
Grade K | Georgia Standards of Excellence: Mathematics

Correlation to *Eureka Math*²TM

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

Accessibility

*Eureka Math*² 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 Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

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.

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.	
MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M2: Two- and Three-Dimensional Shapes
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M3: Comparison K M5: Addition and Subtraction
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: K M5: Addition and Subtraction K M6: Place Value Foundations
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M4: Composition and Decomposition

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M5: Addition and Subtraction K M6: Place Value Foundations
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M2: Two- and Three-Dimensional Shapes K M3: Comparison
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M2: Two- and Three-Dimensional Shapes K M5: Addition and Subtraction K M6: Place Value Foundations
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: K M1: Counting and Cardinality K M5: Addition and Subtraction

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	K.NR.1: Demonstrate and explain the relationship between numbers and quantities up to 20; connect counting to cardinality (the last number counted represents the total quantity in a set).	
	K.NR.1.1 Count up to 20 objects in a variety of structured arrangements and up to 10 objects in a scattered arrangement.	K M1: Counting and Cardinality K M2 Lesson 16: Organize, count, and represent a collection of objects. K M3 Lesson 22: Organize, count, and represent a collection of objects. K M4 Lesson 17: Organize, count, and represent a collection of objects. K M5 Lesson 27: Organize, count, and represent a collection of objects. K M6: Place Value Foundations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	K.NR.1.2 When counting objects, explain that the last number counted represents the total quantity in a set (cardinality), regardless of the arrangement and order.	K M1 Topic B: Answer <i>How Many</i> Questions with Up to 5 Objects K M1 Lesson 13: Count out enough objects and write the numeral. K M1 Topic E: Answer <i>How Many</i> Questions with Up to 10 Objects K M1 Lesson 33: Organize, count, and represent a collection of objects. K M2 Lesson 16: Organize, count, and represent a collection of objects. K M3 Lesson 22: Organize, count, and represent a collection of objects. K M4 Lesson 17: Organize, count, and represent a collection of objects. K M5 Lesson 27: Organize, count, and represent a collection of objects. K M6 Lesson 13: Organize, count, and represent a collection of objects. K M6 Lesson 24: Organize, count, and represent a collection of objects.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	K.NR.1.3 Given a number from 1–20, identify the number that is one more or one less.	K M1 Topic G: Analyze the Count Sequence K M2 Lesson 16: Organize, count, and represent a collection of objects. K M3 Lesson 22: Organize, count, and represent a collection of objects. K M4 Lesson 17: Organize, count, and represent a collection of objects. K M5 Lesson 27: Organize, count, and represent a collection of objects. K M6 Lesson 4: Order numerals 0–20. K M6 Lesson 13: Organize, count, and represent a collection of objects. K M6 Lesson 24: Organize, count, and represent a collection of objects.
	K.NR.1.4 Identify pennies, nickels, and dimes and know their name and value.	1 M2 Lesson 7: Count on or count back to solve related addition and subtraction problems. 1 M2 Lesson 8: Interpret and find an unknown change. 1 M2 Lesson 12: Represent and find an unknown subtrahend in equations. 1 M2 Lesson 21: Represent and solve <i>compare with difference unknown</i> problems, part 1. 1 M5 Lesson 4: Represent a number in multiple ways by trading 10 ones for a ten. <i>Supplemental material is necessary to address identifying and naming the value of nickels.</i>

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	K.NR.2: Use count sequences within 100 to count forward and backward in sequence. K.NR.2.1 Count forward to 100 by tens and ones and backward from 20 by ones.	K M1 Lesson 4: Classify objects into three categories and count. K M1 Lesson 6: Organize, count, and represent a collection of objects. K M1 Topic C: Write Numerals and Create Sets of Up to 5 Objects K M1 Lesson 19: Organize, count, and represent a collection of objects. K M1 Topic F: Write Numerals and Create Sets of Up to 10 Objects K M1 Lesson 33: Organize, count, and represent a collection of objects. K M2 Lesson 16: Organize, count, and represent a collection of objects. K M3 Lesson 22: Organize, count, and represent a collection of objects. K M4 Lesson 17: Organize, count, and represent a collection of objects. K M5 Lesson 27: Organize, count, and represent a collection of objects. K M6: Place Value Foundations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	K.NR.2.2 Count forward beginning from any number within 100 and count backward from any number within 20.	K M2 Lesson 16: Organize, count, and represent a collection of objects. K M3 Lesson 22: Organize, count, and represent a collection of objects. K M4 Lesson 17: Organize, count, and represent a collection of objects. K M5 Lesson 18: Count starting from a number other than 1 to find the total. K M5 Topic D: Make Use of Structure K M6: Place Value Foundations
	K.NR.3: Use place value understanding to compose and decompose numbers from 11–19.	
	K.NR.3.1 Describe numbers from 11 to 19 by composing (putting together) and decomposing (breaking apart) the numbers into ten ones and some more ones.	K M6: Place Value Foundations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	K.NR.4: Identify, write, represent, and compare numbers up to 20.	
	K.NR.4.1 Identify written numerals 0–20 and represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).	K M1: Counting and Cardinality K M2 Lesson 16: Organize, count, and represent a collection of objects. K M3 Lesson 22: Organize, count, and represent a collection of objects. K M4 Lesson 17: Organize, count, and represent a collection of objects. K M5 Lesson 27: Organize, count, and represent a collection of objects. K M6 Topic A: Count and Write Teen Numbers K M6 Lesson 7: Decompose numbers 10–20 with 10 as a part. K M6 Lesson 13: Organize, count, and represent a collection of objects. K M6 Lesson 17: Use patterns in the number sequence to count by ones within 100. K M6 Lesson 24: Organize, count, and represent a collection of objects.
	K.NR.4.2 Compare two sets of up to 10 objects and identify whether the number of objects in one group is more or less than the other group, using the words “greater than,” “less than,” or “the same as.”	K M3 Topic C: Compare Sets Within 10 K M3 Lesson 21: Describe and compare several measurable attributes of objects and sets. K M6 Topic D: Compare

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	K.NR.5: Explain the concepts of addition, subtraction, and equality and use these concepts to solve real-life problems within 10.	
	K.NR.5.1 Compose (put together) and decompose (break apart) numbers up to 10 using objects and drawings.	K M4: Composition and Decomposition K M5 Lesson 4: Represent decomposition situations by using number bonds and addition sentences. K M5 Lesson 5: Represent <i>take apart with both addends unknown</i> situations with a number sentence. K M5 Lesson 8: Understand taking away as a type of subtraction.
	K.NR.5.2 Represent addition and subtraction within 10 from a given authentic situation using a variety of representations and strategies.	K M4: Composition and Decomposition K M5: Addition and Subtraction
	K.NR.5.3 Use a variety of strategies to solve addition and subtraction problems within 10.	K M4 Topic C: Model Composition and Decomposition in Story Problems K M5: Addition and Subtraction K M6 Topic B: Compose and Decompose Teen Numbers
	K.NR.5.4 Fluently add and subtract within 5 using a variety of strategies to solve practical, mathematical problems.	K M5 Lesson 7: Find the total in an addition sentence. K M5 Lesson 14: Find the difference in a subtraction sentence.

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Patterning and Algebraic Reasoning	K.PAR.6: Explain, extend, and create repeating patterns with a repetition, not exceeding 4 and describe patterns involving the passage of time.	
	K.PAR.6.1 Create, extend, and describe repeating patterns with numbers and shapes, and explain the rationale for the pattern.	K M5 Topic D: Make Use of Structure
	K.PAR.6.2 Describe patterns involving the passage of time using words and phrases related to actual events.	<i>Supplemental material is necessary to address patterns involving the passage of time.</i>
Measurement and Data Reasoning	K.MDR.7: Observe, describe, and compare the physical and measurable attributes of objects and analyze graphical displays of data.	
	K.MDR.7.1 Directly compare, describe, and order common objects, using measurable attributes (length, height, width, or weight) and describe the difference.	K M3: Comparison
	K.MDR.7.2 Classify and sort up to ten objects into categories by an attribute; count the number of objects in each category and sort the categories by count.	K M1 Topic A: Classify to Make Categories and Count K M1 Lesson 15: Sort the same group of objects in more than one way and count. K M1 Lesson 16: Decompose a set shown in a picture. K M3 Topic C: Compare Sets Within 10

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	K.MDR.7.3 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.	K M1 Topic A: Classify to Make Categories and Count K M1 Lesson 15: Sort the same group of objects in more than one way and count. K M1 Lesson 16: Decompose a set shown in a picture. K M3 Topic C: Compare Sets Within 10 K M6 Lesson 12: Investigate different ways to decompose teen numbers.
Geometric and Spatial Reasoning	K.GSR.8: Identify, describe, and compare basic shapes encountered in the environment, and form two-dimensional shapes and three-dimensional figures.	
	K.GSR.8.1 Identify, sort, classify, analyze, and compare two-dimensional shapes and three-dimensional figures, in different sizes and orientations, using informal language to describe their similarities, differences, number of sides and vertices, and other attributes.	K M2: Two- and Three-Dimensional Shapes
	K.GSR.8.2 Describe the relative location of an object using positional words.	K M2 Topic A: Analyze and Name Two-Dimensional Shapes K M2 Lesson 5: Communicate the position of flat shapes by using position words. K M2 Lesson 7: Name solid shapes and discuss their attributes. K M2 Lesson 10: Construct a circle. K M2 Lesson 14: Compose flat shapes.
	K.GSR.8.3 Use basic shapes to represent specific shapes found in the environment by creating models and drawings.	K M2 Topic C: Construct Shapes K M3 Lesson 4: Compare the lengths of cube sticks to flat shapes.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	K.GSR.8.4 Use two or more basic shapes to form larger shapes.	K M4 Topic A: Explore Composition and Decomposition K M4 Lesson 9: Compose shapes in more than one way. K M4 Lesson 16: Compose and decompose numbers and shapes. K M5 Lesson 12: Relate parts to total in subtraction situations. K M5 Lesson 25: Extend growing patterns.

Grade 1 | Georgia Standards of Excellence: Mathematics

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MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 1 M2: Addition and Subtraction Relationships 1 M3: Properties of Operations to Make Easier Problems 1 M6: Attributes of Shapes • Advancing Place Value, Addition, and Subtraction
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 1 M2: Addition and Subtraction Relationships 1 M3: Properties of Operations to Make Easier Problems 1 M4: Comparison and Composition of Length Measurements
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 1 M1: Counting, Comparison, and Addition 1 M2: Addition and Subtraction Relationships 1 M3: Properties of Operations to Make Easier Problems 1 M5: Place Value Concepts to Compare, Add, and Subtract 1 M6: Attributes of Shapes • Advancing Place Value, Addition, and Subtraction

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 1 M2: Addition and Subtraction Relationships 1 M3: Properties of Operations to Make Easier Problems 1 M6: Attributes of Shapes • Advancing Place Value, Addition, and Subtraction
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 1 M1: Counting, Comparison, and Addition 1 M4: Comparison and Composition of Length Measurements
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 1 M1: Counting, Comparison, and Addition 1 M4: Comparison and Composition of Length Measurements

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 1 M1: Counting, Comparison, and Addition 1 M2: Addition and Subtraction Relationships 1 M3: Properties of Operations to Make Easier Problems 1 M5: Place Value Concepts to Compare, Add, and Subtract 1 M6: Attributes of Shapes • Advancing Place Value, Addition, and Subtraction
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 1 M1: Counting, Comparison, and Addition 1 M5: Place Value Concepts to Compare, Add, and Subtract 1 M6: Attributes of Shapes • Advancing Place Value, Addition, and Subtraction

