Grade 6 | Arkansas Mathematics Standards Correlation to *Eureka Math*®

About *Eureka Math*

Created by Great Minds®, a mission-driven Public Benefit Corporation, *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

Great Minds offers detailed analyses that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

Data

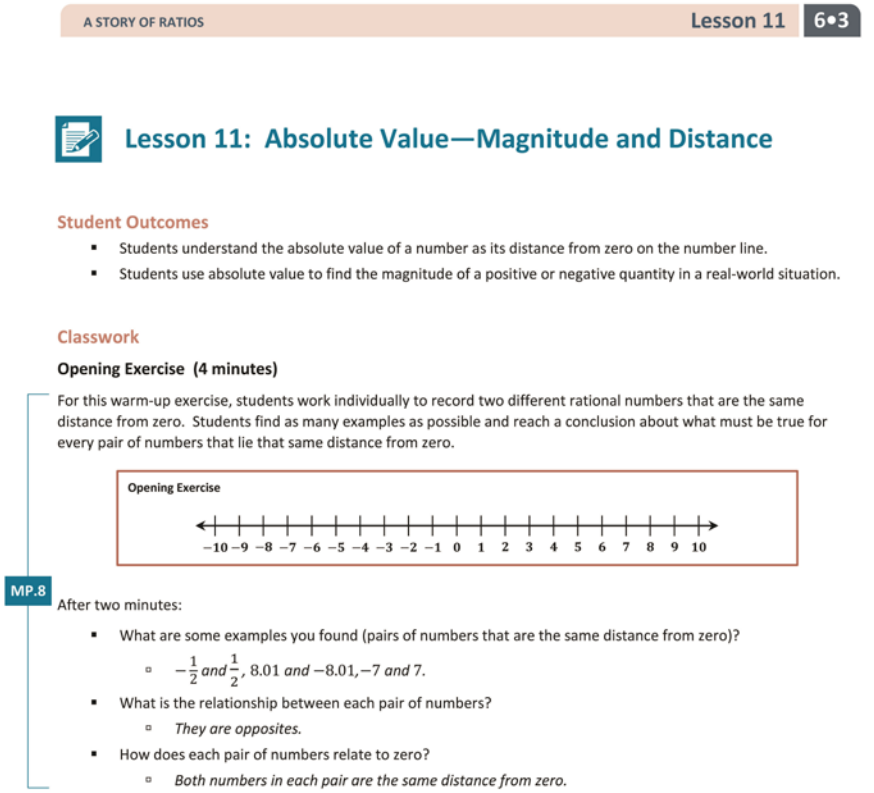
Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

Full Suite of Resources

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

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons. For example: 
MP.2 Reason abstractly and quantitatively.	
MP.3 Construct viable arguments and critique the reasoning of others.	
MP.4 Model with mathematics.	
MP.5 Use appropriate tools strategically.	
MP.6 Attend to precision.	
MP.7 Look for and make use of structure.	
MP.8 Look for and express regularity in repeated reasoning.	

Number Concepts & Computations

Rational Numbers

Students use fractions, decimals, integers, and absolute values to represent real-world situations.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.NCC.1 Explain positive and negative integers as being opposite values or directions and the meaning of 0 in a real-world context.	G6 M3 Topic A: Understanding Positive and Negative Numbers on the Number Line G6 M3 Lesson 13: Statements of Order in the Real World
6.NCC.2 Find and plot rational numbers on horizontal and vertical number lines in real-world and mathematical problems.	G6 M3 Topic B: Order and Absolute Value
6.NCC.3 Compare rational numbers, using inequalities ($<$, $>$,$\leq$, $\geq$, $\neq$) and order on a number line.	G6 M3 Lesson 7: Ordering Integers and Other Rational Numbers G6 M3 Lesson 8: Ordering Integers and Other Rational Numbers G6 M3 Lesson 9: Comparing Integers and Other Rational Numbers G6 M3 Lesson 10: Writing and Interpreting Inequality Statements Involving Rational Numbers
6.NCC.4 Interpret the absolute value of numbers for positive or negative quantities in a real-world context.	G6 M3 Lesson 11: Absolute Value—Magnitude and Distance
6.NCC.5 Convert between fractions, decimals, and percents in real-world and mathematical problems.	G6 M1 Topic D: Percent

