Algebra I | Washington State K–12 Learning Standards for Mathematics (2026) Correlation to *Eureka Math*²® 2nd Edition

*Eureka Math*² is a research-proven math curriculum that empowers teachers to center instructional techniques on student success. Teachers can foster more "aha!" learning moments by providing the support needed for all learners to build a more confident math mindset.

This *Eureka Math*² edition builds on a strong foundation of effective instruction. It provides teachers with guidance on delivering rigorous instruction that honors student choice and encourages confident problem-solving.

*Eureka Math*² carefully sequences mathematical content to maximize vertical alignment from kindergarten through high school. This kind of sequencing has proven to be essential in students' mastery of math.

Teachability

*Eureka Math*² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning (UDL) principles so all learners can access the mathematics and take on challenging math concepts. UDL, Differentiation, and Multilingual Learner supports are built into the instructional design and are clearly identified in the *Teach* book.

The curriculum also carries a focus on readability. By eliminating unnecessary words and using clear sentences, the *Eureka Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum's readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

Math Confidence

*Eureka Math*² fosters a classroom culture of learning by encouraging student-led discourse and cognitive engagement that results in confident learners. By leveraging consistent models, routines, and progressions, teachers can remove barriers and allow all students an avenue to success. Within the digital platform, each grade includes wordless videos and digital interactives that spark students' curiosity and help them make conceptual connections. Using the *Learn* books, students wonder, explore, and make sense of mathematics, which helps them develop a strong, positive mathematical identity.

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Standards for Mathematical Practice	Aligned Components of *Eureka Math*^{2} 2nd Edition
1. Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
2. Reason abstractly and quantitatively.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
3. Construct viable arguments and critique the reasoning of others.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
4. Model with math.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
5. Use appropriate tools strategically.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
6. Attend to precision.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
7. Look for and make use of structure.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
8. Look for and express regularity in repeated reasoning.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.

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Data Analysis

Formulate statistical investigate questions.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.DS.1 Formulate multivariable statistical investigative questions and determine how data can be collected and provide an answer, consider causality and prediction when posing the question. (Priority)	A1 M2 Lesson 15: Relationships Between Quantitative Variables A1 M6 Lesson 1: Analyzing Paint Splatters A1 Data Talk: Organ Transplants in the US A1 Data Talk: Energy in Earthquakes and Lightning A1 Data Talk: The Carbon in Our Trees A1 Data Talk: Change in Forest Area A1 Data Talk: Growth in Renewable Energy A1 Data Talk: Disappearing Sea Ice A1 Data Talk: Daylight at the Extremes A1 Data Talk: Life Expectancy at Birth A1 Data Talk: License to Drive A1 Data Talk: Venomous Snake Bites A1 Data Talk: Time to Vote A1 Data Talk: Disaster Relief A1 Data Talk: US House Tenure A1 Data Talk: Hot and Cold Park Days A1 Data Investigation: Driving Dangers A1 Data Investigation: Carbon in Trees A1 Data Investigation: Organ Donation

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Data Analysis

Collect and consider data.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.DS.2 Understand the issues of bias and confounding variables when collecting data and their impact on interpretation. Understand practices for collecting and handling data, including sensitive information and concerns for privacy and how that may affect data collection.	*Supplemental material is necessary to address this standard.*

Data Analysis

Analyze the data.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.DS.3 Create and analyze data sets using technology to clean, sort, or filter data. Summarize, and describe relationships between quantitative variables using data displays including but not limited to scatter plots, regressions, histograms, and boxplots. (Priority)	A1 M1 Lesson 19: Distributions and Their Shapes A1 M1 Lesson 20: Describing the Center of a Distribution A1 M1 Lesson 22: Describing Variability in a Univariate Distribution with Standard Deviation A1 M1 Lesson 23: Estimating Variability in Data Distributions A1 M2 Lesson 15: Relationships between Quantitative Variables A1 M2 Lesson 16: Using Lines to Model Bivariate Quantitative Data A1 M2 Lesson 17: Modeling Relationships with a Line A1 M2 Lesson 20: Interpreting Correlation A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data A1 M6 Lesson 1: Analyzing Paint Splatters A1 Data Investigation: Carbon in Trees *Supplemental material is necessary to address using technology to clean, sort, or filter data.*

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Data Analysis

Interpret results.

