# Grade 4 | South Carolina College- and Career-Ready Mathematics Standards Correlation to *Eureka Math²®*

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 Math²®*, 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 Math²* carefully sequences mathematical content to maximize vertical alignment—a principle tested and proven to be essential in students' mastery of math—from kindergarten through high school.

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

## Teachability

*Eureka Math²* employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built right into the teacher materials.

## Accessibility

*Eureka Math²* incorporates Universal Design for Learning principles so all learners can access the mathematics and take on challenging math concepts. Student supports are built into the instructional design and are clearly identified in the *Teach* book. Further, the curriculum carries a focus on readability. By eliminating unnecessary words and using simple, clear sentences, the *Eureka Math²* teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum's readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

## Digital Engagement

The digital elements of *Eureka Math²* add to students' engagement with the math. The curriculum provides teachers with downloadable 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 and provide opportunities for students to wonder, explore, and make sense of mathematics, which contributes to the development of a strong, positive mathematical identity.

| Mathematical Process Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **MPS.PS.1**<br>Make sense of problems and persevere in solving them strategically. | Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson. |
| **MPS.RC.1**<br>Explain ideas using precise and contextually appropriate mathematical language, tools, and models. | Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson. |
| **MPS.C.1**<br>Demonstrate a deep and flexible conceptual understanding of mathematical ideas, operations, and relationships while making real-world connections. | Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson. |
| **MPS.AJ.1**<br>Use critical thinking skills to reason both abstractly and quantitatively. | Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson. |
| **MPS.SP.1**<br>Identify and apply regularity in repeated reasoning to make generalizations. | Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson. |

## Data, Probability, and Statistical Reasoning

**4.DPSR.1 Create questions, collect and analyze data, and communicate interpretations through multiple representations.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.DPSR.1.1**<br>Collect and organize numerical and categorical data based on observations, investigations, surveys, and experiments using tables, scaled bar graphs, or dot plots. Use titles and labels. Scales to include whole numbers, halves, and fourths. | 4 M2 Lesson 26-1: Solve problems by creating scaled picture graphs and scaled bar graphs.<br>4 M4 Lesson 28-1: Measure lengths and record data on a line plot.<br>4 M4 Lesson 30: Represent data on a line plot. |
| **4.DPSR.1.2**<br>Solve one-step, real-world situations using whole number and fractional data represented in tables, scaled picture graphs, scaled bar graphs, or dot plots. Limit to like denominators of 2, 3, 4, 5, 6, 8, and 10. | 4 M2 Lesson 26-1: Solve problems by creating scaled picture graphs and scaled bar graphs.<br>4 M4 Lesson 28-1: Measure lengths and record data on a line plot.<br>4 M4 Lesson 29: Solve problems by using data from a line plot.<br>4 M4 Lesson 30: Represent data on a line plot. |

## Data, Probability, and Statistical Reasoning

**4.DPSR.2 Represent the probability of simple events and determine possible outcomes.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.DPSR.2.1**<br>Determine the possible outcomes of a simple event and record the probability as certain, possible, or impossible. | 4 M6 Lesson 20-8: Describe the probability of an event as certain, possible, or impossible.<br>4 M6 Lesson 20-9: Use benchmark values to write the probability of an event that is certain, impossible, or equally likely. |

## Measurement, Geometry, and Spatial Reasoning

**4.MGSR.1 Solve area and perimeter problems in real-world and mathematical situations.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.MGSR.1.1**<br>Apply perimeter formulas for rectangles to solve real-world situations including finding the perimeter, given the side lengths, and finding an unknown side length. | 4 M2 Lesson 18: Investigate and use formulas for the perimeter of a rectangle.<br>4 M2 Lesson 19: Apply area and perimeter formulas to solve problems.<br>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons. |
| **4.MGSR.1.2**<br>Apply area formulas for rectangles to solve real-world situations. Use square units to label area measurements. | 4 M2 Lesson 3: Investigate and use a formula for the area of a rectangle.<br>4 M2 Lesson 7: Multiply by using an area model and the distributive property.<br>4 M2 Lesson 19: Apply area and perimeter formulas to solve problems. |

