



Grade 7 | Alabama Standards for Mathematical Content Correlation to Eureka Math^{2®}

When the original *Eureka Math*® curriculum was released, it quickly became the most widely used K-5 mathematics curriculum in the country. Now, the Great Minds® teacher-writers have created *Eureka Math*^{2®}, a groundbreaking new curriculum that helps teachers deliver exponentially better math instruction while still providing students with the same deep understanding of and fluency in math. *Eureka Math*² carefully sequences mathematical content to maximize vertical alignment—a principle tested and proven to be essential in students' mastery of math—from kindergarten through high school.

While this innovative new curriculum includes all the trademark Eureka Math aha moments that have been delighting students and teachers for years, it also boasts these exciting new features:

Teachability

Eureka Math² 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 right into the teacher materials.

Accessibility

Eureka Math² incorporates Universal Design for Learning principles so all learners can access the mathematics and take on challenging math concepts. Student supports are built into the instructional design and are clearly identified in the Teach book. Further, the curriculum carries a focus on readability. By eliminating unnecessary words and using simple, clear sentences, the Eureka Math² 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.

Digital Engagement

The digital elements of *Eureka Math*² add to students' engagement with the math. The curriculum provides teachers with digital slides for each lesson. In addition, each grade level includes wordless videos that spark students' interest and curiosity. Students at all levels work through mathematical explorations that help lead to their own mathematical discoveries. Digital lessons and videos provide opportunities for students to wonder, explore, and make sense of mathematics, which contributes to the development of a strong, positive mathematical identity.

Student Mathematical Practices

Aligned Components of Eureka Math²

MP.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.
MP.2 Reason abstractly and quantitatively.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.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.
MP.4 Model with mathematics.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.5 Use appropriate tools strategically.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.6 Attend to precision.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.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.
MP.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.

Proportional Reasoning

Analyze proportional relationships and use them to solve real-world and mathematical problems.

Alabama	Stan	dards	for
Mathema	atical	Cont	ent

Aligned Components of Eureka Math²

7.PR.1	7 M1 Lesson 1: An Experiment with Ratios and Rates
Calculate unit rates of length, area,	7 M1 Lesson 2: Exploring Tables of Proportional Relationships
and other quantities measured in like or different units that include ratios or fractions.	7 M1 Lesson 3: Identifying Proportional Relationships in Tables
7.PR.2	This standard is fully addressed by the lessons aligned to its subsections.
Represent a relationship between two quantities and determine whether the two quantities are related proportionally.	
7.PR.2.a	7 M1 Topic A: Understanding Proportional Relationships
Use equivalent ratios displayed in a table or in a graph of the relationship in the coordinate plane to determine whether a relationship between two quantities is proportional.	7 M1 Lesson 14: Extreme Bicycles
7.PR.2.b	7 M1 Lesson 4: Exploring Graphs of Proportional Relationships
Identify the constant of proportionality	7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships
(unit rate) and express the proportional relationship using multiple representations including tables, graphs, equations, diagrams, and verbal descriptions.	7 M1 Lesson 6: Identifying Proportional Relationships in Written Descriptions
	7 M1 Lesson 8: Relating Representations of Proportional Relationships
	7 M1 Lesson 9: Comparing Proportional Relationships
	7 M1 Lesson 11: Constant Rates
	7 M1 Lesson 12: Multi-Step Ratio Problems, Part 1

Aligned Components of Eureka Math²

7.PR.2.b continued	7 M1 Lesson 13: Multi-Step Ratio Problems, Part 2
	7 M1 Lesson 16: Using a Scale Factor
	7 M1 Lesson 18: Relating Areas of Scale Drawings
7.PR.2.c	7 M1 Lesson 4: Exploring Graphs of Proportional Relationships
Explain in context the meaning of a	7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships
point (x, y) on the graph of a proportional relationship, with special attention to the	7 M1 Lesson 9: Comparing Proportional Relationships
points $(0,0)$ and $(1,r)$ where r is the	
unit rate.	
7.PR.3	7 M1 Lesson 7: Handstand Sprint
Solve multi-step percent problems in	7 M1 Lesson 10: Applying Proportional Reasoning
context using proportional reasoning, including simple interest, tax, gratuities,	7 M1 Lesson 11: Constant Rates
commissions, fees, markups and	7 M1 Lesson 12: Multi-Step Ratio Problems, Part 1
markdowns, percent increase, and	7 M1 Lesson 13: Multi-Step Ratio Problems, Part 2
percent decrease.	7 M5 Lesson 2: Racing for Percents
	7 M5 Lesson 3: Percent as a Rate per 100
	7 M5 Lesson 4: Proportion and Percent
	7 M5 Lesson 5: Common Denominators or Common Numerators
	7 M5 Topic B: Part of 100
	7 M5 Lesson 10: Percent Increase
	7 M5 Lesson 11: Percent Decrease
	7 M5 Lesson 12: More Discounts
	7 M5 Lesson 13: What Is the Best Deal?