Washington State Learning Standards	Aligned Components of *Eureka Math*^{2} 2nd Edition
M.HS.DA.DS.4 Acknowledge the presence of missing data values and understand how missing values may add bias to analysis and interpretation. Examine and discuss competing explanations for data trends observed such as confounding variables. Respond to competing arguments or interpretations of the data of different community groups, paying careful attention to what conclusions the data supports, taking into account correlation versus causation.	8 M6 L11: Scatter Plots 8 Data Talk: Alaskan Sled Dog Racing 8 Data Talk: US Armed Service Members A1 M2 Lesson 20: Interpreting Correlation A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data A1 Data Talk: US House Tenure *Supplemental material is necessary to address confounding variables and responding to competing arguments or interpretations.*

Data Analysis

Understand the concept of a function and use function notation.

Washington State Learning Standards	Aligned Components of *Eureka Math*^{2} 2nd Edition
M.HS.DA.FIF.1 Understand that a function has a domain (input, independent elements) and range (output, dependent elements), and assigns to each domain element exactly one range element. If f is a function and x is a value of its domain, then the output of f corresponds to the input x. The graph of f is the graph of the equation $y = f(x)$.	A1 M3 Lesson 1: The Definition of a Function A1 M3 Lesson 2: Representing, Naming, and Evaluating Functions A1 M3 Lesson 3: The Graph of a Function A1 M3 Lesson 4: The Graph of the Equation $y = f(x)$ A1 M3 Lesson 5: Using Pseudocode to Compare Graphs of Functions and Graphs of Equations A1 M3 Lesson 6: Representations of Functions A1 M3 Lesson 7: Inverses of Linear Functions

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.FIF.2 Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	A1 M3 Lesson 1: The Definition of a Function A1 M3 Lesson 2: Representing, Naming, and Evaluating Functions A1 M3 Lesson 6: Representations of Functions A1 M5 Lesson 1: Exploring Patterns A1 M5 Lesson 2: The Recursive Challenge A1 M5 Lesson 3: Recursive Formulas for Sequences A1 M5 Lesson 4: Explicit Formulas for Sequences A1 M5 Lesson 7: Sierpinski Triangle

Data Analysis

Summarize, represent, and interpret data on a single count or measurement variable.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.SID.1 Represent data with plots on the real number line (dot plots, histograms, and box plots). (Priority)	A1 M1 Lesson 18: Applying Absolute Value A1 M1 Lesson 19: Distributions and Their Shapes A1 M1 Lesson 20: Describing the Center of a Distribution
M.HS.DA.SID.1 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.	A1 M1 Lesson 19: Distributions and Their Shapes A1 M1 Lesson 20: Describing the Center of a Distribution A1 M1 Lesson 21: Using Center to Compare Data Distributions A1 M1 Lesson 22: Describing Variability in a Univariate Distribution with Standard Deviation A1 M1 Lesson 23: Estimating Variability in Data Distributions A1 M1 Lesson 24: Comparing Distributions of Univariate Data

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.SID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers). (Priority)	A1 M1 Lesson 19: Distributions and Their Shapes A1 M1 Lesson 20: Describing the Center of a Distribution A1 M1 Lesson 21: Using Center to Compare Data Distributions A1 M1 Lesson 22: Describing Variability in a Univariate Distribution with Standard Deviation A1 M1 Lesson 23: Estimating Variability in Data Distributions A1 M1 Lesson 24: Comparing Distributions of Univariate Data