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	1.NR.1: Extend the count sequence to 120. Read, write, and represent numerical values to 120 and compare numerical values to 100.	
	1.NR.1.1 Count within 120, forward and backward, starting at any number. In this range, read and write numerals and represent a number of objects with a written numeral.	1 M3 Lesson 15: Count and record a collection of objects. 1 M3 Lesson 16: Identify ten as a unit. 1 M5 Topic A: Grouping Units in Tens and Ones 1 M6 Topic D: Count and Represent Numbers Beyond 100
	1.NR.1.2 Explain that the two digits of a 2-digit number represent the amounts of tens and ones.	1 M1 Lesson 12: Count on from 10 to find an unknown total. 1 M3 Topic D: Reason about Ten as a Unit to Add or Subtract 1 M3 Lesson 21: Take from ten to subtract from a teen number, part 1. 1 M3 Lesson 22: Take from ten to subtract from a teen number, part 2. 1 M4: Comparison and Composition of Length Measurements 1 M5 Topic A: Grouping Units in Tens and Ones 1 M5 Lesson 8: Use place value reasoning to write and compare 2 two-digit numbers. 1 M5 Lesson 21: Use varied strategies to add 2 two-digit addends.
	1.NR.1.3 Compare and order whole numbers up to 100 using concrete models, drawings, and the symbols $>$, $=$, and $<$.	1 M1 Topic A: Count and Compare with Data 1 M4 Lesson 5: Measure and compare lengths. 1 M4 Lesson 6: Measure and order lengths. 1 M5 Topic B: Use Place Value to Compare

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	1.NR.2: Explain the relationship between addition and subtraction and apply the properties of operations to solve real-life addition and subtraction problems within 20.	
	1.NR.2.1 Use a variety of strategies to solve addition and subtraction problems within 20.	1 M2: Addition and Subtraction Relationships 1 M3 Topic C: Make Easier Addition Problems with a Linear Model 1 M3 Lesson 19: Solve <i>take from with change unknown</i> problems with totals in the teens. 1 M3 Topic E: Make Easier Problems to Subtract 1 M4 Topic C: Comparison Word Problems with Measurement 1 M6 Topic E: Deepening Problem Solving 1 M6 Lesson 29: Add tens to make 100.
	1.NR.2.2 Use pictures, drawings, and equations to develop strategies for addition and subtraction within 20 by exploring strings of related problems.	1 M2: Addition and Subtraction Relationships 1 M3 Topic C: Make Easier Addition Problems with a Linear Model 1 M3 Lesson 19: Solve <i>take from with change unknown</i> problems with totals in the teens. 1 M3 Topic E: Make Easier Problems to Subtract 1 M4 Topic C: Comparison Word Problems with Measurement 1 M6 Topic E: Deepening Problem Solving 1 M6 Lesson 29: Add tens to make 100.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	1.NR.2.3 Recognize the inverse relationship between subtraction and addition within 20 and use this inverse relationship to solve authentic problems.	1 M1 Lesson 17: Add 0 and 1 to any number. 1 M1 Topic D: Make the Same Total in Varied Ways 1 M2 Topic A: Reason About <i>Take From</i> Situations 1 M2 Lesson 7: Count on or count back to solve related addition and subtraction problems. 1 M2 Lesson 17: Use related addition facts to subtract from 10. 1 M2 Lesson 18: Use related addition facts to subtract. 1 M3: Properties of Operations to Make Easier Problems
	1.NR.2.4 Fluently add and subtract within 10 using a variety of strategies.	1 M1 Lesson 17: Add 0 and 1 to any number. 1 M1 Topic D: Make the Same Total in Varied Ways 1 M2 Topic A: Reason About <i>Take From</i> Situations 1 M2 Lesson 7: Count on or count back to solve related addition and subtraction problems. 1 M2 Lesson 17: Use related addition facts to subtract from 10. 1 M2 Lesson 18: Use related addition facts to subtract. 1 M3 Topic A: Make Easier Problems with Three Addends 1 M3 Topic B: Make Easier Problems to Add

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	1.NR.2.5 Use the meaning of the equal sign to determine whether equations involving addition and subtraction are true or false.	1 M1 Lesson 15: Use the commutative property to count on from the larger addend. 1 M1 Lesson 18: Determine whether number sentences are true or false. 1 M1 Lesson 19: Reason about the meaning of the equal sign. 1 M1 Lesson 24: Use known facts to make easier problems. 1 M2 Lesson 19: Determine the value of the unknown in various positions. 1 M2 Lesson 20: Add or subtract to make groups equal. 1 M5 Lesson 18: Determine if number sentences involving addition and subtraction are true or false. 1 M5 Topic E: Addition of Two-Digit Numbers
	1.NR.2.6 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.	1 M3 Topic A: Make Easier Problems with Three Addends 1 M3 Topic C: Make Easier Addition Problems with a Linear Model 1 M3 Lesson 26: Pose and solve varied word problems.
	1.NR.2.7 Apply properties of operations as strategies to solve addition and subtraction problem situations within 20.	1 M1 Lesson 9: Count on from both parts and record part-total relationships. 1 M1 Topic C: Count On to Add 1 M1 Lesson 18: Determine whether number sentences are true or false. 1 M3: Properties of Operations to Make Easier Problems

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Patterning and Algebraic Reasoning	1.PAR.3: Identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns found in real-life situations.	
	1.PAR.3.1 Investigate, create, and make predictions about repeating patterns with a core of up to 3 elements resulting from repeating an operation, as a series of shapes, or a number string.	K M5 Topic D: Make Use of Structure 1 M6 Lesson 18: Count up and down across 100. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd.
	1.PAR.3.2 Identify, describe, and create growing, shrinking, and repeating patterns based on the repeated addition or subtraction of 1s, 2s, 5s, and 10s.	1 M4 Lesson 14: Measure to find patterns. 1 M5 Lesson 6: Add 10 or take 10 from a two-digit number. 1 M5 Lesson 15: Count on and back by tens to add and subtract. 1 M6 Lesson 17: Read, write, and represent numbers greater than 100. 1 M6 Lesson 18: Count up and down across 100. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. <i>Choral counting routines used in fluency activities embed patterns by using addition. Supplemental material is necessary to address growing patterns of 2s and 5s.</i>

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Geometric and Spatial Reasoning	1.GSR.4: Compose shapes, analyze the attributes of shapes, and relate their parts to the whole.	
	1.GSR.4.1 Identify common two-dimensional shapes and three-dimensional figures, sort and classify them by their attributes and build and draw shapes that possess defining attributes.	1 M6 Topic A: Attributes of Shapes 1 M6 Lesson 7: Create new composite shapes by adding a shape.
	1.GSR.4.2 Compose two-dimensional shapes (rectangles, squares, triangles, half-circles, and quarter-circles) and three-dimensional figures (cubes, rectangular prisms, cones, and cylinders) to create a shape formed of two or more common shapes and compose new shapes from the composite shape.	1 M6 Topic B: Composition of Shapes 1 M6 Lesson 10: Reason about equal and not equal shares.
	1.GSR.4.3 Partition circles and rectangles into two and four equal shares.	1 M6 Topic C: Halves and Fourths
Numerical Reasoning	1.NR.5: Use concrete models, the base ten structure, and properties of operations to add and subtract within 100.	
	1.NR.5.1 Use a variety of strategies to solve applicable, mathematical addition and subtraction problems with one- and two-digit whole numbers.	1 M5: Place Value Concepts to Compare, Add, and Subtract 1 M6 Topic F: Extending Addition to 100

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	1.NR.5.2 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	1 M5 Lesson 5: Reason about equivalent representations of a number. 1 M5 Lesson 20: Add ones and multiples of ten to any number.
	1.NR.5.3 Add and subtract multiples of 10 within 100.	1 M5 Topic D: Addition and Subtraction of Tens
Measurement and Data Reasoning	1.MDR.6: Use appropriate tools to measure, order, and compare intervals of length and time, as well as denominations of money to solve real-life, mathematical problems and answer relevant questions.	
	1.MDR.6.1 Estimate, measure, and record lengths of objects using non-standard units, and compare and order up to three objects using the recorded measurements. Describe the objects compared.	1 M4: Comparison and Composition of Length Measurements
	1.MDR.6.2 Tell and write time in hours and half-hours using analog and digital clocks, and measure elapsed time to the hour on the hour using a predetermined number line.	1 M5 Lesson 1: Tell time to the hour and half hour by using digital and analog clocks. 1 M6 Lesson 14: Tell time to the half hour with the term <i>half past</i>. 1 M6 Lesson 15: Reason about the location of the hour hand to tell time.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	1.MDR.6.3 Identify the value of quarters and compare the values of pennies, nickels, dimes, and quarters.	1 M2 Lesson 7: Count on or count back to solve related addition and subtraction problems. 1 M2 Lesson 8: Interpret and find an unknown change. 1 M2 Lesson 12: Represent and find an unknown subtrahend in equations. 1 M2 Lesson 21: Represent and solve <i>compare with difference unknown</i> problems, part 1. 1 M5 Lesson 4: Represent a number in multiple ways by trading 10 ones for a ten. 1 M5 Lesson 5: Reason about equivalent representations of a number. 1 M5 Lesson 17: Use tens to find an unknown part. 2 M5 Lesson 1: Organize, count, and represent a collection of coins. 2 M5 Lesson 2: Use the fewest number of coins to make a given value. <i>Choral response fluencies for coin identification are found in 2 Module 4.</i>
	1.MDR.6.4 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to compare and order whole numbers.	1 M1 Topic A: Count and Compare with Data 1 M2 Lesson 23: Compare categories in a graph to figure out how many more.

Grade 2 | Georgia Standards of Excellence: Mathematics

Correlation to *Eureka Math*²TM

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

Accessibility

*Eureka Math*² 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 Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

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.

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.	
MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M2: Addition and Subtraction Within 200
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M2: Addition and Subtraction Within 200
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M2: Addition and Subtraction Within 200 2 M3: Shapes and Time with Fraction Concepts 2 M4: Addition and Subtraction Within 1,000

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M6: Multiplication and Division Foundations
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M4: Addition and Subtraction Within 1,000
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M3: Shapes and Time with Fraction Concepts 2 M4: Addition and Subtraction Within 1,000 2 M5: Money, Data, and Customary Measurement

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M2: Addition and Subtraction Within 200 2 M3: Shapes and Time with Fraction Concepts 2 M5: Money, Data, and Customary Measurement 2 M6: Multiplication and Division Foundations
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 2 M1: Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000 2 M2: Addition and Subtraction Within 200 2 M6: Multiplication and Division Foundations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	2.NR.1: Using the place value structure, explore the count sequences to represent, read, write, and compare numerical values to 1,000 and describe basic place-value relationships and structures.	
	2.NR.1.1 Explain the value of a three-digit number using hundreds, tens, and ones in a variety of ways.	2 M1 Topic E: Understand Place Value Units 2 M1 Topic F: Express Three-Digit Numbers in Different Forms 2 M1 Topic G: Model Base-Ten Numbers Within 1,000 with Money 2 M1 Topic H: Compose and Decompose with Place Value Disks 2 M1 Lesson 38: Compare numbers in different forms. 2 M2 Lesson 2: Break apart and add like units. 2 M2 Topic B: Strategies for Composing a Ten and a Hundred to Add 2 M2 Lesson 12: Use place value drawings to compose a ten and a hundred with two- and three-digit addends. Relate to written recordings. 2 M2 Topic D: Strategies for Decomposing a Ten and a Hundred to Subtract

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.NR.1.2 Count forward and backward by ones from any number within 1,000. Count forward by fives from multiples of 5 within 1,000. Count forward and backward by 10s and 100s from any number within 1,000. Count forward by 25s from 0.	2 M1 Topic E: Understand Place Value Units 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Topic G: Model Base-Ten Numbers Within 1,000 with Money 2 M1 Lesson 32: Exchange 10 ones for 1 ten, 10 tens for 1 hundred, and 10 hundreds for 1 thousand. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects. 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M3 Lesson 18: Tell time to the nearest 5 minutes.
	2.NR.1.3 Represent, compare, and order whole numbers to 1,000 with an emphasis on place value and equality. Use $>$, $=$, and $<$ symbols to record the results of comparisons.	2 M1 Topic E: Understand Place Value Units 2 M1 Topic F: Express Three-Digit Numbers in Different Forms 2 M1 Lesson 31: Count the total value of ones, tens, and hundreds with place value disks. 2 M1 Topic I: Compare Two Three-Digit Numbers in Different Forms
	2.NR.2: Apply multiple part-whole strategies, properties of operations and place value understanding to solve real-life, mathematical problems involving addition and subtraction within 1,000.	
	2.NR.2.1 Fluently add and subtract within 20 using a variety of mental, part-whole strategies.	2 M2: Addition and Subtraction Within 200 2 M4 Topic B: Strategies for Composing Tens and Hundreds Within 1,000 2 M4 Topic D: Strategies for Decomposing Tens and Hundreds Within 1,000

