

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

Oklahoma Academic Standards for Mathematics Correlation to *Eureka Math*[™]

ALGEBRA 1

The majority of the Algebra 1 Oklahoma Academic Standards for Mathematics are fully covered by the Algebra I *Eureka Math* curriculum. The areas where the Algebra 1 Oklahoma Academic Standards for Mathematics and Algebra I *Eureka Math* do not align will require the use of *Eureka Math* content from other grade levels or courses, 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 Oklahoma Academic Standards for Mathematics while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

-  Green indicates that the Oklahoma standard is fully addressed in *Eureka Math*.
-  Yellow indicates that the Oklahoma standard may not be completely addressed in *Eureka Math*.
-  Red indicates that the Oklahoma 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 Oklahoma standards and in *Eureka Math*.

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop a Deep and Flexible Conceptual Understanding

Demonstrate a deep and flexible conceptual understanding of mathematical concepts, operations, and relations while making mathematical and real-world connections. Students will develop an understanding of how and when to apply and use the mathematics they know to solve problems.

Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1 and 2, which are 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

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop Accurate and Appropriate Procedural Fluency

Learn efficient procedures and algorithms for computations and repeated processes based on a strong sense of numbers. Develop fluency in addition, subtraction, multiplication, and division of numbers and expressions. Students will generate a sophisticated understanding of the development and application of algorithms and procedures.

Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 7 and 8, which are 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

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop Strategies for Problem Solving

Analyze the parts of complex mathematical tasks and identify entry points to begin the search for a solution. Students will select from a variety of problem solving strategies and use corresponding multiple representations (verbal, physical, symbolic, pictorial, graphical, tabular) when appropriate. They will pursue solutions to various tasks from real-world situations and applications that are often interdisciplinary in nature. They will find methods to verify their answers in context and will always question the reasonableness of solutions.

Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1, 2, and 8, which are 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

Develop Mathematical Reasoning

Explore and communicate a variety of reasoning strategies to think through problems. Students will apply their logic to critique the thinking and strategies of others to develop and evaluate mathematical arguments, including making arguments and counterarguments and making connections to other contexts.

Lessons in every module engage students in modeling with mathematics as required by this standard. This Mathematical Action and Process 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

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop a Productive Mathematical Disposition

Hold the belief that mathematics is sensible, useful, and worthwhile. Students will develop the habit of looking for and making use of patterns and mathematical structures. They will persevere and become resilient, effective problem solvers.

Lessons in every module engage students in using appropriate tools strategically as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1, 7, and 8, which are 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

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop the Ability to Make Conjectures, Model, and Generalize

Make predictions and conjectures and draw conclusions throughout the problem solving process based on patterns and the repeated structures in mathematics. Students will create, identify, and extend patterns as a strategy for solving and making sense of problems.

Lessons in every module engage students in attending to precision as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 4, 7, and 8, which are 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

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop the Ability to Communicate Mathematically

Students will discuss, write, read, interpret and translate ideas and concepts mathematically. As they progress, students' ability to communicate mathematically will include their increased use of mathematical language and terms and analysis of mathematical definitions.

Lessons in every module engage students in looking for and making use of structure as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 3 and 6, which are 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

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
Number & Operations	Standard: Extend the understanding of number and operations to include square roots and cube roots.	
	A1.N.1.1 Write square roots and cube roots of monomial algebraic expressions in simplest radical form.	Algebra II M1 Lesson 9: Radicals and Conjugates Algebra II M3 Lesson 4: Properties of Exponents and Radicals
	A1.N.1.2 Add, subtract, multiply, and simplify square roots of monomial algebraic expressions and divide square roots of whole numbers, rationalizing the denominator when necessary.	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
Algebraic Reasoning & Algebra	Standard: Represent and solve mathematical and real-world problems using linear equations, absolute value equations, and systems of equations; interpret solutions in the original context.	
	A1.A.1.1 Use knowledge of solving equations with rational values to represent and solve mathematical and real-world problems (e.g., angle measures, geometric formulas, science, or statistics) and interpret the solutions in the original context.	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