Data Analysis

Summarize, represent, and interpret data on two categorical and quantitative variables.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.SID.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.	A1 M2 Lesson 22: Summarizing Bivariate Categorical Data with Two-Way Tables A1 M2 Lesson 23: Bivariate Categorical Data and Conditional Relative Frequency Tables A1 M2 Lesson 24: Conditional Relative Frequencies and Association

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.SID.6 Represent data on two quantitative variables on a scatter plot and describe how the variables are related. Solve problems in context by fitting functions to the data and explaining trends and relationships within the data. a. When fitting a function to the data, use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models. b. [Not addressed in this course.] c. Fit a linear function for a scatter plot that suggests a linear association,	A1 M2 Lesson 15: Relationships Between Quantitative Variables A1 M2 Lesson 16: Using Lines to Model Bivariate Quantitative Data A1 M2 Lesson 17: Modeling Relationships with a Line A1 M2 Lesson 20: Interpreting Correlation A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts A1 M4 Lesson 26: Modeling Data with Quadratic Functions A1 M4 Lesson 27: Search and Rescue Helicopter A1 M6 Lesson 1: Analyzing Paint Splatters A1 M6 Lesson 3: Populations of US Cities

Data Analysis

Interpret linear models.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.SID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. (Priority)	A1 M2 Lesson 16: Using Lines to Model Bivariate Quantitative Data A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data
M.HS.DA.SID.8 Compute (using technology) and interpret the correlation coefficient of a linear fit.	A1 M2 Lesson 20: Interpreting Correlation A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.DA.SID.9 Distinguish between correlation and causation. (Priority)	A1 M2 Lesson 20: Interpreting Correlation A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data

Quantity

Reason quantitatively and use units to solve problems.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.NQ.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. (Priority)	A1 M6 Lesson 5: Solar System Models
M.HS.Q.NQ.2 Define appropriate quantities for the purpose of descriptive modeling. (Priority)	A1 M4 Lesson 25: Maximizing Area A1 M6 Lesson 5: Solar System Models
M.HS.Q.NQ.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. (Priority)	A1 M6 Lesson 5: Solar System Models A1 M6 Lesson 6: Polynomial Identities

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Quantity

Interpret the structure of expressions.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.ASSE.1 Interpret expressions that represent a quantity in terms of its context within linear, exponential, and quadratic functions. a. Interpret parts of an expression, such as terms, factors, and coefficients. b. Interpret complicated expressions by viewing one or more of their parts as a single entity.	A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M5 Lesson 8: Exponential Functions A1 M5 Lesson 16: Exponential Growth A1 M5 Lesson 17: Exponential Decay A1 M5 Lesson 18: Modeling Populations A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time
M.HS.Q.ASSE.2 Use the structure or pattern of an expression to identify ways to rewrite it including the difference of squares, compound interest and others.	A1 M1 Lesson 1: The Growing Pattern of Ducks A1 M1 Lesson 2: The Commutative, Associative, and Distributive Properties A1 M1 Lesson 3: Polynomial Expressions A1 M1 Lesson 6: Polynomial Identities A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 5: Solving Equations That Contain Factored Expressions A1 M4 Lesson 6: Solving Quadratic Equations by Factoring: Identities and Guess and Check A1 M4 Lesson 7: Solving Quadratic Equations by Factoring: Splitting the Linear Term A1 M4 Lesson 8: A Summary of Solving Quadratic Equations by Factoring A1 M4 Lesson 9: Creating and Solving Quadratic Equations in One Variable A1 M4 Lesson 10: Zeros of Functions A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.ASSE.2 *continued*	A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 14: Solving Quadratic Equations by Completing the Square A1 M4 Lesson 15: Deriving the Quadratic Formula A1 M5 Lesson 11: Graphing Exponential Functions A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) A1 M5 Lesson 15: Calculating Interest A1 M5 Lesson 18: Modeling Populations