Aligned Components of Eureka Math²

7.PR.3 continued	7 M5 Topic D: Applications of Percent
	7 M5 Lesson 20: Making Money, Day 1
	7 M5 Lesson 21: Making Money, Day 2
	7 M5 Lesson 22: Making Mixtures
	7 M5 Lesson 23: Percents of Percents

Number Systems and Operations

Apply and extend prior knowledge of addition, subtraction, multiplication, and division to operations with rational numbers.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.NSO.4

Apply and extend knowledge of operations of whole numbers, fractions, and decimals to add, subtract, multiply, and divide rational numbers including integers, signed fractions, and decimals.

7 M2 Lesson 4: KAKOOMA®

7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient

7 M2 Lesson 6: Adding Rational Numbers

7 M2 Lesson 9: Subtracting Integers, Part 2

7 M2 Lesson 10: Subtracting Rational Numbers, Part 1

7 M2 Lesson 11: Subtracting Rational Numbers, Part 2

7 M2 Lesson 12: The Integer Game

7 M2 Topic C: Multiplying Rational Numbers

7 M2 Lesson 17: Understanding Negative Dividends

7 M2 Lesson 18: Understanding Negative Divisors

7 M2 Lesson 22: Multiplication and Division Expressions

7 M2 Lesson 24: Order of Operations with Rational Numbers

Aligned Components of Eureka Math²

7.NSO.4.a	7 M2 Lesson 1: Combining Opposites
Identify and explain situations where the sum of opposite quantities is 0 and opposite quantities are defined as additive inverses.	7 M2 Lesson 12: The Integer Game
7.NSO.4.b	7 M2 Lesson 1: Combining Opposites
Interpret the sum of two or more rational	7 M2 Lesson 2: Adding Integers
numbers, by using a number line and in real-world contexts.	7 M2 Lesson 3: Adding Integers Efficiently
real-world contexts.	7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient
	7 M2 Lesson 6: Adding Rational Numbers
	7 M2 Lesson 8: Subtracting Integers, Part 1
7.NSO.4.c	7 M2 Lesson 7: What Subtraction Means
Explain subtraction of rational numbers	7 M2 Lesson 8: Subtracting Integers, Part 1
as addition of additive inverses.	7 M2 Lesson 9: Subtracting Integers, Part 2
	7 M2 Lesson 10: Subtracting Rational Numbers, Part 1
	7 M2 Lesson 11: Subtracting Rational Numbers, Part 2
7.NSO.4.d	7 M2 Lesson 1: Combining Opposites
Use a number line to demonstrate that the	7 M2 Lesson 2: Adding Integers
distance between two rational numbers on the number line is the absolute value of their difference, and apply this	7 M2 Lesson 3: Adding Integers Efficiently
	7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient
principle in real-world contexts.	7 M2 Lesson 6: Adding Rational Numbers
	7 M2 Lesson 8: Subtracting Integers, Part 1