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>A1.A.1.2 Solve absolute value equations and interpret the solutions in the original context.</p>	<p><i>Eureka Math</i> does not address absolute value equations.</p>
	<p>A1.A.1.3 Analyze and solve real-world and mathematical problems involving systems of linear equations with a maximum of two variables by graphing (may include graphing calculator or other appropriate technology), substitution, and elimination. Interpret the solutions in the original context.</p>	<p>Algebra I M1 Lessons 22–23: Solution Sets to Simultaneous Equations</p> <p>Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities</p> <p>Algebra I M4 Lesson 24: Modeling with Quadratic Functions</p>
	<p>Standard: Represent and solve real-world and mathematical problems using linear inequalities, compound inequalities and systems of linear inequalities; interpret solutions in the original context.</p>	
	<p>A1.A.2.1 Represent relationships in various contexts with linear inequalities; solve the resulting inequalities, graph on a coordinate plane, and interpret the solutions.</p>	<p>Algebra I M1 Lesson 21: Solution Sets to Inequalities with Two Variables</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>A1.A.2.2</p> <p>Represent relationships in various contexts with compound and absolute value inequalities and solve the resulting inequalities by graphing and interpreting the solutions on a number line.</p>	<p>Algebra I M1 Lesson 11: Solution Sets for Equations and Inequalities</p> <p>Algebra I M1 Lesson 15: Solution Sets of Two or More Equations (or Inequalities) Joined by “And” or “Or”</p> <p>Algebra I M1 Lesson 16: Solving and Graphing Inequalities Joined by “And” or “Or”</p> <p>Note: Supplemental material is necessary to include absolute value inequalities.</p>
	<p>A1.A.2.3</p> <p>Solve systems of linear inequalities with a maximum of two variables; graph and interpret the solutions on a coordinate plane.</p>	<p>Algebra I M1 Lesson 22: Solution Sets to Simultaneous Equations</p> <p>Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities</p>
<p>Standard: Generate equivalent algebraic expressions and use algebraic properties to evaluate expressions and arithmetic and geometric sequences.</p>		
	<p>A1.A.3.1</p> <p>Solve equations involving several variables for one variable in terms of the others.</p>	<p>Algebra I M1 Lesson 19: Rearranging Formulas</p>
	<p>A1.A.3.2</p> <p>Simplify polynomial expressions by adding, subtracting, or multiplying.</p>	<p>Algebra I M1 Topic B: The Structure of Expressions</p> <p>Algebra I M4 Lessons 1–2: Multiplying and Factoring Polynomial Expressions</p> <p>Algebra I M4 Lessons 3–4: Advanced Factoring Strategies for Quadratic Expressions</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>A1.A.3.3 Factor common monomial factors from polynomial expressions and factor quadratic expressions with a leading coefficient of 1.</p>	<p>Algebra I M1 Lesson 17: Equations Involving Factored Expressions</p> <p>Algebra I M4 Topic A: Quadratic Expressions, Equations, Functions, and Their Connection to Rectangles</p> <p>Algebra I M4 Lesson 12: Completing the Square</p>
	<p>A1.A.3.4 Evaluate linear, absolute value, rational, and radical expressions. Include applying a nonstandard operation such as $a \odot b = 2a + b$.</p>	<p>Algebra I M3 Topic B: Functions and Their Graphs</p> <p>Note: Supplemental material will be needed to include applying a nonstandard operation such as $a \odot b = 2a + b$.</p>
	<p>A1.A.3.5 Recognize that arithmetic sequences are linear using equations, tables, graphs, and verbal descriptions. Use the pattern, find the next term.</p>	<p>Algebra I M3 Topic A: Linear and Exponential Sequences</p> <p>Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates</p> <p>Algebra I M5 Lesson 5: Modeling from a Sequence</p>
	<p>A1.A.3.6 Recognize that geometric sequences are exponential using equations, tables, graphs and verbal descriptions. Given the formula $f(x) = a(r)^x$, find the next term and define the meaning of a and r within the context of the problem.</p>	<p>Algebra I M3 Topic A: Linear and Exponential Sequences</p> <p>Algebra I M3 Lesson 8: Why Stay with Whole Numbers?</p> <p>Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates</p> <p>Algebra I M3 Lesson 23: Newton’s Law of Cooling</p> <p>Algebra I M5 Lesson 5: Modeling from a Sequence</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Standard: Analyze mathematical change involving linear equations in real-world and mathematical problems.</p>	
	<p>A1.A.4.1 Calculate and interpret slope and the x- and y-intercepts of a line using a graph, an equation, two points, or a set of data points to solve real-world and mathematical problems.</p>	<p>G8 M4 Topic C: Slope and Equations of Lines</p> <p>Algebra I M1 Lesson 1: Graphs of Piecewise Linear Functions</p> <p>Algebra I M1 Lesson 5: Two Graphing Stories</p> <p>Algebra I M2 Lesson 14: Modeling Relationships with a Line</p>