Quantity

Analyze functions using different representations.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.FIF.7 Graph linear, exponential, and quadratic functions from their symbolical forms by hand or with technology, and identify key features, including intercepts, intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries, and end behavior. a. Including intercepts, maxima, and minima.	A1 M3 Lesson 4: The Graph of the Equation $y = f(x)$ A1 M3 Lesson 5: Using Pseudocode to Compare Graphs of Functions and Graphs of Equations A1 M3 Lesson 6: Representations of Functions A1 M4 Lesson 4: Graphs of Quadratic Functions A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 19: Transforming the Graphs of Quadratic Functions A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts A1 M5 Lesson 11: Graphing Exponential Functions A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) A1 M5 Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1)

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.FIF.8 Efficiently, flexibly, and accurately write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. a. Factor quadratic functions to verify and explain various properties on graphs, such as zeros and symmetry in terms of a context. Use the properties of exponents to interpret expressions for exponential functions.	A1 M4 Lesson 1: Falling Objects A1 M4 Lesson 2: Projectile Motion A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 10: Zeros of Functions A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 22: A Summary of Graphing Quadratic Functions A1 M5 Lesson 11: Graphing Exponential Functions A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) A1 M5 Lesson 18: Modeling Populations
M.HS.Q.FIF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). Functions could be linear, exponential, or quadratic.	A1 M3 Lesson 11: Using Graphs to Solve Equations A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 21: Completing the Square to Graph Quadratic Functions

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Quantity

Create equations that describe numbers or relationships.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.ACED.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 within linear, quadratic, and exponential equations.	A1 M1 Lesson 11: Writing and Solving Equations in One Variable A1 M1 Lesson 14: Solution Sets of Compound Statements A1M1 Lesson 15: Solving and Graphing Compound Inequalities A1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables A1 M2 Lesson 6: Applications of Linear Equations and Inequalities A1 M6 Lesson 5: Solar System Models
M.HS.Q.ACED.4 Efficiently, flexibly, and accurately rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations within linear, quadratic, and exponential equations.	A1 M1 Lesson 12: Rearranging Formulas A1 M4 Lesson 13: Using Square Roots to Solve Quadratic Equations

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Quantity

Build a function that models a relationship between two quantities.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.FBF.1 Efficiently, flexibly, and accurately write a function that describes a relationship between two quantities, including linear and exponential relationships, and arithmetic and geometric sequences in context. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine standard function types using arithmetic operations.	A1 M4 Lesson 1: Falling Objects A1 M4 Lesson 2: Projectile Motion A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts A1 M4 Lesson 25: Maximizing Area A1 M4 Lesson 26: Modeling Data with Quadratic Functions A1 M4 Lesson 27: Search and Rescue Helicopter A1 M5 Lesson 1: Exploring Patterns A1 M5 Lesson 2: The Recursive Challenge A1 M5 Lesson 3: Recursive Formulas for Sequences A1 M5 Lesson 4: Explicit Formulas for Sequences A1 M5 Lesson 5: Arithmetic and Geometric Sequences A1 M5 Lesson 6: Representation of Arithmetic and Geometric Sequences A1 M5 Lesson 7: Sierpinski Triangle A1 M5 Lesson 8: Exponential Functions A1 M5 Lesson 15: Calculating Interest A1 M6 Lesson 4: The Deal A1 M6 Lesson 5: Solar System Models A1 M6 Lesson 6: Designing a Fundraiser A1 M6 Lesson 7: World Record Doughnut

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Quantity

Understand the concept of a function and use function notation.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.FIF.3 Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.	A1 M5 Lesson 1: Exploring Patterns A1 M5 Lesson 2: The Recursive Challenge A1 M5 Lesson 3: Recursive Formulas for Sequences A1 M5 Lesson 4: Explicit Formulas for Sequences A1 M5 Lesson 5: Arithmetic and Geometric Sequences A1 M5 Lesson 6: Representations of Arithmetic and Geometric Sequences