## Measurement, Geometry, and Spatial Reasoning

**4.MGSR.2 Estimate and measure using units of length, liquid volume, weight, currency, and intervals of time.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.MGSR.2.1**<br>Calculate the value of a collection of coins and bills in real-world situations to determine whether there is enough money to make a purchase. Justify based on comparison of money amounts. | 4 M5 Lesson 1: Organize, count, and represent a collection of money.<br>4 M5 Lesson 1-1: Count collections of bills and coins and reason with totals in real-world contexts. |
| **4.MGSR.2.2**<br>Solve real-world situations involving addition and subtraction of time intervals within $60$ minutes to find elapsed time, start time, or end time. | 4 M1 Lesson 24-1: Solve time word problems where the end time is unknown.<br>4 M1 Lesson 24-2: Solve time word problems where the start time is unknown.<br>4 M1 Lesson 24-3: Solve time word problems where the change in time is unknown.<br>4 M3 Lesson 18: Express units in terms of smaller units. |
| **4.MGSR.2.3**<br>Measure length to the nearest quarter inch. | 4 M4 Lesson 28-1: Measure lengths and record data on a line plot.<br>4 M4 Lesson 28-2: Measure the perimeter of various circles to the nearest quarter inch by using string.<br>4 M4 Lesson 30: Represent data on a line plot. |
| **4.MGSR.2.4**<br>Measure weight in customary units and metric units to the nearest whole unit. Limit to ounces, pounds, grams, and kilograms. | 4 M1 Lesson 4-1: Connect the composition of $1$ kilogram to the composition of $1$ thousand.<br>4 M1 Lesson 4-2: Estimate the weight of familiar objects and read scales when weighing objects. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.MGSR.2.5**<br>Convert customary units of length, weight, and liquid volume from a larger unit to a smaller unit, given direct comparisons of the two measurements and/or the unit equivalencies within a single system of measurement. Limit to inches, feet, yards, ounces, pounds, fluid ounces, cups, pints, quarts, and gallons when given unit equivalencies. | 4 M2 Lesson 17: Express measurements of length in terms of smaller units.<br>4 M3 Lesson 18: Express units of time in terms of smaller units.<br>4 M3 Lesson 19: Express customary measurements of weight in terms of smaller units.<br>4 M3 lesson 20: Express customary measurements of liquid volume in terms of smaller units. |

## Measurement, Geometry, and Spatial Reasoning

**4.MGSR.3 Extend geometric reasoning to attributes of polygons and/or polyhedrons.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.MGSR.3.1**<br>Classify triangles according to side length (*isosceles*, *equilateral*, *scalene*) and angle measure (*acute*, *obtuse*, *right*, *equiangular*). | 4 M6 Lesson 18-1: Analyze and classify triangles based on side length, angle measures, or both.<br>4 M6 Lesson 19-1: Construct and classify triangles based on given attributes.<br>4 M6 Lesson 20: Sort polygons based on a given rule. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.MGSR.3.2**<br>Classify quadrilaterals in a hierarchy based on their shared attributes. | 4 M6 Lesson 20-1: Analyze hierarchies and identify properties of quadrilaterals.<br>4 M6 Lesson 20-2: Classify trapezoids based on their properties.<br>4 M6 Lesson 20-3: Classify parallelograms based on their properties.<br>4 M6 Lesson 20-4: Classify rectangles and rhombuses based on their properties.<br>4 M6 Lesson 20-5: Classify kites and squares based on their properties.<br>4 M6 Lesson 20-6: Identify quadrilaterals from given properties.<br>4 M6 Lesson 20-7: Classify quadrilaterals in a hierarchy based on properties. |