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.NR.2.2 Find 10 more or 10 less than a given three-digit number and find 100 more or 100 less than a given three-digit number.	2 M4 Topic A: Mental Place Value Strategies 2 M4 Lesson 6: Use compensation to add within 1,000. 2 M4 Topic C: Simplifying Strategies for Subtracting Within 1,000
	2.NR.2.3 Solve problems involving the addition and subtraction of two-digit numbers using part-whole strategies.	2 M1 Lesson 22: Use counting strategies to solve <i>add to with change unknown</i> word problems. 2 M2: Addition and Subtraction Within 200 2 M4 Topic A: Mental Place Value Strategies 2 M4 Topic E: Apply Efficient Addition and Subtraction Strategies 2 M6 Topic A: Count and Problem Solve with Equal Groups 2 M6 Lesson 10: Use math drawings to compose a rectangle. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays.
	2.NR.2.4 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	2 M2: Addition and Subtraction Within 200 2 M4: Addition and Subtraction Within 1,000
	2.NR.3: Work with equal groups to gain foundations for multiplication through real-life, mathematical problems.	
	2.NR.3.1 Determine whether a group (up to 20) has an odd or even number of objects. Write an equation to express an even number as a sum of two equal addends.	2 M6: Multiplication and Division Foundations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.NR.3.2 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	2 M6: Multiplication and Division Foundations
Patterning and Algebraic Reasoning	2.PAR.4: Identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns.	
	2.PAR.4.1 Identify, describe, and create a numerical pattern resulting from repeating an operation such as addition and subtraction.	2 M1 Topic E: Understand Place Value Units 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Topic G: Model Base-Ten Numbers Within 1,000 with Money 2 M1 Topic H: Compose and Decompose with Place Value Disks 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M4 Lesson 1: Organize, count, and represent a collection of objects. 2 M4 Lesson 24: Organize, count, and represent a collection of objects. 2 M6: Multiplication and Division Foundations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.PAR.4.2 Identify, describe, and create growing patterns and shrinking patterns involving addition and subtraction up to 20.	1 M5 Lesson 4: Represent a number in multiple ways by trading 10 ones for a ten. 1 M6 Lesson 7: Create new composite shapes by adding a shape. 1 M6 Lesson 18: Count up and down across 100. 1 M6 Lesson 26: Make a total in more than one way. 1 M6 Lesson 29: Add tens to make 100. 2 M6 Lesson 6: Decompose arrays into rows and columns and relate them to repeated addition. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. 2 M6 Lesson 16: Use rectangular arrays to investigate combinations of even and odd numbers.
Measurement and Data Reasoning	2.MDR.5: Estimate and measure the lengths of objects and distance to solve problems found in real-life using standard units of measurement, including inches, feet, and yards.	
	2.MDR.5.1 Construct simple measuring instruments using unit models. Compare unit models to rulers.	2 M1 Topic B: Metric Measurement and Concepts About the Ruler 2 M5 Topic B: Use Customary Units to Measure and Estimate Length

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.MDR.5.2 Estimate and measure the length of an object or distance to the nearest whole unit using appropriate units and standard measuring tools.	2 M1 Topic B: Metric Measurement and Concepts About the Ruler 2 M1 Topic C: Estimate, Measure, and Compare Lengths 2 M5 Lesson 8: Iterate an inch tile to create a unit ruler and measure to the nearest inch. 2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects.
	2.MDR.5.3 Measure to determine how much longer one object is than another and express the length difference in terms of a standard-length unit.	2 M1 Topic C: Estimate, Measure, and Compare Lengths 2 M5 Lesson 8: Iterate an inch tile to create a unit ruler and measure to the nearest inch. 2 M5 Lesson 11: Measure to compare differences in lengths.
	2.MDR.5.4 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.	2 M1 Topic A: Represent Data to Solve Problems 2 M4 Lesson 23: Solve two-step addition and subtraction word problems.
	2.MDR.5.5 Represent whole-number sums and differences within a standard unit of measurement on a number line diagram.	2 M1 Topic D: Solve <i>Compare</i> Problems by Using the Ruler as a Number Line 2 M4 Lesson 14: Use compensation to keep a constant difference by adding the same amount to both numbers. 2 M5 Lesson 12: Identify unknown numbers on a number line by using the interval as a reference point.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.MDR.6: Solve real-life problems involving time and money.	
	2.MDR.6.1 Tell and write time from analog and digital clocks to the nearest five minutes, and estimate and measure elapsed time using a timeline, to the hour or half hour on the hour or half hour.	2 M3 Topic D: Application of Fractions to Tell Time
	2.MDR.6.2 Find the value of a group of coins and determine combinations of coins that equal a given amount that is less than one hundred cents, and solve problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.	2 M5 Topic A: Problem Solving with Coins and Bills
Geometric and Spatial Reasoning	2.GSR.7: Draw and partition shapes and other objects with specific attributes and conduct observations of everyday items and structures to identify how shapes exist in the world.	
	2.GSR.7.1 Describe, compare and sort 2-D shapes including polygons, triangles, quadrilaterals, pentagons, hexagons, and 3-D shapes including rectangular prisms and cones, given a set of attributes.	2 M3 Topic A: Attributes of Geometric Shapes 2 M3 Lesson 6: Recognize that a whole polygon can be decomposed into smaller parts and the parts can be composed to make a whole. 2 M3 Lesson 7: Combine shapes to create a composite shape and create a new shape from composite shapes.
	2.GSR.8.2 Identify at least one line of symmetry in everyday objects to describe each object as a whole.	2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	2.GSR.8.3 Partition circles and rectangles into two, three, or four equal shares. Identify and describe equal-sized parts of the whole using fractional names (“halves,” “thirds,” “fourths,” “half of,” “third of,” “quarter of,” etc.).	2 M3 Topic B: Composite Shapes and Fraction Concepts 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 2 M3 Lesson 16: Use a clock to tell time to the half hour or quarter hour.
	2.GSR.8.4 Recognize that equal shares of identical wholes may be different shapes within the same whole.	2 M3 Topic B: Composite Shapes and Fraction Concepts 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles

Grade 3 | Georgia Standards of Excellence: Mathematics

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MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.	
MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 3 M2: Place Value Concepts Through Metric Measurement 3 M6: Geometry, Measurement, and Data
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 3 M1: Multiplication and Division with Units of 2, 3, 4, 5, and 10 3 M3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 3 M4: Multiplication and Area 3 M6: Geometry, Measurement, and Data
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 3 M1: Multiplication and Division with Units of 2, 3, 4, 5, and 10 3 M3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 3 M1: Multiplication and Division with Units of 2, 3, 4, 5, and 10 3 M2: Place Value Concepts Through Metric Measurement 3 M4: Multiplication and Area
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 3 M4: Multiplication and Area 3 M5: Fractions as Numbers
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 3 M2: Place Value Concepts Through Metric Measurement 3 M3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9 3 M5: Fractions as Numbers
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 3 M3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9 3 M5: Fractions as Numbers 3 M6: Geometry, Measurement, and Data

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	3.NR.1: Use place value reasoning to represent, read, write, and compare numerical values up to 10,000 and round whole numbers up to 1,000.	
	3.NR.1.1 Read and write multi-digit whole numbers up to 10,000 using base-ten numerals and expanded form.	3 M2 Topic A: Understanding Place Value Concepts Through Metric Measurement 3 M2 Topic B: Rounding to the Nearest Ten and Hundred 3 M3 Lesson 24: Organize, count, and represent a collection of objects. 3 M6 Lesson 25: Name and count numbers greater than 1,000. 3 M6 Lesson 26: Fluently multiply and divide within 100 and add and subtract within 1,000. 4 M1 Topic B: Place Value and Comparison Within 1,000,000 4 M1 Lesson 10: Name numbers by using place value understanding.
	3.NR.1.2 Use place value reasoning to compare multi-digit numbers up to 10,000 using $>$, $=$, and $<$ symbols to record the results of comparisons.	2 M1 Topic I: Compare Two Three-Digit Numbers in Different Forms 4 M1 Lesson 9: Compare numbers within 1,000,000 by using $>$, $=$, and $<$.
	3.NR.1.3 Use place value understanding to round whole numbers up to 1,000 to the nearest 10 or 100.	3 M2 Topic B: Rounding to the Nearest Ten and Hundred

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Patterning and Algebraic Reasoning	3.PAR.2: Use part-whole strategies to represent and solve real-life problems involving addition and subtraction with whole numbers within 10,000.	
	3.PAR.2.1 Fluently add and subtract within 1,000 to solve problems.	3 M2: Place Value Concepts Through Metric Measurement 3 M6 Lesson 26: Fluently multiply and divide within 100 and add and subtract within 1,000.
	3.PAR.2.2 Apply part-whole strategies, properties of operations and place value understanding, to solve problems involving addition and subtraction within 10,000. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions.	3 M2: Place Value Concepts Through Metric Measurement 4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction. 4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.
	3.PAR.3: Use part-whole strategies to solve real-life, mathematical problems involving multiplication and division with whole numbers within 100.	
	3.PAR.3.1 Describe, extend, and create numeric patterns related to multiplication. Make predictions related to the patterns.	3 M2 Topic C: Simplifying Strategies to Find Sums and Differences 3 M3 Lesson 23: Identify patterns and apply strategies to multiply with units of 11 and 12.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	3.PAR.3.2 Represent single digit multiplication and division facts using a variety of strategies. Explain the relationship between multiplication and division.	3 M1 Lesson 12: Demonstrate the distributive property using a unit of 4. 3 M1 Lesson 14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10. 3 M1 Topic E: Application of Multiplication and Division Concepts 3 M3 Lesson 1: Organize, count, and represent a collection of objects. 3 M3 Lesson 14: Apply strategies and identify patterns to multiply with units of 9. 3 M3 Lesson 17: Identify and complete patterns with input-output tables. 3 M3 Lesson 24: Organize, count, and represent a collection of objects. 3 M6 Lesson 26: Fluently multiply and divide within 100 and add and subtract within 1,000.
	3.PAR.3.3 Apply properties of operations (i.e., commutative property, associative property, distributive property) to multiply and divide within 100.	3 M1 Topic C: Properties of Multiplication 3 M1 Lesson 19: Use the distributive property to break apart multiplication problems into known facts. 3 M1: Multiplication and Division with Units of 2, 3, 4, 5, and 10