Quantity

Build new functions from existing functions.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.FBF.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 (both positive and negative); find the value of k given the graphs. Using a variety of strategies, experiment with cases and illustrate an explanation of the effects on the graph using technology, within linear, exponential, and quadratic functions.	A1 M3 Lesson 19: Exploring Transformations of the Graphs of Functions A1 M3 Lesson 20: Building New Functions—Translations A1 M3 Lesson 21: Building New Functions—Reflections A1 M3 Lesson 22: Building New Functions—Vertical Scaling A1 M3 Lesson 23: Building New Functions—Horizontal Scaling A1 M3 Lesson 24: A Summary of Transforming the Graph of a Function A1 M4 Lesson 20: Art with Transformations A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) A1 M5 Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1) A1 M5 Lesson 14: Writing Equations for Exponential Functions from Tables or Graphs A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time

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Quantity

Extend the properties of exponents to rational exponents.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.NRN.1 Efficiently, flexibly, and accurately explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values using a variety of strategies, allowing for a notation for radicals in terms of rational exponents.	A1 M5 Lesson 10: Rational Exponents
M.HS.Q.NRN.2 Rewrite expressions involving radicals and rational exponents using the properties of exponents.	A1 M5 Lesson 9: Unit Fraction Exponents A1 M5 Lesson 10: Rational Exponents

Quantity

Use properties of rational and irrational numbers.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.NRN.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.	A1 M4 Lesson 13: Using Square Roots to Solve Quadratic Equations A1 M4 Lesson 17: Rewriting Square Roots

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Quantity

Perform arithmetic operations on polynomials.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.Q.AAPR.1 Efficiently, flexibly, and accurately demonstrate that polynomials form a system with a structure similar to that of integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials, limited to quadratic equations.	A1 M1 Lesson 3: Polynomial Expressions A1 M1 Lesson 4: Adding and Subtracting Polynomial Expressions A1 M1 Lesson 5: Multiplying Polynomial Expressions A1 M1 Lesson 6: Polynomial Identities

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Relationships

Interpret functions that arise in applications in terms of the context.

Washington State Learning Standards	Aligned Components of *Eureka Math*^{2} 2nd Edition
M.HS.R.FIF.4 For a function that models a relationship between two quantities in context of the relationship, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; maximums and minimums; and symmetries. Functions could be linear, exponential, or quadratic. (Priority)	A1 M3 Lesson 7: Inverses of Linear Functions A1 M3 Lesson 8: Exploring Key Features of a Function and Its Graph A1 M3 Lesson 9: Identifying Key Features of a Function and Its Graph A1 M3 Lesson 11: Using Graphs to Solve Equations A1 M3 Lesson 12: Comparing Functions A1 M3 Lesson 13: Mars Curiosity Rover A1 M4 Lesson 1: Falling Objects A1 M4 Lesson 2: Projectile Motion A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 21: Completing the Square to Graph Quadratic Functions A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts A1 M4 Lesson 25: Maximizing Area
M.HS.R.FIF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes in context. Functions could be linear, exponential, or quadratic relationships.	A1 M3 Lesson 3: The Graph of a Function A1 M3 Lesson 13: Mars Curiosity Rover A1 M4 Lesson 2: Projectile Motion A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.FIF.6 Calculate and interpret the average rate of change of a function (represented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.	A1 M4 Lesson 1: Falling Objects A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M5 Lesson 19: Analyzing Exponential Growth A1 M5 Lesson 20: Comparing Growth of Functions A1 M5 Lesson 24: Modeling an Invasive Species Population

Relationships

Write expressions in equivalent forms to solve problems.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.ASSE.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. b. [Not addressed in this course.] c. Use the properties of exponents to transform expressions for exponential functions. (Priority)	A1 M4 Lesson 10: Zeros of Functions A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form A1 M4 Lesson 22: A Summary of Graphing Quadratic Functions A1 M5 Lesson 11: Graphing Exponential Functions A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) A1 M5 Lesson 18: Modeling Populations

