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## Grade 7 | Alabama Standards for Mathematical Content (2019) Correlation to *Eureka Math*<sup>2</sup>® (2027)

*Eureka Math*<sup>2</sup> 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*<sup>2</sup> 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*<sup>2</sup> 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*<sup>2</sup> 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*<sup>2</sup> 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*<sup>2</sup> 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*<sup>2</sup> 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.

Student Mathematical Practices	Aligned Components of <i>Eureka Math</i> <sup>2</sup>
<p><b>MP.1</b> Make sense of problems and persevere in solving them.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.2</b> Reason abstractly and quantitatively.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.3</b> Construct viable arguments and critique the reasoning of others.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.4</b> Model with mathematics.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.5</b> Use appropriate tools strategically.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.6</b> Attend to precision.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.7</b> Look for and make use of structure.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p><b>MP.8</b> Look for and express regularity in repeated reasoning.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>

## Proportional Reasoning

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

Alabama Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i> <sup>2</sup>
<p><b>7.PR.1</b></p> <p>Calculate unit rates of length, area, and other quantities measured in like or different units that include ratios or fractions.</p>	<p>7 M1 Lesson 1: An Experiment with Ratios and Rates</p> <p>7 M1 Lesson 2: Exploring Tables of Proportional Relationships</p> <p>7 M1 Lesson 3: Identifying Proportional Relationships in Tables</p>
<p><b>7.PR.2</b></p> <p>Represent a relationship between two quantities and determine whether the two quantities are related proportionally.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p><b>7.PR.2.a</b></p> <p>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.</p>	<p>7 M1 Lesson 1: An Experiment with Ratios and Rates</p> <p>7 M1 Lesson 2: Exploring Tables of Proportional Relationships</p> <p>7 M1 Lesson 3: Identifying Proportional Relationships in Tables</p> <p>7 M1 Lesson 4: Exploring Graphs of Proportional Relationships</p> <p>7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships</p> <p>7 M1 Lesson 6: Identifying Proportional Relationships in Written Descriptions</p> <p>7 M1 Lesson 14: Extreme Bicycles</p>
<p><b>7.PR.2.b</b></p> <p>Identify the constant of proportionality (unit rate) and express the proportional relationship using multiple representations including tables, graphs, equations, diagrams, and verbal descriptions.</p>	<p>7 M1 Lesson 4: Exploring Graphs of Proportional Relationships</p> <p>7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships</p> <p>7 M1 Lesson 6: Identifying Proportional Relationships in Written Descriptions</p> <p>7 M1 Lesson 8: Relating Representations of Proportional Relationships</p> <p>7 M1 Lesson 9: Comparing Proportional Relationships</p> <p>7 M1 Lesson 11: Constant Rates</p>

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<p><b>7.PR.2.b</b> <i>continued</i></p>	<p>7 M1 Lesson 12: Multi-Step Ratio Problems, Part 1</p> <p>7 M1 Lesson 13: Multi-Step Ratio Problems, Part 2</p> <p>7 M1 Lesson 16: Using a Scale Factor</p> <p>7 M1 Lesson 18: Relating Areas of Scale Drawings</p>
<p><b>7.PR.2.c</b></p> <p>Explain in context the meaning of a point <math>(x, y)</math> on the graph of a proportional relationship, with special attention to the points <math>(0, 0)</math> and <math>(1, r)</math> where <math>r</math> is the unit rate.</p>	<p>7 M1 Lesson 4: Exploring Graphs of Proportional Relationships</p> <p>7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships</p> <p>7 M1 Lesson 9: Comparing Proportional Relationships</p>
<p><b>7.PR.3</b></p> <p>Solve multi-step percent problems in context using proportional reasoning, including simple interest, tax, gratuities, commissions, fees, markups and markdowns, percent increase, and percent decrease.</p>	<p>7 M1 Lesson 7: Handstand Sprint</p> <p>7 M1 Lesson 10: Applying Proportional Reasoning</p> <p>7 M1 Lesson 11: Constant Rates</p> <p>7 M1 Lesson 12: Multi-Step Ratio Problems, Part 1</p> <p>7 M1 Lesson 13: Multi-Step Ratio Problems, Part 2</p> <p>7 M5 Lesson 2: Racing for Percents</p> <p>7 M5 Lesson 3: Percent as a Rate per 100</p> <p>7 M5 Lesson 4: Proportion and Percent</p> <p>7 M5 Lesson 5: Common Denominators or Common Numerators</p> <p>7 M5 Lesson 6: Finding Commission</p> <p>7 M5 Lesson 7: Finding Discounts</p> <p>7 M5 Lesson 8: Determining Fees</p> <p>7 M5 Lesson 9: Tax as a Fee</p> <p>7 M5 Lesson 10: Percent Increase</p>