## Numerical Reasoning

**4.NR.1 Represent and compare numbers using relationships within the base ten number system.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.NR.1.1**<br>Read and write whole numbers through the millions period (0 to 999,999,999) in word, standard, and equations in expanded form. | 4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right.<br>4 M1 Lesson 6-1: Write numbers to 999,999,999 in unit form and expanded form by using place value structure.<br>4 M1 Lesson 6-2: Write numbers to 999,999,999 in standard form and word form. |
| **4.NR.1.2**<br>Estimate sums, differences, products, and quotients of multi-digit whole numbers, using rounding and place value to determine the reasonableness of real-world problem solutions. Write an equation for the estimate. | 4 M1 Lesson 12: Round to the nearest thousand.<br>4 M1 Lesson 13: Round to the nearest ten thousand and hundred thousand.<br>4 M1 Lesson 14: Round multi-digit numbers to any place.<br>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.<br>4 M1 Lesson 16: Add by using the standard algorithm.<br>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.<br>4 M1 Lesson 18: Subtract by using the standard algorithm, decomposing larger units once.<br>4 M1 Lesson 19: Subtract by using the standard algorithm, decomposing larger units up to 3 times.<br>4 M1 Lesson 20: Subtract by using the standard algorithm, decomposing larger units multiple times.<br>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.<br>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.<br>4 M2 Lesson 13: Divide three-digit numbers by one-digit numbers by using an area model.<br>4 M3 Lesson 21: Find whole-number quotients and remainders.<br>4 M3 Lesson 22: Represent, estimate, and solve division word problems.<br>4 M3 Lesson 23: Solve multi-step word problems and interpret remainders.<br>4 M3 Lesson 24: Solve multi-step word problems and assess the reasonableness of solutions. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.NR.1.3**<br>Order whole numbers within 999,999 (no more than 3) in ascending or descending order and record the comparison(s) using symbols for *is less than* (<) and/or *is greater than* (>). | 4 M1 Lesson 9: Compare numbers within 1,000,000 by using >, =, and <. |

## Numerical Reasoning

**4.NR.2 Represent and compare fractions in multiple ways using part-whole relationships.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.NR.2.1**<br>Represent fractions with denominators of 10 and 100 in words, models, and decimal notations. | 4 M5 Lesson 1: Organize, count, and represent a collection of money.<br>4 M5 Lesson 2: Decompose 1 one and express tenths in fraction form and decimal form.<br>4 M5 Lesson 3: Represent tenths as a place value unit.<br>4 M5 Lesson 4: Write mixed numbers in decimal form with tenths.<br>4 M5 Lesson 5: Decompose 1 one and express hundredths in fraction form and decimal form.<br>4 M5 Lesson 6: Represent hundredths as a place value unit.<br>4 M5 Lesson 7: Write mixed numbers in decimal form with hundredths.<br>4 M5 Lesson 8: Represent decimal numbers in expanded form. |
| **4.NR.2.2**<br>Compare decimal numbers to the hundredths using the benchmarks 0, 0.5, and 1.0, concrete area, and linear models. Use the symbols for *is equal to* (=), *is less than* (<), and/or *is greater than* (>). | 4 M5 Lesson 9: Compare measurements expressed as decimal numbers.<br>4 M5 Lesson 10: Use pictorial representations to compare decimal numbers.<br>4 M5 Lesson 11: Compare and order decimal numbers. |
| **4.NR.2.3**<br>Generate equivalent fractions, including fractions greater than 1, using multiple representations. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. | 4 M4 Lesson 8: Generate equivalent fractions with smaller units for unit fractions.<br>4 M4 Lesson 9: Generate equivalent fractions with smaller units for non-unit fractions.<br>4 M4 Lesson 10: Generate equivalent fractions with larger units.<br>4 M4 Lesson 11: Represent equivalent fractions by using tape diagrams, number lines, and multiplication or division.<br>4 M4 Lesson 12: Generate equivalent fractions for fractions greater than 1 and generate equivalent mixed numbers. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.NR.2.4**<br>Represent the composition and decomposition of fractions with the same denominator, including mixed numbers and fractions greater than 1, using multiple representations. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. | 4 M4 Lesson 1: Decompose whole numbers into a sum of unit fractions.<br>4 M4 Lesson 2: Decompose fractions into a sum of unit fractions.<br>4 M4 Lesson 3: Decompose fractions into a sum of fractions.<br>4 M4 Lesson 4: Represent fractions by using various fraction models.<br>4 M4 Lesson 5: Rename fractions greater than 1 as mixed numbers.<br>4 M4 Lesson 6: Rename mixed numbers as fractions greater than 1.<br>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions.<br>4 M4 Lesson 18: Estimate sums and differences of fractions by using benchmarks.<br>4 M4 Lesson 19: Add and subtract fractions with like units.<br>4 M4 Lesson 20: Subtract a fraction from a whole number.<br>4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers.<br>4 M4 Lesson 22: Add two fractions with related units. |
| **4.NR.2.5**<br>Explain and demonstrate how a mixed number is equivalent to a fraction greater than 1 and how a fraction greater than 1 is equivalent to a mixed number. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. | 4 M4 Lesson 1: Decompose whole numbers into a sum of unit fractions.<br>4 M4 Lesson 2: Decompose fractions into a sum of unit fractions.<br>4 M4 Lesson 3: Decompose fractions into a sum of fractions.<br>4 M4 Lesson 4: Represent fractions by using various fraction models.<br>4 M4 Lesson 5: Rename fractions greater than 1 as mixed numbers.<br>4 M4 Lesson 6: Rename mixed numbers as fractions greater than 1.<br>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.NR.2.6**<br>Compare fractions and mixed numbers with like and unlike denominators applying benchmark fractions such as $0, \frac{1}{2}$, and $1$ using the symbols for *is equal to* (=), *is less than* (<), or *is greater than* (>). Limit fractions to denominators of $2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50$, and $100$. | 4 M4 Lesson 12-1: Compare fractions by using the benchmark $\frac{1}{2}$.<br>4 M4 Lesson 13: Compare fractions by using the benchmarks $0, \frac{1}{2}$, and $1$.<br>4 M4 Lesson 13-1: Compare mixed numbers and fractions greater than $1$. |