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	3.PAR.3.4 Use the meaning of the equal sign to determine whether expressions involving addition, subtraction, and multiplication are equivalent.	3 M1 Topic C: Properties of Multiplication 3 M1 Lesson 19: Use the distributive property to break apart multiplication problems into known facts. 3 M3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9 3 M4 Topic C: Applying Properties of Operations to Area
	3.PAR.3.5 Use place value reasoning and properties of operations to multiply one-digit whole numbers by multiples of 10, in the range 10–90.	3 M3 Topic D: Multiplication with Multiples of 10 and Further Application of Concepts
	3.PAR.3.6 Solve practical, relevant problems involving multiplication and division within 100 using part-whole strategies, visual representations, and/or concrete models.	3 M3 Topic D: Multiplication with Multiples of 10 and Further Application of Concepts 3 M3 Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0. 3 M3 Lesson 18: Create multiplication and division word problems.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	3.PAR.3.7 Use multiplication and division to solve problems involving whole numbers to 100. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions.	3 M1 Lesson 5: Represent and solve multiplication word problems by using drawings and equations. 3 M1 Topic B: Conceptual Understanding of Division 3 M1 Topic D: Two Interpretations of Division 3 M1 Lesson 22: Represent and solve two-step word problems using the properties of multiplication. 3 M1 Lesson 23: Represent and solve two-step word problems using drawings and equations. 3 M2 Lesson 25: Solve two-step word problems. 3 M3 Lesson 2: Count by units of 6 to multiply and divide by using arrays. 3 M3 Lesson 3: Count by units of 8 to multiply and divide by using arrays. 3 M3 Topic B: Multiplication and Division Concepts with an Emphasis on the Unit of 7 3 M3 Lesson 19: Solve two-step word problems by using the four operations and assess the reasonableness of solutions. 3 M3 Lesson 22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10. 3 M3 Lesson 25: Apply multiplication and division concepts to complete a multi-part task.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	3.NR.4: Represent fractions with denominators of 2, 3, 4, 6 and 8 in multiple ways within a framework using visual models.	
	3.NR.4.1 Describe a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction. Use parts of a whole, parts of a set, points on a number line, distances on a number line and area models.	3 M5 Lesson 4: Partition a whole into fractional units pictorially and identify the unit fraction. 3 M5 Lesson 5: Partition a whole into fractional units and write fractions in fraction form. 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole 3 M5 Topic C: Fractions on the Number Line 3 M5 Lesson 27: Apply fraction concepts to complete a multi-part task.
	3.NR.4.2 Compare two unit fractions by flexibly using a variety of tools and strategies.	3 M5 Lesson 9: Compare unit fractions by reasoning about their size concretely. 3 M5 Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams. 3 M5 Topic D: Comparing Fractions 3 M5 Lesson 27: Apply fraction concepts to complete a multi-part task.
	3.NR.4.3 Represent fractions, including fractions greater than one, in multiple ways.	3 M5: Fractions as Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	3.NR.4.4 Recognize and generate simple equivalent fractions.	3 M5 Lesson 8: Identify and represent a whole as two non-unit fractions. 3 M5 Topic C: Fractions on the Number line 3 M5 Topic E: Equivalent Fractions
Measurement and Data Reasoning	3.MDR.5: Solve real-life, mathematical problems involving length, liquid volume, mass, and time.	
	3.MDR.5.1 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.	3 M2 Lesson 13: Collect and represent data in a scaled bar graph and solve related problems. 3 M6 Lesson 22: Generate categorical data and represent it by using a scaled picture graph. 3 M6 Lesson 23: Solve problems by creating scaled picture graphs and scaled bar graphs. <i>Supplemental material is necessary to address the statistical investigative process.</i>
	3.MDR.5.2 Tell and write time to the nearest minute and estimate time to the nearest fifteen minutes (quarter hour) from the analysis of an analog clock.	3 M6 Topic A: Tell Time and Solve Time Interval Problems
	3.MDR.5.3 Solve meaningful problems involving elapsed time, including intervals of time to the hour, half hour, and quarter hour where the times presented are only on the hour, half hour, or quarter hour within a.m. or p.m. only.	3 M6 Topic A: Tell Time and Solve Time Interval Problems

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	3.MDR.5.4 Use rulers to measure lengths in halves and fourths (quarters) of an inch and a whole inch.	3 M5 Lesson 16: Measure lengths and record data on a line plot. 3 M6 Lesson 20: Record measurement data in a line plot. 3 M6 Lesson 21: Create and analyze a line plot for measurement data to the nearest half unit and quarter unit.
	3.MDR.5.5 Estimate and measure liquid volumes, lengths and masses of objects using customary units. Solve problems involving mass, length, and volume given in the same unit, and reason about the relative sizes of measurement units within the customary system.	2 M5: Money, Data, and Customary Measurement 4 M3 Topic E: Problem Solving with Measurement
Geometric and Spatial Reasoning	3.GSR.6: Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry.	
	3.GSR.6.1 Identify perpendicular line segments, parallel line segments, and right angles, identify these in polygons, and solve problems involving parallel line segments, perpendicular line segments, and right angles.	3 M4 Lesson 1: Explore attributes of squares, rectangles, and trapezoids. 3 M6 Topic B: Attributes of Two-Dimensional Figures 4 M6 Lesson 4: Identify, define, and draw perpendicular lines. 4 M6 Lesson 5: Identify, define, and draw parallel lines. 4 M6 Lesson 20: Sort polygons based on a given rule.
	3.GSR.6.2 Classify, compare, and contrast polygons, with a focus on quadrilaterals, based on properties. Analyze specific 3-dimensional figures to identify and describe quadrilaterals as faces of these figures.	3 M4 Lesson 1: Explore attributes of squares, rectangles, and trapezoids. 3 M6 Topic B: Attributes of Two-Dimensional Figures

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	3.GSR.6.3 Identify lines of symmetry in polygons.	4 M6 Topic D: Two-Dimensional Figures and Symmetry
	3.GSR.7: Identify area as a measurable attribute of rectangles and determine the area of a rectangle presented in real-life, mathematical problems.	
	3.GSR.7.1 Investigate area by covering the space of rectangles presented in realistic situations using multiple copies of the same unit, with no gaps or overlaps, and determine the total area (total number of units that covered the space).	3 M4 Topic A: Foundations for Understanding Area 3 M4 Lesson 16: Solve historical math problems involving area.
	3.GSR.7.2 Determine the area of rectangles (or shapes composed of rectangles) presented in relevant problems by tiling and counting.	3 M4: Multiplication and Area
	3.GSR.8: Determine the perimeter of a polygon presented in real-life, mathematical problems.	
	3.GSR.8.1 Determine the perimeter of a polygon and explain that the perimeter represents the distance around a polygon. Solve problems involving perimeters of polygons.	3 M6 Topic C: Problem Solving with Perimeter 3 M6 Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.
	3.GSR.8.2 Investigate and describe how rectangles with the same perimeter can have different areas or how rectangles with the same area can have different perimeters.	3 M6 Lesson 16: Solve problems to determine the perimeters of rectangles with the same area. 3 M6 Lesson 17: Solve problems to determine the areas of rectangles with the same perimeter.

Grade 4 | Georgia Standards of Excellence: Mathematics

Correlation to *Eureka Math*²TM

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

Accessibility

*Eureka Math*² 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 Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

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.

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.	
MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 4 M3: Multiplication and Division of Multi-Digit Numbers 4 M4: Foundations for Fraction Operations
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 4 M5: Place Value Concepts for Decimal Fractions 4 M6: Angle Measurements and Plane Figures
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 4 M2: Place Value Concepts for Multiplication and Division 4 M4: Foundations for Fraction Operations
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 4 M1: Place Value Concepts for Addition and Subtraction 4 M4: Foundations for Fraction Operations

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 4 M3: Multiplication and Division of Multi-Digit Numbers 4 M4: Foundations for Fraction Operations
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 4 M1: Place Value Concepts for Addition and Subtraction 4 M2: Place Value Concepts for Multiplication and Division 4 M3: Multiplication and Division of Multi-Digit Numbers 4 M6: Angle Measurements and Plane Figures
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 4 M1: Place Value Concepts for Addition and Subtraction 4 M2: Place Value Concepts for Multiplication and Division 4 M4: Foundations for Fraction Operations 4 M5: Place Value Concepts for Decimal Fractions
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 4 M4: Foundations for Fraction Operations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	4.NR.1: Recognize patterns within the base ten place value system with quantities presented in real-life situations to compare and round multi-digit whole numbers through the hundred-thousands place.	
	4.NR.1.1 Read and write multi-digit whole numbers to the hundred-thousands place using base-ten numerals and expanded form.	4 M1 Topic B: Place Value and Comparison Within 1,000,000 4 M1 Lesson 10: Name numbers by using place value understanding. 4 M1 Lesson 11: Find 1, 10, and 100 thousand more than and less than a given number.
	4.NR.1.2 Recognize and show that a digit in one place has a value ten times greater than what it represents in the place to its right and extend this understanding to determine the value of a digit when it is shifted to the left or right, based on the relationship between multiplication and division.	4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right. <i>Choral Response fluencies and Sprints for 10 times as much are found in 4 Module 1 and 4 Module 2.</i>
	4.NR.1.3 Use place value reasoning to represent, compare, and order multi-digit numbers, using $>$, $=$, and $<$ symbols to record the results of comparisons.	4 M1 Lesson 5: Organize, count, and represent a collection of objects. 4 M1 Lesson 9: Compare numbers within 1,000,000 by using $>$, $=$, and $<$.
	4.NR.1.4 Use place value understanding to round multi-digit whole numbers.	4 M1 Topic C: Rounding Multi-Digit Whole Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.NR.2: Using part-whole strategies, solve problems involving addition and subtraction through the hundred-thousands place, as well as multiplication and division of multi-digit whole numbers presented in real-life, mathematical situations.	
	4.NR.2.1 Fluently add and subtract multi-digit numbers to solve practical, mathematical problems using place value understanding, properties of operations, and relationships between operations.	4 M1 Topic D: Multi-Digit Whole Number Addition and Subtraction
	4.NR.2.2 Interpret, model, and solve problems involving multiplicative comparison.	4 M1 Topic A: Multiplication as Multiplicative Comparison 4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right. 4 M2 Lesson 9: Solve multiplication word problems. 4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.
	4.NR.2.3 Solve relevant problems involving multiplication of a number with up to four digits by a 1-digit whole number or involving multiplication of two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	4 M2 Lesson 1: Multiply multiples of 10 by one-digit numbers by using the associative property of multiplication. 4 M2 Lesson 4: Multiply by using familiar strategies. 4 M2 Topic B: Multiplication of Tens and Ones by One-Digit Numbers 4 M3: Multiplication and Division of Multi-Digit Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.NR.2.4 Solve authentic division problems involving up to 4-digit dividends and 1-digit divisors (including whole number quotients with remainders) using strategies based on place-value understanding, properties of operations, and the relationships between operations.	4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers. 4 M2 Lesson 11: Divide by using familiar strategies. 4 M2 Topic C: Division of Tens and Ones by One-Digit Numbers 4 M2 Lesson 16: Divide by using the break apart and distribute strategy. 4 M3 Lesson 1: Divide multiples of 100 and 1,000. 4 M3 Topic B: Division of Thousands, Hundreds, Tens, and Ones 4 M3 Topic F: Remainders, Estimating, and Problem Solving
	4.NR.2.5 Solve multi-step problems using addition, subtraction, multiplication, and division involving whole numbers. Use mental computation and estimation strategies to justify the reasonableness of solutions.	4 M1 Lesson 15: Apply estimation to real-world situations by using rounding. 4 M1 Topic D: Multi-Digit Whole Number Addition and Subtraction 4 M3 Topic F: Remainders, Estimating, and Problem Solving
Patterning and Algebraic Reasoning	4.PAR.3: Generate and analyze patterns, including those involving shapes, input/output diagrams, factors, multiples, prime numbers, and composite numbers.	
	4.PAR.3.1 Generate both number and shape patterns that follow a provided rule.	4 M2 Topic E: Factors and Multiples
	4.PAR.3.2 Use input-output rules, tables, and charts to represent and describe patterns, find relationships, and solve problems.	3 M3 Lesson 17: Identify and complete patterns with input-output tables. 4 M2 Topic E: Factors and Multiples