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Relationships

Create equations that describe numbers or relationships.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.ACED.1 Efficiently, flexibly, and accurately create equations and inequalities in one variable that model a situation, and use them to solve problems. Include equations arising from linear, quadratic, and exponential functions. (Priority)	A1 M1 Lesson 7: Printing Presses A1 M1 Lesson 11: Writing and Solving Equations in One Variable A1 M1 Lesson 13: Solving Linear Inequalities in One Variable A1 M1 Lesson 14: Solution Sets of Compound Statements A1 M1 Lesson 15: Solving and Graphing Compound Inequalities A1 M4 Lesson 9: Creating and Solving Quadratic Equations in One Variable A1 M5 Lesson 19: Analyzing Exponential Growth A1 M5 Lesson 21: World Population Prediction A1 M5 Lesson 22: A Closer Look at Populations A1 M5 Lesson 24: Modeling an Invasive Species Population
M.HS.R.ACED.2 Efficiently, flexibly, and accurately create linear, quadratic, and exponential equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. (Priority)	A1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables A1 M2 Lesson 2: Graphing Linear Equations in Two Variables A1 M2 Lesson 3: Creating Linear Equations in Two Variables A1 M2 Lesson 6: Applications of Linear Equations and Inequalities A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts A1 M4 Lesson 25: Maximizing Area A1 M4 Lesson 26: Modeling Data with Quadratic Functions A1 M4 Lesson 27: Search and Rescue Helicopter

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Relationships

Construct and compare linear, quadratic, and exponential models and solve problems.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.FLE.1 Distinguish between situations that can be modeled with linear functions and with exponential functions in terms of context, including: a. Linear functions grow with equal differences over equal interval and exponential functions grow with equal factors over equal intervals. b. Recognizing constant rates per unit interval relative to another. c. Recognize contexts of growth or decay by a constant percent rate per unit interval relative to another.	A1 M5 Lesson 15: Calculating Interest A1 M5 Lesson 18: Modeling Populations A1 M5 Lesson 19: Analyzing Exponential Growth A1 M5 Lesson 21: World Population Prediction A1 M5 Lesson 22: A Closer Look at Populations A1 M5 Lesson 24: Modeling an Invasive Species Population A1 M6 Lesson 1: Analyzing Paint Splatters A1 M6 Lesson 2: Using Residual Plots to Select Models for Data A1 M6 Lesson 3: Populations of US Cities

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Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.FLE.2 Efficiently, flexibly, and accurately construct linear and exponential functions given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	A1 M5 Lesson 8: Exponential Functions A1 M5 Lesson 14: Writing Equations for Exponential Functions from Tables or Graphs A1 M5 Lesson 16: Exponential Growth A1 M5 Lesson 17: Exponential Decay A1 M5 Lesson 21: World Population Prediction A1 M5 Lesson 22: A Closer Look at Populations A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time A1 M5 Lesson 24: Modeling an Invasive Species Population A1 M6 Lesson 4: The Deal A1 M6 Lesson 5: Solar System Models A1 M6 Lesson 6: Designing a Fundraiser A1 M6 Lesson 7: World Record Doughnut
M.HS.R.FLE.3 Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly and quadratically.	A1 M5 Lesson 20: Comparing Growth of Functions

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Relationships

Interpret expressions for functions in terms of the situation they model.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.FLE.5 Interpret the parameters in a linear or exponential function in terms of a context. (Priority)	A1 M5 Lesson 18: Modeling Populations A1 M5 Lesson 19: Analyzing Exponential Growth A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time A1 M5 Lesson 24: Modeling an Invasive Species Population