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<b>Alabama Standards for Mathematical Content</b>	<b>Aligned Components of <i>Eureka Math</i><sup>2</sup></b>
<b>7.PR.3 <i>continued</i></b>	7 M5 Lesson 11: Percent Decrease 7 M5 Lesson 12: More Discounts 7 M5 Lesson 13: What Is the Best Deal? 7 M5 Lesson 15: Tips and Taxes 7 M5 Lesson 16: Markups and Discounts 7 M5 Lesson 17: Simple Interest and Proportionality 7 M5 Lesson 18: Simple Interest—Solving for Unknown Values 7 M5 Lesson 19: Applying Percent Error 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.

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<p><b>7.NSO.4</b></p> <p>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.</p>	<p>7 M2 Lesson 4: KAKOOMA®</p> <p>7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient</p> <p>7 M2 Lesson 6: Adding Rational Numbers</p> <p>7 M2 Lesson 9: Subtracting Integers, Part 2</p> <p>7 M2 Lesson 10: Subtracting Rational Numbers, Part 1</p> <p>7 M2 Lesson 11: Subtracting Rational Numbers, Part 2</p> <p>7 M2 Lesson 12: The Integer Game</p> <p>7 M2 Lesson 13: Understanding Multiples of Negative Numbers</p> <p>7 M2 Lesson 14: Understanding the Product of Two Negative Numbers</p> <p>7 M2 Lesson 15: Multiplying Rational Numbers</p> <p>7 M2 Lesson 16: Exponential Expressions with Rational Numbers</p> <p>7 M2 Lesson 17: Understanding Negative Dividends</p> <p>7 M2 Lesson 18: Understanding Negative Divisors</p> <p>7 M2 Lesson 22: Multiplication and Division Expressions</p> <p>7 M2 Lesson 24: Order of Operations with Rational Numbers</p>
<p><b>7.NSO.4.a</b></p> <p>Identify and explain situations where the sum of opposite quantities is 0 and opposite quantities are defined as additive inverses.</p>	<p>7 M2 Lesson 1: Combining Opposites</p> <p>7 M2 Lesson 12: The Integer Game</p>

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<p><b>7.NSO.4.b</b></p> <p>Interpret the sum of two or more rational numbers, by using a number line and in real-world contexts.</p>	<p>7 M2 Lesson 1: Combining Opposites</p> <p>7 M2 Lesson 2: Adding Integers</p> <p>7 M2 Lesson 3: Adding Integers Efficiently</p> <p>7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient</p> <p>7 M2 Lesson 6: Adding Rational Numbers</p> <p>7 M2 Lesson 8: Subtracting Integers, Part 1</p>
<p><b>7.NSO.4.c</b></p> <p>Explain subtraction of rational numbers as addition of additive inverses.</p>	<p>7 M2 Lesson 7: What Subtraction Means</p> <p>7 M2 Lesson 8: Subtracting Integers, Part 1</p> <p>7 M2 Lesson 9: Subtracting Integers, Part 2</p> <p>7 M2 Lesson 10: Subtracting Rational Numbers, Part 1</p> <p>7 M2 Lesson 11: Subtracting Rational Numbers, Part 2</p>
<p><b>7.NSO.4.d</b></p> <p>Use a number line to demonstrate that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.</p>	<p>7 M2 Lesson 1: Combining Opposites</p> <p>7 M2 Lesson 2: Adding Integers</p> <p>7 M2 Lesson 3: Adding Integers Efficiently</p> <p>7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient</p> <p>7 M2 Lesson 6: Adding Rational Numbers</p> <p>7 M2 Lesson 8: Subtracting Integers, Part 1</p>
<p><b>7.NSO.4.e</b></p> <p>Extend strategies of multiplication to rational numbers to develop rules for multiplying signed numbers, showing that the properties of the operations are preserved.</p>	<p>7 M2 Lesson 13: Understanding Multiples of Negative Numbers</p> <p>7 M2 Lesson 14: Understanding the Product of Two Negative Numbers</p> <p>7 M2 Lesson 15: Multiplying Rational Numbers</p> <p>7 M2 Lesson 16: Exponential Expressions with Rational Numbers</p>

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

**Algebra and Functions**

Create equivalent expressions using the properties of operations.