Aligned Components of Eureka Math²

7.NSO.4.e	7 M2 Topic C: Multiplying Rational Numbers
Extend strategies of multiplication to rational numbers to develop rules for multiplying signed numbers, showing that the properties of the operations are preserved.	
7.NSO.4.f	7 M2 Lesson 18: Understanding Negative Divisors
Divide integers and explain that division by zero is undefined. Interpret the quotient of integers (with a non-zero divisor) as a rational number.	7 M2 Lesson 21: Comparing and Ordering Rational Numbers
7.NSO.4.g	7 M2 Lesson 19: Rational Numbers as Decimals, Part 1
Convert a rational number to a decimal	7 M2 Lesson 20: Rational Numbers as Decimals, Part 2
using long division, explaining that the decimal form of a rational number terminates or eventually repeats.	7 M2 Lesson 21: Comparing and Ordering Rational Numbers
7.NSO.5	7 M2 Lesson 25: Writing and Evaluating Expressions with Rational Numbers, Part 1
Solve real-world and mathematical problems involving the four operations of rational numbers, including complex fractions. Apply properties of operations as strategies where applicable.	7 M2 Lesson 26: Writing and Evaluating Expressions with Rational Numbers, Part 2

Algebra and Functions

Create equivalent expressions using the properties of operations.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.AF.6	7 M3 Topic A: Equivalent Expressions
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	
7.AF.7	7 M3 Lesson 2: The Distributive Property and the Tabular Model
Generate expressions in equivalent forms	7 M3 Lesson 4: Adding and Subtracting Expressions
based on context and explain how the quantities are related.	7 M3 Lesson 5: Factoring Expressions
quantities are related.	7 M3 Lesson 6: Comparing Expressions
	7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures
	7 M5 Lesson 10: Percent Increase
	7 M5 Lesson 11: Percent Decrease
	7 M5 Lesson 12: More Discounts
	7 M5 Lesson 14: Scale Factor—Percent Increase and Decrease
	7 M5 Lesson 15: Tips and Taxes
	7 M5 Lesson 16: Markups and Discounts
	7 M5 Lesson 23: Percents of Percents

Algebra and Functions

Solve real-world and mathematical problems using numerical and algebraic expressions, equations, and inequalities.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.AF.8

Solve multi-step real-world and mathematical problems involving rational numbers (integers, signed fractions and decimals), converting between forms as needed. Assess the reasonableness of answers using mental computation and estimation strategies.

7 M2 Lesson 25: Writing and Evaluating Expressions with Rational Numbers, Part 1

7 M2 Lesson 26: Writing and Evaluating Expressions with Rational Numbers, Part 2

7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures

7 M3 Lesson 10: Problem Solving with Unknown Angle Measures

7 M3 Lesson 11: Dominoes and Dominoes

7 M3 Lesson 16: Using Equations to Solve Rate Problems

7 M3 Lesson 17: Using Equations to Solve Problems

7.AF.9

Use variables to represent quantities in real-world or mathematical problems and construct algebraic expressions, equations, and inequalities to solve problems by reasoning about the quantities.

7 M3 Lesson 11: Dominoes and Dominoes

7 M3 Lesson 12: Solving Equations Algebraically and Arithmetically

7 M3 Lesson 13: Solving Equations—Puzzles

7 M3 Lesson 16: Using Equations to Solve Rate Problems

7 M3 Lesson 17: Using Equations to Solve Problems

7 M3 Lesson 18: Understanding Inequalities and Their Solutions

7 M3 Lesson 19: Using Equations to Solve Inequalities

7 M3 Lesson 21: Solving Two-Step Inequalities

7 M3 Lesson 22: Solving Problems Involving Inequalities

7 M3 Lesson 23: Inequalities vs. Equations

Aligned Components of Eureka Math²

7.	Δ	F.	9	ď

Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.

7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures

7 M3 Lesson 12: Solving Equations Algebraically and Arithmetically

7 M3 Lesson 13: Solving Equations—Puzzles

7 M3 Lesson 14: Solving Equations—Scavenger Hunt

7 M3 Lesson 15: Solving Equations Fluently

7 M3 Lesson 16: Using Equations to Solve Rate Problems

7.AF.9.b

Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality, and interpret it in the context of the problem.

7 M3 Topic D: Inequalities

Data Analysis, Statistics, and Probability

Make inferences about a population using random sampling.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.DSP.10

Examine a sample of a population to generalize information about the population.