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.PAR.3.3 Find factor pairs in the range 1–100 and find multiples of single-digit numbers up to 100.	4 M2 Topic E: Factors and Multiples
	4.PAR.3.4 Identify composite numbers and prime numbers and explain the relationship with the factor pairs.	4 M2 Topic E: Factors and Multiples
Numerical Reasoning	4.NR.4: Solve real-life problems involving addition, subtraction, equivalence, and comparison of fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100 using part-whole strategies and visual models.	
	4.NR.4.1 Using concrete materials, drawings, and number lines, demonstrate and explain the relationship between equivalent fractions, including fractions greater than one, and explain the identity property of multiplication as it relates to equivalent fractions. Generate equivalent fractions using these relationships.	4 M4 Topic B: Equivalent Fractions
	4.NR.4.2 Compare two fractions with the same numerator or the same denominator by reasoning about their size and recognize that comparisons are valid only when the two fractions refer to the same whole.	3 M5 Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams. 3 M5 Topic D: Comparing Fractions 3 M5 Lesson 27: Apply fraction concepts to complete a multi-part task.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.NR.4.3 Compare two fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies and recognize that comparisons are valid only when the two fractions refer to the same whole.	4 M4 Topic C: Compare Fractions
	4.NR.4.4 Represent whole numbers and fractions as the sum of unit fractions.	4 M4 Topic A: Fraction Decomposition and Equivalence 4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions. 4 M4 Topic D: Add and Subtract Fractions
	4.NR.4.5 Represent a fraction as a sum of fractions with the same denominator in more than one way, recording with an equation.	4 M4 Topic A: Fraction Decomposition and Equivalence 4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions. 4 M4 Topic D: Add and Subtract Fractions
	4.NR.4.6 Add and subtract fractions and mixed numbers with like denominators using a variety of tools.	4 M4 Topic D: Add and Subtract Fractions 4 M4 Topic E: Add and Subtract Mixed Numbers
	4.NR.5: Solve real-life problems involving addition, equivalence, comparison of fractions with denominators of 10 and 100, and comparison of decimal numbers as tenths and hundredths using part-whole strategies and visual models.	
	4.NR.5.1 Demonstrate and explain the concept of equivalent fractions with denominators of 10 and 100, using concrete materials and visual models. Add two fractions with denominators of 10 and 100.	4 M5: Place Value Concepts for Decimal Fractions

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.NR.5.2 Represent, read, and write fractions with denominators of 10 or 100 using decimal notation, and decimal numbers to the hundredths place as fractions, using concrete materials and drawings.	4 M5: Place Value Concepts for Decimal Fractions
	4.NR.5.3 Compare two decimal numbers to the hundredths place by reasoning about their size. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions.	4 M5 Topic C: Comparison of Decimal Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Measurement and Data Reasoning	4.MDR.6: Measure time and objects that exist in the world to solve real-life, mathematical problems and analyze graphical displays of data to answer relevant questions.	
	4.MDR.6.1 Use the four operations to solve problems involving elapsed time to the nearest minute, intervals of time, metric measurements of liquid volumes, lengths, distances, and masses of objects, including problems involving fractions with like denominators, and also problems that require expressing measurements given in a larger unit in terms of a smaller unit, and expressing a smaller unit in terms of a larger unit based on the idea of equivalence.	4 M1 Topic E: Metric Measurement Conversion Tables 4 M2 Lesson 17: Express measurements of length in terms of smaller units. 4 M3 Topic E: Problem Solving with Measurement 4 M4 Lesson 20: Subtract a fraction from a whole number. 4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers. 4 M4 Lesson 27: Subtract a mixed number from a mixed number. 4 M4 Lesson 28: Represent and solve word problems with mixed numbers by using drawings and equations. 4 M4 Lesson 33: Solve word problems involving multiplication of a fraction by a whole number. 4 M5 Lesson 14: Solve word problems with tenths and hundredths. <i>Supplemental material is needed to address expressing smaller units in terms of a larger unit within the same measurement system.</i>
	4.MDR.6.2 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.	4 M4 Lesson 29: Solve problems by using data from a line plot. 4 M4 Lesson 30: Represent data on a line plot.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.MDR.6.3 Create dot plots to display a distribution of numerical (quantitative) measurement data.	4 M4 Lesson 29: Solve problems by using data from a line plot. 4 M4 Lesson 30: Represent data on a line plot.
Geometric and Spatial Reasoning	4.GSR.7: Investigate the concepts of angles and angle measurement to estimate and measure angles.	
	4.GSR.7.1 Recognize angles as geometric shapes formed when two rays share a common endpoint. Draw right, acute, and obtuse angles based on the relationship of the angle measure to 90 degrees.	4 M6 Lesson 7: Explore angles as fractional turns through a circle. 4 M6 Topic B: Angle Measurement
	4.GSR.7.2 Measure angles in reference to a circle with the center at the common endpoint of two rays. Determine an angle's measure in relation to the 360 degrees in a circle through division or as a missing factor problem.	4 M6 Lesson 7: Explore angles as fractional turns through a circle. 4 M6 Topic C: Determine Unknown Angle Measures
	4.GSR.8: Identify and draw geometric objects, classify polygons based on properties, and solve problems involving area and perimeter of rectangular figures.	
	4.GSR.8.1 Explore, investigate, and draw points, lines, line segments, rays, angles (right, acute, obtuse), perpendicular lines, parallel lines, and lines of symmetry. Identify these in two-dimensional figures.	4 M6: Angle Measurements and Plane Figures

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	4.GSR.8.2 Classify, compare, and contrast polygons based on lines of symmetry, the presence or absence of parallel or perpendicular line segments, or the presence or absence of angles of a specified size and based on side lengths.	4 M6 Topic D: Two-Dimensional Figures and Symmetry
	4.GSR.8.3 Solve problems involving area and perimeter of composite rectangles involving whole numbers with known side lengths.	4 M2 Lesson 3: Investigate and use a formula for the area of a rectangle. 4 M2 Lesson 7: Multiply by using an area model and the distributive property. 4 M2 Topic D: Problem Solving with Measurement

Grade 5 | Georgia Standards of Excellence: Mathematics

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Mathematical Practices**Aligned Components of *Eureka Math*²**

MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.

MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 5 M4: Place Value Concepts for Decimal Operations 5 M5: Addition and Multiplication with Area and Volume
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 5 M1: Place Value Concepts for Multiplication and Division with Whole Numbers 5 M5: Addition and Multiplication with Area and Volume
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 5 M3: Multiplication and Division with Fractions 5 M6: Foundations to Geometry in the Coordinate Plane
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 5 M3: Multiplication and Division with Fractions

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 5 M2: Addition and Subtraction with Fractions 5 M4: Place Value Concepts for Decimal Operations 5 M6: Foundations to Geometry in the Coordinate Plane
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 5 M1: Place Value Concepts for Multiplication and Division with Whole Numbers 5 M3: Multiplication and Division with Fractions 5 M4: Place Value Concepts for Decimal Operations
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 5 M2: Addition and Subtraction with Fractions 5 M4: Place Value Concepts for Decimal Operations 5 M6: Foundations to Geometry in the Coordinate Plane
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 5 M4: Place Value Concepts for Decimal Operations 5 M6: Foundations to Geometry in the Coordinate Plane

Big Ideas	Georgia Standards of Excellence: Mathematics		Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	5.NR.1: Use place value understanding to solve real-life, mathematical problems.		
	5.NR.1.1 Explain that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.		5 M1 Lesson 1: Relate adjacent place value units by using place value understanding. 5 M1 Lesson 2: Multiply and divide by 10, 100, and 1,000 and identify patterns in the products and quotients. 5 M4 Topic A: Understanding Decimal Numbers with Place Value and Fraction Thinking
	5.NR.1.2 Explain patterns in the placement of digits when multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10, up to 10^3 .		5 M1 Topic A: Place Value Understanding for Whole Numbers 5 M4 Lesson 5: Multiply and divide decimal numbers by powers of 10.
	5.NR.2: Multiply and divide multi-digit whole numbers to solve relevant, mathematical problems.		
	5.NR.2.1 Fluently multiply multi-digit (up to 3-digit by 2-digit) whole numbers to solve authentic problems.		5 M1 Topic B: Multiplication of Whole Numbers
	5.NR.2.2 Fluently divide multi-digit whole numbers (up to 4-digit dividends and 2-digit divisors no greater than 25) to solve practical problems.		5 M1 Topic C: Division of Whole Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	5.NR.3: Describe fractions and perform operations with fractions to solve relevant, mathematical problems using part-whole strategies and visual models.	
	5.NR.3.1 Explain the meaning of a fraction as division of the numerator by the denominator ($\frac{a}{b} = a \div b$). Solve problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.	5 M2 Topic A: Fractions and Division
	5.NR.3.2 Compare and order up to three fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies.	4 M4 Topic C: Compare Fractions
	5.NR.3.3 Model and solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators.	5 M2: Addition and Subtraction with Fractions
	5.NR.3.4 Model and solve problems involving multiplication of a fraction and a whole number.	5 M3: Multiplication and Division with Fractions

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	5.NR.3.5 Explain why multiplying a whole number by a fraction greater than one results in a product greater than the whole number, and why multiplying a whole number by a fraction less than one results in a product less than the whole number and multiplying a whole number by a fraction equal to one results in a product equal to the whole number.	5 M3: Multiplication and Division with Fractions 5 M5 Lesson 10: Find the area of a rectangle with fraction side lengths by relating the rectangle to a unit square. 5 M5 Lesson 14: Solve real-world problems involving areas of composite figures with mixed-number side lengths. 5 M5 Lesson 15: Solve multi-step word problems involving multiplication of mixed numbers.
	5.NR.3.6 Model and solve problems involving division of a unit fraction by a whole number and a whole number by a unit fraction.	5 M3: Multiplication and Division with Fractions
	5.NR.4: Read, write, and compare decimal numbers to the thousandths place, and round and perform operations with decimal numbers to the hundredths place to solve relevant, mathematical problems.	
	5.NR.4.1 Read and write decimal numbers to the thousandths place using base-ten numerals written in standard form and expanded form.	5 M4 Lesson 1: Model and relate decimal place value units to thousandths. 5 M4 Lesson 2: Represent thousandths as a place value unit. 5 M4 Lesson 3: Represent decimal numbers to the thousandths place in different forms.
	5.NR.4.2 Represent, compare, and order decimal numbers to the thousandths place based on the meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	5 M4 Lesson 6: Compare decimal numbers to the thousandths place.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	5.NR.4.3 Use place value understanding to round decimal numbers to the hundredths place.	5 M4 Lesson 7: Round decimal numbers to the nearest one, tenth, or hundredth. 5 M4 Lesson 8: Round decimal numbers to any place value unit.
	5.NR.4.4 Solve problems involving addition and subtraction of decimal numbers to the hundredths place using a variety of strategies.	5 M4: Place Value Concepts for Decimal Operations
	5.NR.5: Write, interpret, and evaluate numerical expressions within authentic problems.	
	5.NR.5.1 Write, interpret, and evaluate simple numerical expressions involving whole numbers with or without grouping symbols to represent actual situations.	5 M1 Lesson 1: Relate adjacent place value units by using place value understanding. 5 M1 Lesson 2: Multiply and divide by 10, 100, and 1,000 and identify patterns in the products and quotients. 5 M4 Topic A: Understanding Decimal Numbers with Place Value and Fraction Thinking
Patterning and Algebraic Reasoning	5.PAR.6: Solve relevant problems by creating and analyzing numerical patterns using the given rule(s).	
	5.PAR.6.1 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms by completing a table.	5 M6 Topic B: Patterns in the Coordinate Plane 5 M6 Lesson 11: Draw lines in the coordinate plane and identify points on the lines. 5 M6 Lesson 20: Reason about patterns in real-world situations.