Number Concepts & Computations

Rational Number Operations

Students extend previous knowledge of operations to decimals and fractions, involving positive rational numbers.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.NCC.6 Interpret and represent quotients of fractions.	G6 M2 Topic A: Arithmetic Operations Including Dividing by a Fraction
6.NCC.7 Solve problems involving the division of fractions in real-world and mathematical problems.	G6 M2 Topic A: Arithmetic Operations Including Dividing by a Fraction
6.NCC.8 Divide multi-digit numbers fluently in real-world and mathematical problems.	G6 M2 Lesson 8: Dividing Fractions and Mixed Numbers
6.NCC.9 Use any standard algorithm to fluently add and subtract multi-digit decimals and fractions in real-world and mathematical problems.	G6 M2 Topic B: Multi-Digit Decimal Operations—Adding, Subtracting, and Multiplying
6.NCC.10 Use any standard algorithm to fluently multiply and divide multi-digit decimals and fractions in real-world and mathematical problems.	G6 M2 Topic B: Multi-Digit Decimal Operations—Adding, Subtracting, and Multiplying G6 M2 Lesson 14: The Division Algorithm—Converting Decimal Division into Whole Number Division Using Fractions G6 M2 Lesson 15: The Division Algorithm—Converting Decimal Division into Whole Number Division Using Mental Math

Number Concepts & Computations

Common Factors and Multiples

Students use factors and multiples to solve problems.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.NCC.11 Solve real-world and mathematical problems with the greatest common factor of two whole numbers less than or equal to 100.	G6 M2 Lesson 17: Divisibility Tests for 3 and 9 G6 M2 Lesson 18: Least Common Multiple and Greatest Common Factor G6 M2 Lesson 19: The Euclidean Algorithm as an Application of the Long Division Algorithm
6.NCC.12 Solve real-world and mathematical problems with the least common multiple of two whole numbers less than or equal to 12.	G6 M2 Lesson 17: Divisibility Tests for 3 and 9 G6 M2 Lesson 18: Least Common Multiple and Greatest Common Factor G6 M2 Lesson 19: The Euclidean Algorithm as an Application of the Long Division Algorithm
6.NCC.13 Use the distributive property and the greatest common factor to rewrite the sum of two whole numbers, 1 through 100.	G6 M2 Lesson 17: Divisibility Tests for 3 and 9 G6 M2 Lesson 18: Least Common Multiple and Greatest Common Factor G6 M2 Lesson 19: The Euclidean Algorithm as an Application of the Long Division Algorithm

Proportional Relationships

Ratio & Rates

Students understand ratio concepts and use proportional reasoning to solve problems.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.PR.1 Use precise ratio language and notation to describe a ratio as a relationship between two quantities.	G6 M1 Topic A: Representing and Reasoning About Ratios G6 M1 Topic B: Collections of Equivalent Ratios G6 M1 Topic C: Unit Rates G6 M1 Lesson 24: Percent and Rates per 100 G6 M1 Lesson 25: A Fraction as a Percent
6.PR.2 Calculate unit rates to include unit pricing and constant speed.	G6 M1 Lesson 21: Getting the Job Done—Speed, Work, and Measurement Units G6 M1 Lesson 22: Getting the Job Done—Speed, Work, and Measurement Units G6 M1 Lesson 23: Problem-Solving Using Rates, Unit Rates, and Conversions
6.PR.3 Give examples of unit rates as a ratio that compares two quantities with different units of measure, limited to non-complex fractions.	G6 M1 Lesson 21: Getting the Job Done—Speed, Work, and Measurement Units G6 M1 Lesson 22: Getting the Job Done—Speed, Work, and Measurement Units G6 M1 Lesson 23: Problem-Solving Using Rates, Unit Rates, and Conversions
6.PR.4 Create various representations to compare ratios and find missing values to solve real-world and mathematical problems.	G6 M1 Topic B: Collections of Equivalent Ratios
6.PR.5 Find a percent of a quantity as a rate per 100 and solve problems involving finding the whole when given a part and the percent.	G6 M1 Topic D: Percent

