ▪ Solve *systems of equations* in two variables using substitution and elimination ▪ Understand that the solution to a system of equations will be the same when using substitution and elimination	Algebra I M1 Lessons 22–23: Solution Sets to Simultaneous Equations
	AR.Math.Content.HSA.REI.C.6 Solve *systems of equations* algebraically and graphically	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
	AR.Math.Content.HSA.REI.C.7 Solve *systems of equations* consisting of linear equations and nonlinear equations in two variables algebraically and graphically	Algebra II M1 Lesson 31: Systems of Equations Algebra II M1 Lesson 32: Graphing Systems of Equations
	Cluster: Solve systems of equations	
	AR.Math.Content.HSA.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*	Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables

Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	AR.Math.Content.HSA.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 by: ▪ Using technology to graph the *functions* ▪ Making tables of values ▪ Finding successive approximations Include cases (but not limited to) where $f(x)$ and/or $g(x)$ are: ▪ Linear ▪ Polynomial ▪ Absolute value ▪ Exponential		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
	AR.Math.Content.HSA.REI.D.12 Solve linear inequalities and systems of linear inequalities in two variables by graphing		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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Interpreting Functions	**Cluster: Understand the concept of a function and use function notation**	
	AR.Math.Content.HSF.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* ▪ Understand that 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 ▪ Understand that 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 $y = f(x)$
	AR.Math.Content.HSF.IF.A.2 In terms of a real-world context: ▪ Use *function notation* ▪ Evaluate *functions* for inputs in their *domains* ▪ Interpret statements that use *function notation*	Algebra I M3: Linear and Exponential Functions
	AR.Math.Content.HSF.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?

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Interpret functions that arise in applications in terms of the context	
	AR.Math.Content.HSF.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 ▪ Sketch graphs showing key features given a verbal description of the relationship	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	AR.Math.Content.HSF.IF.B.5 ▪ Relate the *domain* of a *function* to its graph ▪ Relate the *domain* of a *function* 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
	AR.Math.Content.HSF.IF.B.6 ▪ Calculate and interpret the average *rate of change* of a *function* (presented algebraically or as a table) over a specified interval ▪ Estimate the *rate of change* from a graph	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Analyze functions using different representations	
	AR.Math.Content.HSF.IF.C.7 Graph *functions* expressed algebraically and show key features of the graph, with and without technology ▪ Graph *linear* and *quadratic functions* and, when applicable, show *intercepts*, maxima, and minima ▪ Graph square root, cube root, and *piecewise-defined functions*, including *step functions* and *absolute value functions* ▪ Graph *exponential functions*, showing *intercepts* and end behavior	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 Topic C: 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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	AR.Math.Content.HSF.IF.C.8 Write *expressions for functions* in different but equivalent forms to reveal key features of the *function* ▪ Use the process of factoring and completing the square in a *quadratic function* to show *zeros*, extreme values (vertex), and symmetry of the graph, and interpret these in terms of a context.	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 M3 Topic D: Using Functions and Graphs to Solve Problems 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 Algebra II M3 Lesson 23: Bean Counting Algebra II M3 Lesson 27: Modeling with Exponential Functions

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	AR.Math.Content.HSF.IF.C.9 Compare properties of two *functions* each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions)	Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways
Building Functions	**Cluster: Build a function that models a relationship between two quantities**	
	AR.Math.Content.HSF.BF.A.1 Write a *function* that describes a relationship between two quantities ▪ From a context, determine an explicit expression, a recursive process, or steps for calculation	Algebra I M3: Linear and Exponential Functions Algebra I M5: A Synthesis of Modeling with Equations and Functions Algebra II M2 Lesson 12: Ferris Wheels—Using Trigonometric Functions to Model Cyclical Behavior Algebra II M3 Lesson 28: Newton's Law of Cooling, Revisited Algebra II M3 Lesson 30: Buying a Car Algebra II M3 Lesson 33: The Million Dollar Problem

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Build new functions from existing functions	
	AR.Math.Content.HSF.BF.B.3 ▪ Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (k, a *constant* both positive and negative) ▪ Find the value of k given the graphs of the transformed *functions* ▪ Experiment with multiple transformations and illustrate an explanation of the effects on the graph with or without technology	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, $f(x) = x^2$
Linear, Quadratic, and Exponential Models	**Cluster: Construct and compare linear, quadratic, and exponential models and solve problems**	
	AR.Math.Content.HSF.LE.A.1 Distinguish between situations that can be modeled with *linear functions* and with *exponential functions* ▪ Show that *linear functions* grow by equal differences over equal intervals, and that *exponential functions* grow by equal factors over equal intervals ▪ Recognize situations in which one quantity changes at a constant rate per unit interval relative to another ▪ 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 M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M5: A Synthesis of Modeling with Equations and Functions

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	AR.Math.Content.HSF.LE.A.2 Construct linear and exponential equations, including arithmetic and geometric sequences,: ▪ given a graph ▪ a description of a relationship ▪ or two input-output pairs (include reading these from a table)	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
	AR.Math.Content.HSF.LE.A.3 Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or any polynomial function	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	
	AR.Math.Content.HSF.BF.B.5 In terms of a context, interpret the parameters (rates of growth or decay, *domain* and *range* restrictions where applicable, etc.) in a *function*	Algebra I M3 Topic D: Using Functions and Graphs to Solve Problems

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Interpreting Categorical and Quantitative Data	**Cluster: Summarize, represent, and interpret data on a single count or measurement variable**	
	AR.Math.Content.HSS.ID.A.1 Represent data with plots on the real number line (dot plots, histograms, and box plots)	Algebra I M2: Descriptive Statistics
	AR.Math.Content.HSS.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
	AR.Math.Content.HSS.ID.A.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers)	Algebra I M2: Descriptive Statistics
	Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables	
	AR.Math.Content.HSS.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

Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	AR.Math.Content.HSS.ID.B.6 Represent data on two quantitative variables on a *scatter plot*, and describe how the variables are related ▪ Fit a *function* to the data; use *functions* fitted to data to solve problems in the context of the data		Algebra I M2 Topic D: Numerical Data on Two Variables Algebra I M5 Lesson 7: Modeling a Context from Data
	Cluster: Interpret linear models		
	AR.Math.Content.HSS.ID.C.7 Interpret the *slope* (*rate of change*) and the *intercept* (constant term) of a linear model in the context of the data		Algebra I M2 Lesson 14: Modeling Relationships with a Line
	AR.Math.Content.HSS.ID.C.8 Compute (using technology) and interpret the *correlation coefficient* of a linear fit		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
	AR.Math.Content.HSS.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