Relationships

Understand solving equations as a process of reasoning and explain the reasoning.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.AREI.1 Given that an original equation has a solution, efficiently, flexibly, and accurately select and use strategies to solve the equation, explaining each step, and construct a viable argument to justify a solution method. (Priority)	A1 M1 Lesson 9: Solving Linear Equations in One Variable A1 M1 Lesson 10: Some Potential Dangers When Solving Equations A1 M1 Lesson 11: Writing and Solving Equations in One Variable

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Relationships

Solve equations and inequalities in one variable.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.AREI.3 Efficiently, flexibly, and accurately solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	A1 M1 Lesson 7: Printing Presses A1 M1 Lesson 8: Solution Sets for Equations and Inequalities in One Variable A1 M1 Lesson 9: Solving Linear Equations in One Variable A1 M1 Lesson 10: Some Potential Dangers When Solving Equations A1 M1 Lesson 11: Writing and Solving Equations in One Variable A1 M1 Lesson 13: Solving Linear Inequalities in One Variable A1 M1 Lesson 14: Solution Sets of Compound Statements A1 M1 Lesson 15: Solving and Graphing Compound Inequalities A1 M1 Lesson 16: Solving Absolute Value Equations A1 M1 Lesson 17: Solving Absolute Value Inequalities A1 M1 Lesson 18: Applying Absolute Value
M.HS.R.AREI.4 Solve quadratic equations in one variable using a process of identifying solutions as appropriate to the initial form of the equation. a. [Not addressed in this course.] b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, and factoring, as appropriate to the initial equation.	A1 M4 Lesson 5: Solving Equations That Contain Factored Expressions A1 M4 Lesson 6: Solving Quadratic Equations by Factoring: Identities and Guess and Check A1 M4 Lesson 7: Solving Quadratic Equations by Factoring: Splitting the Linear Term A1 M4 Lesson 8: A Summary of Solving Quadratic Equations by Factoring A1 M4 Lesson 9: Creating and Solving Quadratic Equations in One Variable A1 M4 Lesson 13: Using Square Roots to Solve Quadratic Equations

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Relationships

Solve systems of equations.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.R.AREI.5 Efficiently, flexibly, and accurately demonstrate that systems of two equations in two variables maintain the same solution set when one equation is replaced by the sum of that equation and a multiple of the other equation.	A1 M2 Lesson 9: A New Way to Solve Systems
M.HS.R.AREI.6 Efficiently, flexibly, and accurately solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	A1 M2 Lesson 7: Low-Flow Showerhead A1 M2 Lesson 8: Systems of Linear Equations in Two Variables A1 M2 Lesson 9: A New Way to Solve Systems A1 M2 Lesson 10: The Elimination Method A1 M2 Lesson 11: Applications of Systems of Equations
M.HS.R.AREI.7 Efficiently, flexibly, and accurately solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.	A1 M4 Lesson 24: Another Look at Systems of Equations

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Spatial Reasoning

Represent and solve equations and inequalities graphically.

Washington State Learning Standards	Aligned Components of *Eureka Math*² 2nd Edition
M.HS.SR.AREI.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).	A1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables A1 M2 Lesson 2: Graphing Linear Equations in Two Variables
M.HS.SR.AREI.11 Using a variety of strategies 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, exponential, and quadratic. (Priority)	A1 M3 Lesson 10: Representing Functions from Verbal Descriptions A1 M4 Lesson 24: Another Look at Systems of Equations A1 M5 Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1) A1 M5 Lesson 20: Comparing Growth of Functions
M.HS.SR.AREI.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.	A1 M2 Lesson 4: Solution Sets of Linear Inequalities in Two Variables A1 M2 Lesson 5: Graphing Linear Inequalities in Two Variables A1 M2 Lesson 12: Solution Sets of Systems of Linear Inequalities A1 M2 Lesson 13: Graphing Solution Sets of Systems of Linear Inequalities A1 M2 Lesson 14: Applications of Systems of Linear Inequalities A1 M6 Lesson 5: Solar System Models

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