Algebra

Expressions

Students extend their understanding of arithmetic to algebraic expressions.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.ALG.1 Read and write expressions in real-world or mathematical problems in which letters stand for numbers.	G6 M4 Topic C: Replacing Letters and Numbers G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions G6 M4 Topic E: Expressing Operations in Algebraic Form G6 M4 Topic F: Writing and Evaluating Expressions and Formulas
6.ALG.2 Use mathematical terms to identify parts of an expression, including the names of operations, terms, factors, coefficients, variables, and constants.	G6 M4 Lesson 10: Writing and Expanding Multiplication Expressions
6.ALG.3 Write and evaluate expressions for given values of variables, using order of operations, including expressions with whole number exponents.	G6 M4 Lesson 6: The Order of Operations
6.ALG.4 Generate equivalent expressions by applying the associative, commutative, distributive, and identity properties.	G6 M4 Topic A: Relationships of the Operations G6 M4 Lesson 9: Writing Addition and Subtraction Expressions G6 M4 Lesson 11: Factoring Expressions G6 M4 Lesson 12: Distributing Expressions

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.ALG.5 Identify when two expressions are equivalent by using properties of operations including like terms.	G6 M4 Lesson 8: Replacing Numbers with Letters G6 M4 Lesson 9: Writing Addition and Subtraction Expressions G6 M4 Lesson 10: Writing and Expanding Multiplication Expressions G6 M4 Lesson 11: Factoring Expressions G6 M4 Lesson 12: Distributing Expressions G6 M4 Lesson 13: Writing Division Expressions

Algebra

Equations & Inequalities

Students focus on reasoning about and solving equations and inequalities.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.ALG.6 Use substitution to determine if a given value in a specified set makes an equation or inequality true.	G6 M4 Topic G: Solving Equations G6 M4 Topic H: Applications of Equations
6.ALG.7 Write and solve one-step equations in real-world and mathematical problems, involving positive rational numbers and zero.	G6 M4 Lesson 26: One-Step Equations—Addition and Subtraction G6 M4 Lesson 27: One-Step Equations—Multiplication and Division G6 M4 Lesson 28: Two-Step Problems—All Operations G6 M4 Lesson 29: Multi-Step Problems—All Operations G6 M4 Lesson 30: One-Step Problems in the Real World G6 M4 Lesson 31: Problems in Mathematical Terms G6 M4 Lesson 32: Multi-Step Problems in the Real World

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.ALG.8 Write, solve, and graph one-step inequalities in real-world and mathematical problems.	G6 M4 Lesson 33: From Equations to Inequalities G6 M4 Lesson 34: Writing and Graphing Inequalities in Real-World Problems

Geometry & Measurement

Area, Volume, & Surface Area

Students solve problems involving area, volume, and surface area.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.GM.1 Find the area of triangles, quadrilaterals, and polygons by composing or decomposing to solve real-world and mathematical problems.	G6 M5 Topic A: Area of Triangles, Quadrilaterals, and Polygons G6 M5 Lesson 8: Drawing Polygons in the Coordinate Plane G6 M5 Lesson 9: Determining Perimeter and Area of Polygons on the Coordinate Plane
6.GM.2 Apply the formulas $V = lwh$ and $V = Bh$ to find the volume of right rectangular prisms with fractional edge lengths to solve real-world and mathematical problems, including solving for an unknown dimension.	G6 M5 Topic C: Volume of Right Rectangular Prisms G6 M5 Lesson 19: Surface Area and Volume in the Real World G6 M5 Lesson 20: Addendum Lesson for Modeling—Applying Surface Area and Volume to Aquariums
6.GM.3 Construct nets of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid, using the nets to find the surface area of these prisms.	G6 M5 Topic D: Nets and Surface Area

Geometry & Measurement

Coordinate Plane System

Students graph points in all four quadrants.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.GM.4 Find and graph pairs of rational numbers in all four quadrants of the coordinate plane in real-world and mathematical problems.	G6 M3 Topic C: Rational Numbers and the Coordinate Plane
6.GM.5 Draw polygons in the coordinate plane when given coordinates for the vertices.	G6 M5 Topic B: Polygons on the Coordinate Plane
6.GM.6 Use coordinates to calculate vertical and horizontal distances between points with the same x-coordinate or the same y-coordinate to solve real-world and mathematical problems.	G6 M3 Topic C: Rational Numbers and the Coordinate Plane G6 M5 Topic B: Polygons on the Coordinate Plane