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<p><b>7.AF.6</b></p> <p>Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p>	<p>7 M3 Lesson 1: Equivalent Expressions</p> <p>7 M3 Lesson 2: The Distributive Property and the Tabular Model</p> <p>7 M3 Lesson 3: The Distributive Property and Combining Like Terms</p> <p>7 M3 Lesson 4: Adding and Subtracting Expressions</p> <p>7 M3 Lesson 5: Factoring Expressions</p> <p>7 M3 Lesson 6: Comparing Expressions</p>
<p><b>7.AF.7</b></p> <p>Generate expressions in equivalent forms based on context and explain how the quantities are related.</p>	<p>7 M3 Lesson 2: The Distributive Property and the Tabular Model</p> <p>7 M3 Lesson 4: Adding and Subtracting Expressions</p> <p>7 M3 Lesson 5: Factoring Expressions</p> <p>7 M3 Lesson 6: Comparing Expressions</p> <p>7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures</p> <p>7 M5 Lesson 10: Percent Increase</p> <p>7 M5 Lesson 11: Percent Decrease</p> <p>7 M5 Lesson 12: More Discounts</p> <p>7 M5 Lesson 14: Scale Factor—Percent Increase and Decrease</p> <p>7 M5 Lesson 15: Tips and Taxes</p> <p>7 M5 Lesson 16: Markups and Discounts</p> <p>7 M5 Lesson 23: Percents of Percents</p>

## 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 <i>Eureka Math</i> <sup>2</sup>
<p><b>7.AF.8</b></p> <p>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.</p>	<p>7 M2 Lesson 25: Writing and Evaluating Expressions with Rational Numbers, Part 1</p> <p>7 M2 Lesson 26: Writing and Evaluating Expressions with Rational Numbers, Part 2</p> <p>7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 10: Problem Solving with Unknown Angle Measures</p> <p>7 M3 Lesson 11: Dominoes and Dominoes</p> <p>7 M3 Lesson 16: Using Equations to Solve Rate Problems</p> <p>7 M3 Lesson 17: Using Equations to Solve Problems</p>
<p><b>7.AF.9</b></p> <p>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.</p>	<p>7 M3 Lesson 11: Dominoes and Dominoes</p> <p>7 M3 Lesson 12: Solving Equations Algebraically and Arithmetically</p> <p>7 M3 Lesson 13: Solving Equations—Puzzles</p> <p>7 M3 Lesson 16: Using Equations to Solve Rate Problems</p> <p>7 M3 Lesson 17: Using Equations to Solve Problems</p> <p>7 M3 Lesson 18: Understanding Inequalities and Their Solutions</p> <p>7 M3 Lesson 19: Using Equations to Solve Inequalities</p> <p>7 M3 Lesson 21: Solving Two-Step Inequalities</p> <p>7 M3 Lesson 22: Solving Problems Involving Inequalities</p> <p>7 M3 Lesson 23: Inequalities vs. Equations</p>

Alabama Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i> <sup>2</sup>
<p><b>7.AF.9.a</b></p> <p>Solve word problems leading to equations of the form <math>px + q = r</math> and <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> 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.</p>	<p>7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures</p> <p>7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 12: Solving Equations Algebraically and Arithmetically</p> <p>7 M3 Lesson 13: Solving Equations—Puzzles</p> <p>7 M3 Lesson 14: Solving Equations—Scavenger Hunt</p> <p>7 M3 Lesson 15: Solving Equations Fluently</p> <p>7 M3 Lesson 16: Using Equations to Solve Rate Problems</p>
<p><b>7.AF.9.b</b></p> <p>Solve word problems leading to inequalities of the form <math>px + q &gt; r</math> or <math>px + q &lt; r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Graph the solution set of the inequality, and interpret it in the context of the problem.</p>	<p>7 M3 Lesson 18: Understanding Inequalities and Their Solutions</p> <p>7 M3 Lesson 19: Using Equations to Solve Inequalities</p> <p>7 M3 Lesson 20: Preserving and Reversing</p> <p>7 M3 Lesson 21: Solving Two-Step Inequalities</p> <p>7 M3 Lesson 22: Solving Problems Involving Inequalities</p> <p>7 M3 Lesson 23: Inequalities vs. Equations</p>

### Data Analysis, Statistics, and Probability

Make inferences about a population using random sampling.