7 M6 Lesson 11: Populations and Samples

7 M6 Lesson 12: Selecting a Sample

7 M6 Lesson 13: Variability Between Samples

7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean

Aligned Components of Eureka Math²

7.DSP.10.a	7 M6 Lesson 11: Populations and Samples
Differentiate between a sample and	7 M6 Lesson 12: Selecting a Sample
a population.	7 M6 Lesson 13: Variability Between Samples
	7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean
7.DSP.10.b	7 M6 Lesson 11: Populations and Samples
Compare sampling techniques to	7 M6 Lesson 12: Selecting a Sample
determine whether a sample is random and thus representative of a population,	7 M6 Lesson 13: Variability Between Samples
explaining that random sampling tends	7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean
to produce representative samples and support valid inferences.	
support valid inferences.	
7.DSP.10.c	7 M6 Lesson 11: Populations and Samples
Determine whether conclusions and	7 M6 Lesson 12: Selecting a Sample
generalizations can be made about a population based on a sample.	7 M6 Lesson 13: Variability Between Samples
	7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean
7.DSP.10.d	7 M6 Lesson 13: Variability Between Samples
Use data from a random sample to draw inferences about a population with an unknown characteristic of interest, generating multiple samples to gauge variation and making predictions or conclusions about the population.	7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean
	7 M6 Lesson 15: Sampling Variability and the Effect of Sample Size
	7 M6 Lesson 16: Sampling Variability When Estimating a Population Proportion

Aligned Components of Eureka Math²

7.DSP.10.e	Supplemental material is necessary to address this standard.
Informally explain situations in which	
statistical bias may exist.	

Data Analysis, Statistics, and Probability

Make inferences from an informal comparison of two populations.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.DSP.11	7 M6 Topic D: Comparing Populations
Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.	
7.DSP.12	7 M6 Topic D: Comparing Populations
Make informal comparative inferences about two populations using measures of center and variability and/or mean absolute deviation in context.	

Data Analysis, Statistics, and Probability

Investigate probability models.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.DSP.13	7 M6 Lesson 1: What is Probability?
Use a number from 0 to 1 to represent the probability of a chance event occurring, explaining that larger numbers indicate greater likelihood of the event occurring, while a number near zero indicates an unlikely event.	
7.DSP.14	7 M6 Lesson 4: Theoretical Probability
Define and develop a probability model, including models that may or may not be uniform, where uniform models assign equal probability to all outcomes and non-uniform models involve events that are not equally likely.	7 M6 Lesson 7: The Law of Large Numbers 7 M6 Lesson 8: Picking Blue
7.DSP.14.a	7 M6 Lesson 2: Empirical Probability
Collect and use data to predict probabilities of events.	7 M6 Lesson 3: Outcomes of Chance Experiments
	7 M6 Lesson 6: Outcomes That Are Not Equally Likely
	7 M6 Lesson 8: Picking Blue
7.DSP.14.b	7 M6 Lesson 7: The Law of Large Numbers
Compare probabilities from a model to observed frequencies, explaining possible sources of discrepancy.	

Aligned Components of Eureka Math²

7.DSP.15	7 M6 Lesson 2: Empirical Probability
Approximate the probability of an event using data generated by a simulation (experimental probability) and compare it to the theoretical probability.	7 M6 Lesson 3: Outcomes of Chance Experiments 7 M6 Lesson 6: Outcomes That Are Not Equally Likely 7 M6 Lesson 8: Picking Blue
7.DSP.15.a	7 M6 Lesson 2: Empirical Probability
Observe the relative frequency of an event over the long run, using simulation or technology, and use those results to predict approximate relative frequency.	7 M6 Lesson 3: Outcomes of Chance Experiments 7 M6 Lesson 6: Outcomes That Are Not Equally Likely 7 M6 Lesson 8: Picking Blue
7.DSP.16 Find probabilities of simple and compound events through experimentation or simulation and by analyzing the sample space,	7 M6 Lesson 5: Multistage Experiments
representing the probabilities as percents, decimals, or fractions.	
7.DSP.16.a	7 M6 Lesson 5: Multistage Experiments
Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams, and determine the probability of an event by finding the fraction of outcomes in the sample space for which the compound event occurred.	