Geometry & Measurement

Conversions

Students apply measurement knowledge to solve real-world problems.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.GM.7 Convert measurements within and between the metric and customary measurement systems to solve real-world and mathematical problems.	G5 M1 Lesson 4: Use exponents to denote powers of 10 with application to metric conversions. G5 M2 Topic D: Measurement Word Problems with Whole Number and Decimal Multiplication G5 M4 Lesson 8: Relate a fraction of a set to the repeated addition interpretation of fraction multiplication. G5 M4 Lesson 9: Find a fraction of a measurement, and solve word problems. G5 M4 Lesson 19: Convert measures involving whole numbers, and solve multi-step word problems. G5 M4 Lesson 20: Convert mixed unit measurements, and solve multi-step word problems. G5 M6 Lesson 21: Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. G5 M6 Lesson 28: Solidify fluency with Grade 5 skills. *Supplemental material is necessary to address converting measurements between the metric and customary measurement systems.*

Statistics & Probability

Statistical & Nonstatistical

Students recognize that data collected to answer a statistical question can be analyzed by their distributions.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.SP.1 Identify the difference between statistical and non-statistical questions and write simple statistical questions that allow variable responses.	G6 M6 Lesson 1: Posing Statistical Questions

Statistics & Probability

Measures of Center

Students explore mean, median, and mode.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.SP.2 Calculate and interpret any measure of center (mean, median, and mode) of a numerical data set.	G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project
6.SP.3 Determine which measure of center (mean or median) is more appropriate to describe the center of data and justify the choice.	G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project
6.SP.4 Describe how the mean or median is affected by outliers of a numerical data set.	G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project

Statistics & Probability

Measures of Variation

Students explore range and interquartile range.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.SP.5 Calculate and interpret the measure of variation [range and interquartile range (IQR)] of a numerical data set.	G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.SP.6 Determine which measure of variation (range or interquartile range) is more appropriate to describe the shape; justify the choice.	G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project

Statistics & Probability

Numerical Data

Students summarize and describe distributions.

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.SP.7 Represent numerical data on a number line, histogram, and box plot.	G6 M6 Lesson 2: Displaying a Data Distribution G6 M6 Lesson 3: Creating a Dot Plot G6 M6 Lesson 4: Creating a Histogram G6 M6 Lesson 5: Describing a Distribution Displayed in a Histogram G6 M6 Lesson 6: Describing the Center of a Distribution Using the Mean G6 M6 Lesson 7: The Mean as a Balance Point G6 M6 Lesson 8: Variability in a Data Distribution G6 M6 Lesson 10: Describing Distributions Using the Mean and MAD G6 M6 Lesson 11: Describing Distributions Using the Mean and MAD G6 M6 Lesson 14: Summarizing a Distribution Using a Box Plot G6 M6 Lesson 15: More Practice with Box Plots G6 M6 Lesson 16: Understanding Box Plots G6 M6 Lesson 17: Developing a Statistical Project G6 M6 Lesson 18: Connecting Graphical Representations and Numerical Summaries

Arkansas Mathematics Standards	Aligned Components of *Eureka Math*
6.SP.7 ***continued***	G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project
6.SP.8 Calculate the relative frequency of an interval of data values when given a histogram.	G6 M6 Lesson 2: Displaying a Data Distribution G6 M6 Lesson 4: Creating a Histogram G6 M6 Lesson 5: Describing a Distribution Displayed in a Histogram G6 M6 Lesson 8: Variability in a Data Distribution G6 M6 Lesson 17: Developing a Statistical Project G6 M6 Lesson 18: Connecting Graphical Representations and Numerical Summaries G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project
6.SP.9 Interpret a box plot to answer statistical questions about a data set.	G6 M6 Lesson 2: Displaying a Data Distribution G6 M6 Lesson 14: Summarizing a Distribution Using a Box Plot G6 M6 Lesson 15: More Practice with Box Plots G6 M6 Lesson 16: Understanding Box Plots G6 M6 Lesson 17: Developing a Statistical Project G6 M6 Lesson 18: Connecting Graphical Representations and Numerical Summaries G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project