	<p>A1.A.4.2 Solve mathematical and real-world problems involving lines that are parallel, perpendicular, horizontal, or vertical.</p>	<p>Geometry M1 Lesson 7: Solve for Unknown Angles—Transversals</p> <p>Geometry M1 Lesson 18: Looking More Carefully at Parallel Lines</p> <p>Geometry M2 Topic A: Scale Drawings</p> <p>Geometry M2 Lesson 19: Families of Parallel Lines and the Circumference of the Earth</p> <p>Geometry M4 Lesson 4: Designing a Search Robot to Find a Beacon</p> <p>Geometry M4 Topic B: Perpendicular and Parallel Lines in the Cartesian Plane</p> <p>Geometry M4 Lesson 14: Motion Along a Line—Search Robots Again</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>A1.A.4.3 Express linear equations in slope-intercept, point-slope, and standard forms and convert between these forms. Given sufficient information (slope and y-intercept, slope and one-point on the line, two points on the line, x- and y-intercept, or a set of data points), write the equation of a line.</p>	<p>Algebra I M2 Lesson 16: More on Modeling Relationships with a Line</p> <p>Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates</p> <p>Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again</p> <p>Algebra I M5: A Synthesis of Modeling with Equations and Functions</p>
	<p>A1.A.4.4 Translate between a graph and a situation described qualitatively.</p>	<p>Algebra I M1 Lesson 3: Graphs of Exponential Functions</p> <p>Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables</p> <p>Algebra I M5: A Synthesis of Modeling with Equations and Functions</p>
<p>Functions</p>	<p>Standard: Understand functions as descriptions of covariation (how related quantities vary together) in real-world and mathematical problems.</p>	
	<p>A1.F.1.1 Distinguish between relations and functions.</p>	<p>G8 M5 Lesson 2: Formal Definition of a Function</p> <p>G8 M5 Lesson 5: Graphs of Functions and Equations</p> <p>G8 M5 Lesson 7: Comparing Linear Functions and Graphs</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>A1.F.1.2 Identify the dependent and independent variables as well as the domain and range given a function, equation, or graph. Identify restrictions on the domain and range in real-world contexts.</p>	<p>Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns?</p> <p>Algebra I M3 Lesson 12: The Graph of the Equation $y = f(x)$</p>
	<p>A1.F.1.3 Write linear functions, using function notation, to model real-world and mathematical situations.</p>	<p>Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns?</p> <p>Algebra I M3 Lessons 9–10: Representing, Naming, and Evaluating Functions</p> <p>Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates</p> <p>Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again</p>
	<p>A1.F.1.4 Given a graph modeling a real-world situation, read and interpret the linear piecewise function (excluding step functions).</p>	<p>Algebra I M1 Lesson 1: Graphs of Piecewise Linear Functions</p> <p>Algebra I M3 Lesson 15: Piecewise Functions</p> <p>Algebra I M3 Lesson 24: Piecewise and Step Functions in Context</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Standard: Recognize functions and understand that families of functions are characterized by their rate of change.</p>	
	<p>A1.F.2.1 Distinguish between linear and nonlinear (including exponential) functions arising from real-world and mathematical situations that are represented in tables, graphs, and equations. Understand that linear functions grow by equal intervals and that exponential functions grow by equal factors over equal intervals.</p>	<p>Algebra I M3 Lesson 5: The Power of Exponential Growth</p> <p>Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population</p> <p>Algebra I M3 Lesson 7: Exponential Decay</p> <p>Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates</p> <p>Algebra I M5: A Synthesis of Modeling with Equations and Functions</p>
	<p>A1.F.2.2 Recognize the graph of the functions $f(x) = x$ and $f(x) = x$ and predict the effects of transformations [$f(x + c)$ and $f(x) + c$, where c is a positive or negative constant] algebraically and graphically using various methods and tools that may include graphing calculators.</p>	<p>Algebra I M3 Topic C: Transformations of Functions</p> <p>Algebra I M4 Lesson 19: Translating Graphs of Functions</p> <p>Algebra I M4 Lesson 20: Stretching and Shrinking Graphs of Functions</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Standard: Represent functions in multiple ways and use the representation to interpret real-world and mathematical problems.</p>	
	<p>A1.F.3.1 Identify and generate equivalent representations of linear equations, graphs, tables, and real-world situations.</p>	<p>Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables</p> <p>Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities</p> <p>Algebra I M2 Lesson 14: Modeling Relationships with a Line</p> <p>Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns?</p> <p>Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates</p> <p>Algebra I M5: A Synthesis of Modeling with Equations and Functions</p>
	<p>A1.F.3.2 Use function notation; evaluate a function, including nonlinear, at a given point in its domain algebraically and graphically. Interpret the results in terms of real-world and mathematical problems.</p>	<p>Algebra I M3: Linear and Exponential Functions</p>
<p>A1.F.3.3 Add, subtract, and multiply functions using function notation.</p>	<p>Algebra I M3 Lesson 10: Representing, Naming and Evaluating Functions</p> <p>Note: Supplemental material is necessary to address multiplication using function notation.</p>	