Alabama Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i> <sup>2</sup>
<p><b>7.DSP.10</b></p> <p>Examine a sample of a population to generalize information about the population.</p>	<p>7 M6 Lesson 11: Populations and Samples</p> <p>7 M6 Lesson 12: Selecting a Sample</p> <p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p>

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<p><b>7.DSP.10.a</b></p> <p>Differentiate between a sample and a population.</p>	<p>7 M6 Lesson 11: Populations and Samples</p> <p>7 M6 Lesson 12: Selecting a Sample</p> <p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p>
<p><b>7.DSP.10.b</b></p> <p>Compare sampling techniques to determine whether a sample is random and thus representative of a population, explaining that random sampling tends to produce representative samples and support valid inferences.</p>	<p>7 M6 Lesson 11: Populations and Samples</p> <p>7 M6 Lesson 12: Selecting a Sample</p> <p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p>
<p><b>7.DSP.10.c</b></p> <p>Determine whether conclusions and generalizations can be made about a population based on a sample.</p>	<p>7 M6 Lesson 11: Populations and Samples</p> <p>7 M6 Lesson 12: Selecting a Sample</p> <p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p>
<p><b>7.DSP.10.d</b></p> <p>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.</p>	<p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p> <p>7 M6 Lesson 15: Sampling Variability and the Effect of Sample Size</p> <p>7 M6 Lesson 16: Sampling Variability When Estimating a Population Proportion</p>

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<p><b>7.DSP.10.e</b></p> <p>Informally explain situations in which statistical bias may exist.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
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**Data Analysis, Statistics, and Probability**

**Make inferences from an informal comparison of two populations.**

**Alabama Standards for Mathematical Content**

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<p><b>7.DSP.11</b></p> <p>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.</p>	<p>7 M6 Lesson 17: Comparing Sample Means</p> <p>7 M6 Lesson 18: Comparing Population Means</p> <p>7 M6 Lesson 19: Memory Games</p>
<p><b>7.DSP.12</b></p> <p>Make informal comparative inferences about two populations using measures of center and variability and/or mean absolute deviation in context.</p>	<p>7 M6 Lesson 17: Comparing Sample Means</p> <p>7 M6 Lesson 18: Comparing Population Means</p> <p>7 M6 Lesson 19: Memory Games</p>

## Data Analysis, Statistics, and Probability

Investigate probability models.

Alabama Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i> <sup>2</sup>
<p><b>7.DSP.13</b></p> <p>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.</p>	<p>7 M6 Lesson 1: What is Probability?</p>
<p><b>7.DSP.14</b></p> <p>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.</p>	<p>7 M6 Lesson 4: Theoretical Probability</p> <p>7 M6 Lesson 7: The Law of Large Numbers</p> <p>7 M6 Lesson 8: Picking Blue</p>
<p><b>7.DSP.14.a</b></p> <p>Collect and use data to predict probabilities of events.</p>	<p>7 M6 Lesson 2: Empirical Probability</p> <p>7 M6 Lesson 3: Outcomes of Chance Experiments</p> <p>7 M6 Lesson 6: Outcomes That Are Not Equally Likely</p> <p>7 M6 Lesson 8: Picking Blue</p>
<p><b>7.DSP.14.b</b></p> <p>Compare probabilities from a model to observed frequencies, explaining possible sources of discrepancy.</p>	<p>7 M6 Lesson 7: The Law of Large Numbers</p>