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	5.PAR.6.2 Represent problems by plotting ordered pairs and explain coordinate values of points in the first quadrant of the coordinate plane.	5 M6: Foundations to Geometry in the Coordinate Plane
Measurement and Data Reasoning	5.MDR.7: Solve problems involving customary measurements, metric measurements, and time and analyze graphical displays of data to answer relevant questions.	
	5.MDR.7.1 Explore realistic problems involving different units of measurement, including distance, mass, weight, volume, and time.	4 M1 Topic E: Metric Measurement Conversion Tables 4 M2 Lesson 17: Express measurements of length in terms of smaller units. 4 M3 Topic E: Problem Solving with Measurement 5 M1 Lesson 5: Convert measurements and describe relationships between metric units. 5 M1 Lesson 6: Solve multi-step word problems by using metric measurement conversion. 5 M3 Lesson 5: Convert larger customary measurement units to smaller measurement units. 5 M3 Lesson 6: Convert smaller customary measurement units to larger measurement units. 5 M4 Topic E: Applications of Decimals
	5.MDR.7.2 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.	5 M2 Topic D: Problem Solving and Line Plots with Fractional Measurements <i>Supplemental material is necessary to address the statistical investigative process.</i>

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	5.MDR.7.3 Convert among units within the metric system and then apply these conversions to solve multistep, practical problems.	5 M1 Lesson 5: Convert measurements and describe relationships between metric units. 5 M1 Lesson 6: Solve multi-step word problems by using metric measurement conversion. 5 M3 Lesson 5: Convert larger customary measurement units to smaller measurement units. 5 M3 Lesson 6: Convert smaller customary measurement units to larger measurement units. 5 M4 Topic E: Applications of Decimals
	5.MDR.7.4 Convert among units within relative sizes of measurement units within the customary measurement system.	4 M1 Topic E: Metric Measurement Conversion Tables 4 M2 Lesson 17: Express measurements of length in terms of smaller units. 4 M3 Topic E: Problem Solving with Measurement
Geometric and Spatial Reasoning	5.GSR.8: Examine properties of polygons and rectangular prisms, classify polygons by their properties, and discover volume of right rectangular prisms.	
	5.GSR.8.1 Classify, compare, and contrast polygons based on properties.	5 M5 Topic A: Drawing, Analysis, and Classification of Two-Dimensional Figures 5 M6 Lesson 12: Graph and classify quadrilaterals in the coordinate plane.
	5.GSR.8.2 Determine, through exploration and investigation, that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	5 M5 Topic A: Drawing, Analysis, and Classification of Two-Dimensional Figures

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	5.GSR.8.3 Investigate volume of right rectangular prisms by packing them with unit cubes without gaps or overlaps. Then, determine the total volume to solve problems.	5 M5 Topic C: Volume Concepts 5 M5 Lesson 22: Find the volumes of right rectangular prisms by using the area of the base. 5 M5 Lesson 23: Find the volumes of right rectangular prisms by multiplying the edge lengths.
	5.GSR.8.4 Discover and explain how the volume of a right rectangular prism can be found by multiplying the area of the base times the height to solve authentic, mathematical problems.	5 M5: Addition and Multiplication with Area and Volume

Grade 6 | Georgia Standards of Excellence: Mathematics

Correlation to *Eureka Math*²TM

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

Accessibility

*Eureka Math*² 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 Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

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.

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.	
MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 6 M1: Ratios, Rates, and Percents 6 M2: Operations with Fractions and Multi-Digit Numbers
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 6 M1: Ratios, Rates, and Percents 6 M4: Expressions and One-Step Equations 6 M6: Statistics
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 6 M3: Rational Numbers 6 M5: Area, Surface Area, and Volume
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 6 M5: Area, Surface Area, and Volume 6 M6: Statistics

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 6 M4: Expressions and One-Step Equations 6 M6: Statistics
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 6 M2: Operations with Fractions and Multi-Digit Numbers 6 M4: Expressions and One-Step Equations 6 M6: Statistics
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 6 M1: Ratios, Rates, and Percents 6 M2: Operations with Fractions and Multi-Digit Numbers 6 M4: Expressions and One-Step Equations 6 M5: Area, Surface Area, and Volume 6 M6: Statistics

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 6 M1: Ratios, Rates, and Percents 6 M2: Operations with Fractions and Multi-Digit Numbers 6 M3: Rational Numbers 6 M5: Area, Surface Area, and Volume

Big Ideas	Georgia Standards of Excellence: Mathematics		Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	6.NR.1: Solve relevant, mathematical problems involving operations with whole numbers, fractions, and decimal numbers.		
	6.NR.1.1 Fluently add and subtract any combination of fractions to solve problems.		5 M2 Topic B: Addition and Subtraction of Fractions by Making Like Units 5 M2 Lesson 12: Subtract whole numbers from mixed numbers and mixed numbers from whole numbers.
	6.NR.1.2 Multiply and divide any combination of whole numbers, fractions, and mixed numbers using a student-selected strategy. Interpret products and quotients of fractions and solve word problems.		5 M3 Topic B: Multiplication of Fractions 6 M2 Topic B: Dividing Fractions 6 M2 Topic C: Dividing Fractions Fluently
	6.NR.1.3 Perform operations with multi-digit decimal numbers fluently using models and student-selected strategies.		6 M2 Topic C: Dividing Fractions Fluently 6 M2 Topic F: Decimal Division
	6.NR.2: Apply operations with whole numbers, fractions, and decimals within relevant applications.		
	6.NR.2.1 Describe and interpret the center of the distribution by the equal share value (mean).		6 M6: Statistics
	6.NR.2.2 Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.		6 M6: Statistics

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.NR.2.3 Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.	6 M6 Topic B: Mean and Mean Absolute Deviation 6 M6 Lesson 12: Using the Median to Describe the Center 6 M6 Lesson 13: Using the Interquartile Range to Describe Variability 6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures 6 M6 Lesson 21: Comparing Measures of Variability
	6.NR.2.4 Design simple experiments and collect data. Use data gathered from realistic scenarios and simulations to determine quantitative measures of center (median and/or mean) and variability (interquartile range and range). Use these quantities to draw conclusions about the data, compare different numerical data sets, and make predictions.	7 M6 Lesson 12: Selecting a Sample 7 M6 Topic D: Comparing Populations
	6.NR.2.5 Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	6 M6 Lesson 20: Choosing a Measure of Center
	6.NR.2.6 Describe the impact that inserting or deleting a data point has on the mean and the median of a data set. Create data displays using a dot plot or box plot to examine this impact.	6 M6 Lesson 12: Using the Median to Describe the Center 6 M6 Lesson 20: Choosing a Measure of Center

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.NR.3: Solve a variety of problems involving whole numbers and their opposites; model rational numbers on a number line to describe problems presented in relevant, mathematical situations.	
	6.NR.3.1 Identify and compare integers and explain the meaning of zero based on multiple authentic situations.	6 M3 Topic A: Integers and Rational Numbers 6 M3 Lesson 5: Comparing Rational Numbers 6 M3 Lesson 6: Ordering Rational Numbers
	6.NR.3.2 Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites.	6 M3: Rational Numbers
	6.NR.3.3 Recognize and explain that opposite signs of integers indicate locations on opposite sides of zero on the number line; recognize and explain that the opposite of the opposite of a number is the number itself.	6 M3 Topic A: Integers and Rational Numbers
	6.NR.3.4 Write, interpret, and explain statements of order for rational numbers in authentic, mathematical situations. Compare rational numbers, including integers, using equality and inequality symbols.	6 M3 Lesson 5: Comparing Rational Numbers 6 M3 Lesson 6: Ordering Rational Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.NR.3.5 Explain the absolute value of a rational number as its distance from zero on the number line; interpret absolute value as distance for a positive or negative quantity in a relevant situation.	6 M3 Lesson 7: Absolute Value
	6.NR.3.6 Distinguish comparisons of absolute value from statements about order.	6 M3 Lesson 8: Absolute Value and Order 6 M3 Lesson 9: Interpreting Order and Distance in Real-World Situations
	6.NR.4: Solve a variety of contextual problems involving ratios, unit rates, equivalent ratios, percentages, and conversions within measurement systems using proportional reasoning.	
	6.NR.4.1 Explain the concept of a ratio, represent ratios, and use ratio language to describe a relationship between two quantities.	6 M1 Topic A: Ratios 6 M1 Topic B: Collections of Equivalent Ratios
	6.NR.4.2 Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	6 M1 Topic B: Collections of Equivalent Ratios 6 M1 Topic C: Comparing Ratio Relationships 6 M1 Lesson 16: Speed 6 M1 Lesson 18: Comparing Rates
	6.NR.4.3 Solve problems involving proportions using a variety of student-selected strategies.	6 M1 Topic A: Ratios 6 M1 Topic B: Collections of Equivalent Ratios 6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.NR.4.4 Describe the concept of rates and unit rate in the context of a ratio relationship.	6 M1 Lesson 15: The Value of the Ratio 6 M1 Topic D: Rates
	6.NR.4.5 Solve unit rate problems including those involving unit pricing and constant speed.	6 M1 Topic D: Rates 6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations 6 M5 Lesson 13: Surface Area in Real-World Situations
	6.NR.4.6 Calculate a percent of a quantity as a rate per 100 and solve everyday problems given a percent.	6 M1 Topic E: Percents
	6.NR.4.7 Use ratios to convert within measurement systems (customary and metric) to solve authentic problems that exist in everyday life.	5 M3 Lesson 5: Convert larger customary measurement units to smaller measurement units. 5 M3 Lesson 6: Convert smaller customary measurement units to larger measurement units. 6 M1 Topic D: Rates
Geometric and Spatial Reasoning	6.GSR.5: Solve relevant problems involving area, surface area, and volume.	
	6.GSR.5.1 Explore area as a measurable attribute of triangles, quadrilaterals, and other polygons conceptually by composing or decomposing into rectangles, triangles, and other shapes. Find the area of these geometric figures to solve problems.	6 M5: Area, Surface Area, and Volume

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.GSR.5.2 Given the net of three-dimensional figures with rectangular and triangular faces, determine the surface area of these figures.	6 M5 Topic C: Nets and Surface Area 6 M5 Lesson 19: Volume and Surface Area in Real-World Situations
	6.GSR.5.3 Calculate the volume of right rectangular prisms with fractional edge lengths by applying the formula, $V = (\text{area of base}) \times (\text{height})$.	6 M5 Topic D: Volumes of Right Rectangular Prisms
Patterning and Algebraic Reasoning	6.PAR.6: Identify, write, evaluate, and interpret numerical and algebraic expressions as mathematical models to explain authentic situations.	
	6.PAR.6.1 Write and evaluate numerical expressions involving rational bases and whole-number exponents.	6 M4 Topic A: Numerical Expressions
	6.PAR.6.2 Determine greatest common factors and least common multiples using a variety of strategies to make sense of applicable problems.	6 M2 Topic A: Factors, Multiples, and Divisibility 6 M4 Lesson 13: The Distributive Property 6 M4 Lesson 14: Using the Distributive Property to Factor Expressions

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.PAR.6.3 Write and read expressions that represent operations with numbers and variables in realistic situations.	6 M4 Lesson 7: Algebraic Expressions with Addition and Subtraction 6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division 6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations 6 M4 Lesson 11: Modeling Real-World Situations with Expressions
	6.PAR.6.4 Evaluate expressions when given values for the variables, including expressions that arise in everyday situations.	6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division 6 M4 Lesson 11: Modeling Real-World Situations with Expressions 6 M4 Lesson 12: Applying Properties to Multiplication and Division Expressions 6 M4 Lesson 17: Equations and Solutions 6 M5: Area, Surface Area, and Volume
	6.PAR.6.5 Apply the properties of operations to identify and generate equivalent expressions.	6 M4 Topic C: Equivalent Expressions Using the Properties of Operations 6 M5 Lesson 7: Areas of Trapezoids and Other Polygons 6 M5 Lesson 12: From Nets to Surface Area 6 M5 Lesson 17: Problem Solving with Volume

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.PAR.7: Write and solve one-step equations and inequalities as mathematical models to explain authentic, realistic situations.	
	6.PAR.7.1 Solve one-step equations and inequalities involving variables when values for the variables are given. Determine whether an equation and inequality involving a variable is true or false for a given value of the variable.	6 M4 Topic D: Equations and Inequalities
	6.PAR.7.2 Write one-step equations and inequalities to represent and solve problems; explain that a variable can represent an unknown number or any number in a specified set.	6 M4 Topic D: Equations and Inequalities 6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations 6 M5 Lesson 7: Areas of Trapezoids and Other Polygons 6 M5 Lesson 12: From Nets to Surface Area 6 M5 Lesson 17: Problem Solving with Volume
	6.PAR.7.3 Solve problems by writing and solving equations of the form $x \pm p = q$, $px = q$, and $\frac{x}{p} = q$ for cases in which p , q , and x are all nonnegative rational numbers.	6 M4 Topic D: Equations and Inequalities 6 M4 Lesson 21: Solving Problems with Equations 6 M5 Lesson 2: The Area of a Right Triangle
	6.PAR.7.4 Recognize and generate inequalities of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$ to explain situations that have infinitely many solutions; represent solutions of such inequalities on a number line.	6 M4 Lesson 18: Inequalities and Solutions

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	6.PAR.8: Graph rational numbers as points on the coordinate plane to represent and solve contextual, mathematical problems; draw polygons using the coordinates for their vertices and find the length of a side of a polygon.	
	6.PAR.8.1 Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.	6 M3 Topic A: Integers and Rational Numbers 6 M3 Lesson 10: The Four Quadrants of the Coordinate Plane 6 M3 Lesson 11: Plotting Points in the Coordinate Plane
	6.PAR.8.2 Show and explain that signs of numbers in ordered pairs indicate locations in quadrants of the coordinate plane and determine how two ordered pairs may differ based only on the signs.	6 M3 Topic C: The Coordinate Plane
	6.PAR.8.3 Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same x -coordinate or the same y -coordinate.	6 M3 Lesson 14: Modeling with the Coordinate Plane 6 M3 Topic D: Solving Problems in the Coordinate Plane 6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane
	6.PAR.8.4 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same x -coordinate or the same y -coordinate.	6 M5 Topic B: Problem Solving with Area

Grade 7 | Georgia Standards of Excellence: Mathematics

Correlation to *Eureka Math*²TM

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Mathematical Practices**Aligned Components of *Eureka Math*²**

MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.