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
Data & Probability	Standard: Display, describe, and compare data. For linear relationships, make predictions and assess the reliability of those predictions.	
	A1.D.1.1 Describe a data set using data displays, describe and compare data sets using summary statistics, including measures of central tendency, location, and spread. Know how to use calculators, spreadsheets, or other appropriate technology to display data and calculate summary statistics.	Algebra I M2: Descriptive Statistics
	A1.D.1.2 Collect data and use scatterplots to analyze patterns and describe linear relationships between two variables. Using graphing technology, determine regression lines and correlation coefficients; use regression lines to make predictions and correlation coefficients to assess the reliability of those predictions.	Algebra I M2 Topic D: Numerical Data on Two Variables
	A1.D.1.3 Interpret graphs as being discrete or continuous.	G8 M5 Lesson 4: More Examples of Functions

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	Standard: Calculate probabilities and apply probability concepts.	
	<p>A1.D.2.1 Select and apply counting procedures, such as the multiplication and addition principles and tree diagrams, to determine the size of a sample space (the number of possible outcomes) and to calculate probabilities.</p>	G7 M5 Topic A: Calculating and Interpreting Probabilities Algebra II M4 Topic A: Probability
	<p>A1.D.2.2 Describe the concepts of intersections, unions, and complements using Venn diagrams to evaluate probabilities. Understand the relationships between these concepts and the words AND, OR, and NOT.</p>	Algebra II M4 Topic A: Probability
	<p>A1.D.2.3 Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes.</p>	Algebra I M2 Topic C: Categorical Data on Two Variables
	<p>A1.D.2.4 Apply probability concepts to real-world situations to make informed decisions.</p>	G7 M5 Lesson 12: Applying Probability to Make Informed Decisions Precalculus and Advanced Topics M5 Lessons 18–19: Analyzing Decisions and Strategies Using Probability