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<p><b>7.DSP.15</b></p> <p>Approximate the probability of an event using data generated by a simulation (experimental probability) and compare it to the theoretical probability.</p>	<p>7 M6 Lesson 2: Empirical Probability</p> <p>7 M6 Lesson 3: Outcomes of Chance Experiments</p> <p>7 M6 Lesson 6: Outcomes That Are Not Equally Likely</p> <p>7 M6 Lesson 8: Picking Blue</p>
<p><b>7.DSP.15.a</b></p> <p>Observe the relative frequency of an event over the long run, using simulation or technology, and use those results to predict approximate relative frequency.</p>	<p>7 M6 Lesson 2: Empirical Probability</p> <p>7 M6 Lesson 3: Outcomes of Chance Experiments</p> <p>7 M6 Lesson 6: Outcomes That Are Not Equally Likely</p> <p>7 M6 Lesson 8: Picking Blue</p>
<p><b>7.DSP.16</b></p> <p>Find probabilities of simple and compound events through experimentation or simulation and by analyzing the sample space, representing the probabilities as percents, decimals, or fractions.</p>	<p>7 M6 Lesson 5: Multistage Experiments</p>
<p><b>7.DSP.16.a</b></p> <p>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.</p>	<p>7 M6 Lesson 5: Multistage Experiments</p>

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

## Geometry and Measurement

Construct and describe geometric figures, analyzing relationships among them.

<b>Alabama Standards for Mathematical Content</b>	<b>Aligned Components of <i>Eureka Math</i><sup>2</sup></b>
<p><b>7.GM.17</b></p> <p>Solve problems involving scale drawings of geometric figures, including computation of actual lengths and areas from a scale drawing and reproduction of a scale drawing at a different scale.</p>	<p>7 M1 Lesson 15: Scale Drawings</p> <p>7 M1 Lesson 16: Using a Scale Factor</p> <p>7 M1 Lesson 17: Finding Actual Distances from a Scale Drawing</p> <p>7 M1 Lesson 18: Relating Areas of Scale Drawings</p> <p>7 M1 Lesson 19: Scale and Scale Factor</p> <p>7 M1 Lesson 20: Creating Multiple Scale Drawings</p> <p>7 M5 Lesson 1: Proportionality and Scale Factor</p> <p>7 M5 Lesson 14: Scale Factor—Percent Increase and Decrease</p>

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### Aligned Components of *Eureka Math*<sup>2</sup>

<p><b>7.GM.18</b></p> <p>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.</p>	<p>7 M4 Lesson 1: Sketching, Drawing, and Constructing Geometric Figures</p> <p>7 M4 Lesson 2: Constructing Parallelograms and Other Quadrilaterals</p> <p>7 M4 Lesson 3: Side Lengths of a Triangle</p> <p>7 M4 Lesson 4: Angles of a Triangle</p> <p>7 M4 Lesson 5: Constructing Quadrilaterals and Triangles</p> <p>7 M4 Lesson 6: Unique Triangles</p> <p>7 M4 Lesson 7: Two Angles and One Side</p> <p>7 M4 Lesson 8: Two Sides and One Angle</p> <p>7 M4 Lesson 9: Constructing a Circle</p>
<p><b>7.GM.19</b></p> <p>Describe the two-dimensional figures created by slicing three-dimensional figures into plane sections.</p>	<p>7 M4 Lesson 22: Understanding Planes and Cross Sections</p> <p>7 M4 Lesson 23: Cross Section Scavenger Hunt</p>

## 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 <i>Eureka Math</i> <sup>2</sup>
<p><b>7.GM.20</b></p> <p>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.</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>
<p><b>7.GM.20.a</b></p> <p>Informally derive the formula for area of a circle.</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>
<p><b>7.GM.20.b</b></p> <p>Solve area and circumference problems in real-world and mathematical situations involving circles.</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>

**Alabama Standards for  
Mathematical Content****Aligned Components of *Eureka Math*<sup>2</sup>**

<p><b>7.GM.21</b></p> <p>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.</p>	<p>7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures</p> <p>7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 10: Problem Solving with Unknown Angle Measures</p>
<p><b>7.GM.22</b></p> <p>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.</p>	<p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 16: Solving Area Problems by Composition and Decomposition</p> <p>7 M4 Lesson 17: Surface Area of Right Rectangular and Right Triangular Prisms</p> <p>7 M4 Lesson 18: Surface Area of Right Prisms</p> <p>7 M4 Lesson 20: Surface Areas of Right Pyramids</p> <p>7 M4 Lesson 21: Surface Area of Other Solids</p> <p>7 M4 Lesson 24: Volume of Prisms</p> <p>7 M4 Lesson 25: Volume of Composite Solids</p> <p>7 M4 Lesson 26: Designing a Fish Tank</p>