MP.1: Make sense of problems and persevere in solving them.

While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules:

7 M3: Expressions, Equations, and Inequalities

7 M5: Percent and Applications of Percent

MP.2: Reason abstractly and quantitatively.

While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules:

7 M1: Ratios and Proportional Relationships

7 M3: Expressions, Equations, and Inequalities

7 M5: Percent and Applications of Percent

7 M6: Probability and Populations

MP.3: Construct viable arguments and critique the reasoning of others.

While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules:

7 M3: Expressions, Equations, and Inequalities

7 M4: Geometry

7 M5: Percent and Applications of Percent

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 7 M1: Ratios and Proportional Relationships 7 M4: Geometry
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 7 M1: Ratios and Proportional Relationships 7 M2: Operations with Rational Numbers 7 M5: Percent and Applications of Percent
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 7 M2: Operations with Rational Numbers 7 M3: Expressions, Equations, and Inequalities 7 M4: Geometry 7 M6: Probability and Populations

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 7 M2: Operations with Rational Numbers 7 M3: Expressions, Equations, and Inequalities 7 M4: Geometry 7 M5: Percent and Applications of Percent
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 7 M1: Ratios and Proportional Relationships 7 M2: Operations with Rational Numbers 7 M4: Geometry 7 M5: Percent and Applications of Percent

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	7.NR.1: Solve relevant, mathematical problems, including multi-step problems, involving the four operations with rational numbers and quantities in any form (integers, percentages, fractions, and decimal numbers).	
	7.NR.1.1 Show that a number and its opposite have a sum of 0 (are additive inverses). Describe situations in which opposite quantities combine to make 0.	7 M2 Lesson 1: Combining Opposites 7 M2 Lesson 12: The Integer Game
	7.NR.1.2 Show and explain $p + q$ as the number located a distance $ q $ from p , in the positive or negative direction, depending on whether q is positive or negative. Interpret sums of rational numbers by describing applicable situations.	7 M2 Topic A: Adding Rational Numbers 7 M2 Lesson 8: Subtracting Integers, Part 1
	7.NR.1.3 Represent addition and subtraction with rational numbers on a horizontal or a vertical number line diagram to solve authentic problems.	7 M2 Topic A: Adding Rational Numbers 7 M2 Topic B: Subtracting Rational Numbers
	7.NR.1.4 Show and explain subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference and apply this principle in contextual situations.	7 M2 Topic B: Subtracting Rational Numbers
	7.NR.1.5 Apply properties of operations, including part-whole reasoning, as strategies to add and subtract rational numbers.	7 M2 Topic A: Adding Rational Numbers 7 M2 Topic B: Subtracting Rational Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.NR.1.6 Make sense of multiplication of rational numbers using realistic applications.	7 M2: Operations with Rational Numbers
	7.NR.1.7 Show and explain that integers can be divided, assuming the divisor is not zero, and every quotient of integers is a rational number.	7 M2 Lesson 18: Understanding Negative Divisors 7 M2 Lesson 21: Comparing and Ordering Rational Numbers
	7.NR.1.8 Represent the multiplication and division of integers using a variety of strategies and interpret products and quotients of rational numbers by describing them based on the relevant situation.	7 M2 Topic C: Multiplying Rational Numbers
	7.NR.1.9 Apply properties of operations as strategies to solve multiplication and division problems involving rational numbers represented in an applicable scenario.	7 M2 Topic C: Multiplying Rational Numbers 7 M2 Topic D: Dividing Rational Numbers 7 M2 Lesson 24: Order of Operations with Rational Numbers
	7.NR.1.10 Convert rational numbers between forms to include fractions, decimal numbers, and percentages, using understanding of the part divided by the whole. Know that the decimal form of a rational number terminates in 0s or eventually repeats.	7 M2 Topic D: Dividing Rational Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.NR.1.11 Solve multi-step, contextual problems involving rational numbers, converting between forms as appropriate, and assessing 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 Topic B: Unknown Angle Measurements 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
Patterning and Algebraic Reasoning	7.PAR.2: Use properties of operations, generate equivalent expressions, and interpret the expressions to explain relevant situations.	
	7.PAR.2.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	7 M3 Topic A: Equivalent Expressions
	7.PAR.2.2 Rewrite an expression in different forms from a contextual problem to clarify the problem and show how the quantities in it are related.	7 M3 Topic B: Unknown Angle Measurements 7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures 7 M5 Topic C: More or Less Than 100% 7 M5 Lesson 15: Tips and Taxes 7 M5 Lesson 16: Markups and Discounts 7 M5 Lesson 23: Percents of Percents

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.PAR.3: Represent authentic situations using equations and inequalities with variables; solve equations and inequalities symbolically, using the properties of equality.	
	7.PAR.3.1 Construct algebraic equations to solve practical problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Interpret the solution based on the situation.	7 M3: Expressions, Equations, and Inequalities
	7.PAR.3.2 Construct algebraic inequalities to solve problems, leading to inequalities of the form $px \pm q > r$, $px \pm q < r$, $px \pm q \leq r$, or $px \pm q \geq r$, where p , q , and r are specific rational numbers. Graph and interpret the solution based on the realistic situation that the inequalities represent.	7 M3 Topic D: Inequalities
	7.PAR.4 Recognize proportional relationships in relevant, mathematical problems; represent, solve, and explain these relationships with tables, graphs, and equations.	
	7.PAR.4.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units presented in realistic problems.	7 M1 Topic A: Understanding Proportional Relationships
	7.PAR.4.2 Determine the unit rate (constant of proportionality) in tables, graphs ($1, r$), equations, diagrams, and verbal descriptions of proportional relationships to solve realistic problems.	7 M1: Ratios and Proportional Relationships

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.PAR.4.3 Determine whether two quantities presented in authentic problems are in a proportional relationship.	7 M1 Topic A: Understanding Proportional Relationships 7 M1 Lesson 14: Extreme Bicycles
	7.PAR.4.4 Identify, represent, and use proportional relationships.	7 M1: Ratios and Proportional Relationships 7 M5: Percent and Applications of Percent
	7.PAR.4.5 Use context to explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	7 M1 Lesson 4: Exploring Graphs of Proportional Relationships 7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships 7 M1 Lesson 9: Comparing Proportional Relationships
	7.PAR.4.6 Solve everyday problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing, and reproducing a scale drawing at a different scale.	7 M1 Topic C: Scale Drawings and Proportional Relationships 7 M5 Lesson 1: Proportionality and Scale Factor 7 M5 Lesson 14: Scale Factor—Percent Increase and Decrease
	7.PAR.4.7 Use similar triangles to explain why the slope, m , is the same between any two distinct points on a non-vertical line in the coordinate plane.	8 M4 Topic D: Slope of a Line
	7.PAR.4.8 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.	8 M4 Lesson 15: Comparing Proportional Relationships 8 M4 Lesson 16: Proportional Relationships and Slope

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.PAR.4.9 Use proportional relationships to solve multi-step ratio and percent problems presented in applicable situations.	7 M1 Topic B: Working with Proportional Relationships 7 M5: Percent and Applications of Percent
	7.PAR.4.10 Predict characteristics of a population by examining the characteristics of a representative sample. Recognize the potential limitations and scope of the sample to the population.	7 M6 Topic C: Random Sampling
	7.PAR.4.11 Analyze sampling methods and conclude that random sampling produces and supports valid inferences.	7 M6 Topic C: Random Sampling
	7.PAR.4.12 Use data from repeated random samples to evaluate how much a sample mean is expected to vary from a population mean. Simulate multiple samples of the same size.	7 M6 Topic C: Random Sampling
Geometric and Spatial Reasoning	7.GSR.5: Solve practical problems involving angle measurement, circles, area of circles, surface area of prisms and cylinders, and volume of cylinders and prisms composed of cubes and right prisms.	
	7.GSR.5.1 Measure angles in whole non-standard units.	<i>Supplemental material is necessary to address measurement of angles with non-standard units.</i> <i>Eureka Math² does include this content in grade 4.</i> 4 M6 Topic B: Angle Measurement 4 M6 Topic C: Determine Unknown Angle Measures

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.GSR.5.2 Measure angles in whole number degrees using a protractor.	Supplemental material is necessary to address measurement of angles with a protractor. <i>Eureka Math</i> ² does include this content in grade 4. 4 M6 Topic B: Angle Measurement
	7.GSR.5.3 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve equations for an unknown angle in a figure.	7 M3 Topic B: Unknown Angle Measurements
	7.GSR.5.4 Explore and describe the relationship between pi, radius, diameter, circumference, and area of a circle to derive the formulas for the circumference and area 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.GSR.5.5 Given the formula for the area and circumference of a circle, solve problems that exist in everyday life.	7 M4 Topic C: Circumference and Area of Circles
	7.GSR.5.6 Solve realistic problems involving surface area of right prisms and cylinders.	7 M4 Lesson 14: Composite Figures with Circular Regions 7 M4 Topic D: Area and Surface Area 7 M4 Topic E: Cross Sections and Volume
	7.GSR.5.7 Describe the two-dimensional figures (cross sections) that result from slicing three-dimensional figures, as in the plane sections of right rectangular prisms, right rectangular pyramids, cones, cylinders, and spheres.	7 M4 Lesson 22: Understanding Planes and Cross Sections 7 M4 Lesson 23: Cross Section Scavenger Hunt

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.GSR.5.8 Explore volume as a measurable attribute of cylinders and right prisms. Find the volume of these geometric figures using concrete problems.	8 M6 Topic E: Volume
Probability Reasoning	7.PR.6: Using mathematical reasoning, investigate chance processes and develop, evaluate, and use probability models to find probabilities of simple events presented in authentic situations.	
	7.PR.6.1 Represent the probability of a chance event as a number between 0 and 1 that expresses the likelihood of the event occurring. Describe that a probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	7 M6 Lesson 1: What is Probability?
	7.PR.6.2 Approximate the probability of a chance event by collecting data on an event and observing its long-run relative frequency will approach the theoretical probability.	7 M6 Topic A: Calculating and Interpreting Probabilities 7 M6 Lesson 8: Picking Blue
	7.PR.6.3 Develop a probability model and use it to find probabilities of simple events. Compare experimental and theoretical probabilities of events. If the probabilities are not close, explain possible sources of the discrepancy.	7 M6 Lesson 7: The Law of Large Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	7.PR.6.4 Develop a uniform probability model by assigning equal probability to all outcomes and use the model to determine probabilities of events.	7 M6 Lesson 4: Theoretical Probability 7 M6 Lesson 7: The Law of Large Numbers
	7.PR.6.5 Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.	7 M6 Lesson 6: Outcomes That Are Not Equally Likely 7 M6 Lesson 8: Picking Blue
	7.PR.6.6 Use appropriate graphical displays and numerical summaries from data distributions with categorical or quantitative (numerical) variables as probability models to draw informal inferences about two samples or populations.	7 M6: Probability and Populations

Grade 8 | Georgia Standards of Excellence: Mathematics

Correlation to *Eureka Math*²TM

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

Accessibility

*Eureka Math*² 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 Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

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.