Aligned Components of Eureka Math²

7.DSP.16.b Design and use a simulation to generate frequencies for compound events.	7 M6 Lesson 9: Probability Simulations 7 M6 Lesson 10: Simulations with Random Number Tables
7.DSP.16.c Represent events described in everyday language in terms of outcomes in the sample space which composed the event.	7 M6 Lesson 3: Outcomes of Chance Experiments 7 M6 Lesson 4: Theoretical Probability 7 M6 Lesson 5: Multistage Experiments 7 M6 Lesson 6: Outcomes That Are Not Equally Likely

Geometry and Measurement

Construct and describe geometric figures, analyzing relationships among them.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.GM.17	7 M1 Lesson 15: Scale Drawings
Solve problems involving scale drawings of geometric figures, including computation of actual lengths and areas	7 M1 Lesson 16: Using a Scale Factor
	7 M1 Lesson 17: Finding Actual Distances from a Scale Drawing
from a scale drawing and reproduction	7 M1 Lesson 18: Relating Areas of Scale Drawings
of a scale drawing at a different scale.	7 M1 Lesson 19: Scale and Scale Factor
	7 M1 Lesson 20: Creating Multiple Scale Drawings
	7 M5 Lesson 1: Proportionality and Scale Factor
	7 M5 Lesson 14: Scale Factor—Percent Increase and Decrease

Aligned Components of Eureka Math²

7.GM.18

Construct geometric shapes (freehand, using a ruler and a protractor, and using technology), given a written description or measurement constraints with an emphasis on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

7 M4 Topic A: Constructing Geometric Figures

7 M4 Topic B: Constructing Triangles

7 M4 Lesson 9: Constructing a Circle

7.GM.19

Describe the two-dimensional figures created by slicing three-dimensional figures into plane sections.

7 M4 Lesson 22: Understanding Planes and Cross Sections

7 M4 Lesson 23: Cross Section Scavenger Hunt

Geometry and Measurement

Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume.

Alabama Standards for Mathematical Content

Aligned Components of Eureka Math²

7.GM.20

Explain the relationships among circumference, diameter, area, and radius of a circle to demonstrate understanding of formulas for the area and circumference of a circle.

7 M4 Lesson 10: The Outside of a Circle

7 M4 Lesson 11: The Inside of a Circle

7 M4 Lesson 12: Exploring the Area and Circumference of a Circle

7 M4 Lesson 13: Finding Areas of Circular Regions

7 M4 Lesson 14: Composite Figures with Circular Regions

7 M4 Lesson 15: Watering a Lawn

Aligned Components of Eureka Math²

7.GM.20.a	7 M4 Lesson 10: The Outside of a Circle
Informally derive the formula for area of a circle.	7 M4 Lesson 11: The Inside of a Circle
	7 M4 Lesson 12: Exploring the Area and Circumference of a Circle
	7 M4 Lesson 13: Finding Areas of Circular Regions
	7 M4 Lesson 14: Composite Figures with Circular Regions
	7 M4 Lesson 15: Watering a Lawn
7.GM.20.b	7 M4 Lesson 10: The Outside of a Circle
Solve area and circumference problems in real-world and mathematical situations involving circles.	7 M4 Lesson 11: The Inside of a Circle
	7 M4 Lesson 12: Exploring the Area and Circumference of a Circle
	7 M4 Lesson 13: Finding Areas of Circular Regions
	7 M4 Lesson 14: Composite Figures with Circular Regions
	7 M4 Lesson 15: Watering a Lawn
7.GM.21	7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures
Use facts about supplementary, complementary, vertical, and adjacent angles in multi-step problems to write and solve simple equations for an unknown angle in a figure.	7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures
	7 M3 Lesson 10: Problem Solving with Unknown Angle Measures

Aligned Components of Eureka Math²

7.GM.22

Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right rectangular prisms.

7 M4 Lesson 14: Composite Figures with Circular Regions

7 M4 Lesson 16: Solving Area Problems by Composition and Decomposition

7 M4 Lesson 17: Surface Area of Right Rectangular and Right Triangular Prisms

7 M4 Lesson 18: Surface Area of Right Prisms

7 M4 Lesson 20: Surface Areas of Right Pyramids

7 M4 Lesson 21: Surface Area of Other Solids

7 M4 Lesson 24: Volume of Prisms

7 M4 Lesson 25: Volume of Composite Solids

7 M4 Lesson 26: Designing a Fish Tank