## Patterns, Algebra, and Functional Reasoning

**4.PAFR.1 Use multiple representations to reason and solve problems involving operational properties of whole numbers and decimals.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.PAFR.1.1**<br>Use a strategy to accurately compute sums and differences of whole numbers up to 100,000 and justify the sum or difference. | 4 M1 Lesson 16: Add by using the standard algorithm.<br>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.<br>4 M1 Lesson 18: Subtract by using the standard algorithm, decomposing larger units once.<br>4 M1 Lesson 19: Subtract by using the standard algorithm, decomposing larger units up to 3 times.<br>4 M1 Lesson 20: Subtract by using the standard algorithm, decomposing larger units multiple times.<br>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.<br>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction. |
| **4.PAFR.1.2**<br>Compute the product of a one-digit whole number times a multiple of 10 (from 10 to 90) and 100 (from 100 to 900) based on place value and properties of operations. | 4 M2 Lesson 1: Multiply multiples of 10 by one-digit numbers by using the associative property of multiplication.<br>4 M2 Lesson 1-1: Multiply by multiples of 10 by using the place value chart.<br>4 M2 Lesson 1-2: Multiply by multiples of 10 by using place value strategies and the associative property.<br>4 M2 Lesson 1-3: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10.<br>4 M3 Lesson 2: Multiply by multiples of 100 and 1,000. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.PAFR.1.3**<br>Decompose numbers by the value of each digit to multiply whole numbers up to four digits by a one-digit number and two 2-digit whole numbers. | 4 M2 Lesson 1: Multiply multiples of 10 by one-digit numbers by using the associative property of multiplication.<br>4 M2 Lesson 4: Multiply by using familiar strategies.<br>4 M2 Lesson 5: Multiply by using place value strategies and the distributive property.<br>4 M2 Lesson 6: Multiply with regrouping by using place value strategies and the distributive property.<br>4 M2 Lesson 7: Multiply by using an area model and the distributive property.<br>4 M2 Lesson 8: Multiply by applying the distributive property and write equations.<br>4 M2 Lesson 9: Solve multiplication word problems.<br>4 M2 Lesson 10: Multiply by applying simplifying strategies.<br>4 M3 Lesson 2: Multiply by multiples of 100 and 1,000.<br>4 M3 Lesson 3: Multiply a two-digit multiple of 10 by a two-digit multiple of 10.<br>4 M3 Lesson 9: Apply place value strategies to multiply three-digit numbers by one-digit numbers.<br>4 M3 Lesson 10: Apply place value strategies to multiply four-digit numbers by one-digit numbers.<br>4 M3 Lesson 11: Represent multiplication by using partial products.<br>4 M3 Lesson 12: Multiply by using various recording methods in vertical form.<br>4 M3 Lesson 13: Multiply two-digit numbers by two-digit multiples of 10.<br>4 M3 Lesson 14: Apply place value strategies to multiply two-digit numbers by two-digit numbers.<br>4 M3 Lesson 15: Multiply with four partial products.<br>4 M3 Lesson 16: Multiply with two partial products.<br>4 M3 Lesson 17: Apply the distributive property to multiply. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.PAFR.1.4**<br>Use a strategy to divide up to a four-digit dividend by a one-digit divisor, with and without remainders. Justify the calculation. | 4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers.<br>4 M2 Lesson 11: Divide by using familiar strategies.<br>4 M2 Lesson 12: Divide two-digit numbers by one-digit numbers by using an area model.<br>4 M2 Lesson 13: Divide three-digit numbers by one-digit numbers by using an area model.<br>4 M2 Lesson 14: Divide two-digit numbers by one-digit numbers by using place value strategies.<br>4 M2 Lesson 15: Divide three-digit numbers by one-digit numbers by using place value strategies.<br>4 M2 Lesson 16: Divide by using the break apart and distribute strategy.<br>4 M3 Lesson 1: Divide multiples of 100 and 1,000.<br>4 M3 Lesson 4: Apply place value strategies to divide hundreds, tens, and ones.<br>4 M3 Lesson 5: Apply place value strategies to divide thousands, hundreds, tens, and ones.<br>4 M3 Lesson 6: Connect pictorial representations of division to long division.<br>4 M3 Lesson 7: Represent division by using partial quotients.<br>4 M3 Lesson 8: Choose and apply a method to divide multi-digit numbers.<br>4 M3 Lesson 21: Find whole-number quotients and remainders.<br>4 M3 Lesson 22: Represent, estimate, and solve division word problems. |

## Patterns, Algebra, and Functional Reasoning

**4.PAFR.2 Use multiple representations to reason and solve problems involving operational properties of fractions.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.PAFR.2.1**<br>Use a strategy to accurately compute sums and differences of fractions with like denominators and justify the reasonableness of the answer. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 25 and 100. | 4 M4 Lesson 1: Decompose whole numbers into a sum of unit fractions.<br>4 M4 Lesson 2: Decompose fractions into a sum of unit fractions.<br>4 M4 Lesson 3: Decompose fractions into a sum of fractions.<br>4 M4 Lesson 4: Represent fractions by using various fraction models.<br>4 M4 Lesson 5: Rename fractions greater than 1 as mixed numbers.<br>4 M4 Lesson 6: Rename mixed numbers as fractions greater than 1.<br>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions.<br>4 M4 Lesson 18: Estimate sums and differences of fractions by using benchmarks.<br>4 M4 Lesson 19: Add and subtract fractions with like units.<br>4 M4 Lesson 20: Subtract a fraction from a whole number.<br>4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers.<br>4 M4 Lesson 22: Add two fractions with related units.<br>4 M4 Lesson 23: Add a fraction to a mixed number.<br>4 M4 Lesson 24: Add a mixed number to a mixed number.<br>4 M4 Lesson 25: Subtract a fraction from a mixed number, part 1.<br>4 M4 Lesson 26: Subtract a fraction from a mixed number, part 2.<br>4 M4 Lesson 27: Subtract a mixed number from a mixed number.<br>4 M4 Lesson 28: Represent and solve word problems with mixed numbers by using drawings and equations.<br>4 M4 Lesson 29: Solve problems by using data from a line plot.<br>4 M4 Lesson 30: Represent data on a line plot. |
| **4.PAFR.2.2**<br>Use fraction and decimal equivalencies to add and subtract tenths and hundredths, to include mixed numbers and fractions greater than 1. | 4 M5 Lesson 12: Apply fraction equivalence to add tenths and hundredths.<br>4 M5 Lesson 13: Apply fraction equivalence to add mixed numbers with tenths and hundredths.<br>4 M5 Lesson 14: Solve word problems with tenths and hundredths. |