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.	
MP.1: Make sense of problems and persevere in solving them.	While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules: 8 M2: Rigid Motions and Congruent Figures 8 M4: Linear Equations in One and Two Variables 8 M5: Systems of Linear Equations
MP.2: Reason abstractly and quantitatively.	While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules: 8 M1: Scientific Notation, Exponents, and Irrational Numbers 8 M4: Linear Equations in One and Two Variables 8 M5: Systems of Linear Equations 8 M6: Functions and Bivariate Statistics
MP.3: Construct viable arguments and critique the reasoning of others.	While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules: 8 M1: Scientific Notation, Exponents, and Irrational Numbers 8 M2: Rigid Motions and Congruent Figures 8 M4: Linear Equations in One and Two Variables 8 M6: Functions and Bivariate Statistics

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.4: Model with mathematics.	While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules: 8 M3: Dilations and Similar Figures 8 M4: Linear Equations in One and Two Variables
MP.5: Use appropriate tools strategically.	While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules: 8 M4: Linear Equations in One and Two Variables 8 M6: Functions and Bivariate Statistics
MP.6: Attend to precision.	While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules: 8 M1: Scientific Notation, Exponents, and Irrational Numbers 8 M2: Rigid Motions and Congruent Figures 8 M4: Linear Equations in One and Two Variables 8 M6: Functions and Bivariate Statistics
MP.7: Look for and make use of structure.	While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules: 8 M3: Dilations and Similar Figures 8 M5: Systems of Linear Equations 8 M6: Functions and Bivariate Statistics

Mathematical Practices	Aligned Components of <i>Eureka Math</i> ²
MP.8: Look for and express regularity in repeated reasoning.	While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules: 8 M1: Scientific Notation, Exponents, and Irrational Numbers 8 M2: Rigid Motions and Congruent Figures 8 M3: Dilations and Similar Figures 8 M4: Linear Equations in One and Two Variables

Big Ideas	Georgia Standards of Excellence: Mathematics		Aligned Components of <i>Eureka Math</i> ²
Numerical Reasoning	8.NR.1: Solve problems involving irrational numbers and rational approximations of irrational numbers to explain realistic applications.		
	8.NR.1.1 Distinguish between rational and irrational numbers using decimal expansion. Convert a decimal expansion which repeats eventually into a rational number.		8 M1 Lesson 22: Familiar and Not So Familiar Numbers 8 M4 Lesson 5: An Interesting Application of Linear Equations, Part 1 8 M4 Lesson 6: An Interesting Application of Linear Equations, Part 2
	8.NR.1.2 Approximate irrational numbers to compare the size of irrational numbers, locate them approximately on a number line, and estimate the value of expressions.		8 M1 Topic E: Irrational Numbers
	8.NR.2: Solve problems involving radicals and integer exponents including relevant application situations; apply place value understanding with scientific notation and use scientific notation to explain real phenomena.		
	8.NR.2.1 Apply the properties of integer exponents to generate equivalent numerical expressions.		8 M1 Topic A: Introduction to Scientific Notation 8 M1 Topic B: Properties and Definitions of Exponents
	8.NR.2.2 Use square root and cube root symbols to represent solutions to equations. Recognize that $x^2 = p$ (where p is a positive rational number and $ x \leq 25$) has two solutions and $x^3 = p$ (where p is a negative or positive rational number and $ x \leq 10$) has one solution. Evaluate square roots of perfect squares ≤ 625 and cube roots of perfect cubes ≥ -1000 and ≤ 1000 .		8 M1 Topic D: Perfect Squares, Perfect Cubes, and the Pythagorean Theorem 8 M1 Topic E: Irrational Numbers

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.NR.2.3 Use numbers expressed in scientific notation to estimate very large or very small quantities, and to express how many times as much one is than the other.	8 M1 Topic A: Introduction to Scientific Notation 8 M1 Lesson 7: Making Sense of the Exponent of 0 8 M1 Lesson 11: Small Positive Numbers in Scientific Notation
	8.NR.2.4 Add, subtract, multiply, and divide numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Interpret scientific notation that has been generated by technology (e.g., calculators or online technology tools).	8 M1 Topic A: Introduction to Scientific Notation 8 M1 Topic C: Applications of the Properties and Definitions of Exponents
Patterning and Algebraic Reasoning	8.PAR.3: Create and interpret expressions within relevant situations. Create, interpret, and solve linear equations and linear inequalities in one variable to model and explain real phenomena.	
	8.PAR.3.1 Interpret expressions and parts of an expression, in context, by utilizing formulas or expressions with multiple terms and/or factors.	Algebra I M5: Linear and Exponential Functions
	8.PAR.3.2 Describe and solve linear equations in one variable with one solution ($x = a$), infinitely many solutions ($a = a$), or no solutions ($a = b$). Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).	8 M4 Topic B: The Structure of Linear Equations in One Variable

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.PAR.3.3 Create and solve linear equations and inequalities in one variable within a relevant application.	7 M3 Topic D: Inequalities
	8.PAR.3.4 Using algebraic properties and the properties of real numbers, justify the steps of a one-solution equation or inequality.	8 M4 Topic A: Linear Equations in One Variable 8 M4 Lesson 10: Using Linear Equations to Solve Real-World Problems 8 M4 Lesson 11: Planning a Trip
	8.PAR.3.5 Solve linear equations and inequalities in one variable with coefficients represented by letters and explain the solution based on the contextual, mathematical situation.	7 M3 Topic D: Inequalities 8 M4 Topic A: Linear Equations in One Variable 8 M4 Topic B: The Structure of Linear Equations in One Variable
	8.PAR.3.6 Use algebraic reasoning to fluently manipulate linear and literal equations expressed in various forms to solve relevant, mathematical problems.	Algebra I M1: Expressions, Equations, and Inequalities in One Variable Algebra I M4: Quadratic Functions
	8.PAR.4: Show and explain the connections between proportional and non-proportional relationships, lines, and linear equations; create and interpret graphical mathematical models and use the graphical, mathematical model to explain real phenomena represented in the graph.	
	8.PAR.4.1 Use the equation $y = mx$ (proportional) for a line through the origin to derive the equation $y = mx + b$ (non-proportional) for a line intersecting the vertical axis at b .	8 M6 Lesson 3: Linear Functions and Proportionality 8 M6 Lesson 6: Linear Functions and Rate of Change 8 M6 Lesson 10: Graphs of Nonlinear Functions

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.PAR.4.2 Show and explain that the graph of an equation representing an applicable situation in two variables is the set of all its solutions plotted in the coordinate plane.	Algebra I M2: Equations and Inequalities in Two Variables
Functional and Graphical Reasoning	8.FGR.5: Describe the properties of functions to define, evaluate, and compare relationships, and use functions and graphs of functions to model and explain real phenomena.	
	8.FGR.5.1 Show and explain that a function is a rule that assigns to each input exactly one output.	8 M6 Topic A: Functions
	8.FGR.5.2 Within realistic situations, identify and describe examples of functions that are linear or nonlinear. Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	8 M6 Lesson 9: Increasing and Decreasing Functions 8 M6 Lesson 10: Graphs of Nonlinear Functions
	8.FGR.5.3 Relate the domain of a linear function to its graph and where applicable to the quantitative relationship it describes.	Algebra I M3 Topic A: Functions and Their Graphs
	8.FGR.5.4 Compare properties (rate of change and initial value) of two functions used to model an authentic situation each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).	8 M6 Lesson 7: Interpreting Rate of Change and Initial Value 8 M6 Lesson 8: Comparing Functions

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.FGR.5.5 Write and explain the equations $y = mx + b$ (slope-intercept form), $Ax + By = C$ (standard form), and $(y - y_1) = m(x - x_1)$ (point-slope form) as defining a linear function whose graph is a straight line to reveal and explain different properties of the function.	8 M4 Topic E: Different Forms of Linear Equations
	8.FGR.5.6 Write a linear function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	8 M6 Topic A: Functions
	8.FGR.5.7 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph.	8 M6 Lesson 6: Linear Functions and Rate of Change 8 M6 Lesson 7: Interpreting Rate of Change and Initial Value 8 M6 Lesson 25: Applications of Volume
	8.FGR.5.8 Explain the meaning of the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	8 M6: Functions and Bivariate Statistics

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.FGR.5.9 Graph and analyze linear functions expressed in various algebraic forms and show key characteristics of the graph to describe applicable situations.	Algebra I M2 Lesson 2: Graphing Linear Equations in Two Variables Algebra I M2 Lesson 3: Creating Linear Equations in Two Variables Algebra I M3 Lesson 6: Representations of Functions Algebra I M3 Lesson 8: Identifying Key Features of a Function and Its Graph Algebra I M3 Lesson 14: Piecewise Linear Functions Algebra I M3 Lesson 15: The Absolute Value Function Algebra I M3 Lesson 19: Building New Functions—Translations Algebra I M3 Lesson 21: Building New Functions—Vertical Scaling
	8.FGR.6: Solve practical, linear problems involving situations using bivariate quantitative data.	
	8.FGR.6.1 Show that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, visually fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line of best fit.	8 M6 Topic C: Bivariate Numerical Data
	8.FGR.6.2 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercepts.	8 M6 Topic C: Bivariate Numerical Data

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.FGR.6.3 Explain the meaning of the predicted slope (rate of change) and the predicted intercept (constant term) of a linear model in the context of the data.	8 M6 Topic C: Bivariate Numerical Data
	8.FGR.6.4 Use appropriate graphical displays from data distributions involving lines of best fit to draw informal inferences and answer the statistical investigative question posed in an unbiased statistical study.	8 M6 Lesson 16: Using the Investigative Process 8 M6 Lesson 17: Analyzing the Model
	8.FGR.7: Justify and use various strategies to solve systems of linear equations to model and explain realistic phenomena.	
	8.FGR.7.1 Interpret and solve relevant mathematical problems leading to two linear equations in two variables.	8 M5 Lesson 1: Solving Problems with Equations and Their Graphs 8 M5 Topic C: Writing and Solving Systems of Linear Equations
	8.FGR.7.2 Show and explain that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because the points of intersection satisfy both equations simultaneously.	8 M5 Topic A: Solving Systems of Linear Equations Graphically 8 M5 Lesson 7: The Substitution Method 8 M5 Lesson 10: Choosing a Solution Method 8 M5 Lesson 14: Back to the Coordinate Plane
	8.FGR.7.3 Approximate solutions of two linear equations in two variables by graphing the equations and solving simple cases by inspection.	8 M5: Systems of Linear Equations

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.FGR.7.4 Analyze and solve systems of two linear equations in two variables algebraically to find exact solutions.	8 M5 Topic B: Solving Systems of Linear Equations Algebraically
	8.FGR.7.5 Create and compare the equations of two lines that are either parallel to each other, perpendicular to each other, or neither parallel nor perpendicular.	8 M5 Lesson 3: Identifying Solutions
Geometric and Spatial Reasoning	8.GSR.8: Solve geometric problems involving the Pythagorean Theorem and the volume of geometric figures to explain real phenomena.	
	8.GSR.8.1 Explain a proof of the Pythagorean Theorem and its converse using visual models.	8 M2 Topic D: Congruent Figures and the Pythagorean Theorem
	8.GSR.8.2 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles within authentic, mathematical problems in two and three dimensions.	8 M1 Topic D: Perfect Squares, Perfect Cubes, and the Pythagorean Theorem 8 M2 Topic D: Congruent Figures and the Pythagorean Theorem 8 M3 Lesson 16: Similar Right Triangles
	8.GSR.8.3 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system in practical, mathematical problems.	8 M2 Lesson 20: Distance in the Coordinate Plane 8 M2 Lesson 22: On the Right Path

Big Ideas	Georgia Standards of Excellence: Mathematics	Aligned Components of <i>Eureka Math</i> ²
	8.GSR.8.4 Apply the formulas for the volume of cones, cylinders, and spheres and use them to solve in relevant problems.	8 M6 Topic E: Volume