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.PAFR.2.3**<br>Represent and compute the product of a whole number times a unit fraction. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 25 and 100. | 4 M4 Lesson 31: Decompose non-unit fractions into a product of a whole number and a unit fraction.<br>4 M4 Lesson 32: Multiply a fraction by a whole number by using the associative property.<br>4 M4 Lesson 33: Solve word problems involving multiplication of a fraction by a whole number.<br>4 M4 Lesson 34: Multiply a mixed number by a whole number by using the distributive property. |
| **4.PAFR.2.4**<br>Interpret a fraction as an equal sharing division situation, where a quantity (the numerator) is divided into equal parts (the denominator) to include real-world situations. | 4 M4 Lesson 34-1: Interpret a fraction as division.<br>4 M4 Lesson 34-2: Interpret a fraction as division by writing remainders as fractions.<br>4 M4 Lesson 34-3: Represent fractions as division by using models.<br>4 M4 Lesson 34-4: Solve word problems involving division and fractions. |

## Patterns, Algebra, and Functional Reasoning

**4.PAFR.3 Use reasoning to represent and solve algebraic and numerical situations.**

| South Carolina College- and Career-Ready Mathematics Standards | Aligned Components of *Eureka Math²* |
|---|---|
| **4.PAFR.3.1**<br>Find all factor pairs for a whole number in the range $1–50$. Determine whether the whole number is prime or composite. | 4 M2 Lesson 21: Find factor pairs for numbers up to $100$ and use factors to identify numbers as prime or composite.<br>4 M2 Lesson 22: Use division and the associative property of multiplication to find factors.<br>4 M2 Lesson 23: Determine whether a whole number is a multiple of another number.<br>4 M2 Lesson 24: Recognize that a number is a multiple of each of its factors.<br>4 M2 Lesson 25: Explore properties of prime and composite numbers up to $100$ by using multiples. |
| **4.PAFR.3.2**<br>Describe and extend a numerical pattern that follows a rule using function tables and real-world situations. | 4 M2 Lesson 26: Use relationships within a pattern to find an unknown term in the sequence. |
| **4.PAFR.3.3**<br>Solve real-world situations involving multiplicative comparison situations and write equations to represent the problem using a variable for the unknown. | 4 M1 Lesson 1: Interpret multiplication as multiplicative comparison.<br>4 M1 Lesson 2: Solve multiplicative comparison problems with unknowns in various positions.<br>4 M1 Lesson 3: Describe relationships between measurements by using multiplicative comparison.<br>4 M1 Lesson 4: Represent the composition of larger units of money by using multiplicative comparison.<br>4 M2 Lesson 9: Solve multiplication word problems.<br>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons. |
| **4.PAFR.3.4**<br>Solve two-step, real-world situations using the four operations involving whole number answers. Represent the problem using an equation with a variable as the unknown in any position. | 4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.<br>4 M1 Lesson 16: Add by using the standard algorithm.<br>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.<br>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.<br>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.<br>4 M3 Lesson 21: Find whole-number quotients and remainders.<br>4 M3 Lesson 22: Represent, estimate, and solve division word problems.<br>4 M3 Lesson 23: Solve multi-step word problems and interpret remainders.<br>4 M3 Lesson 24: Solve multi-step word problems and assess the reasonableness of solutions. |