
Grade 4 | Alabama Standards for Mathematical Content (2019) Correlation to *Eureka Math*²® (2027)

*Eureka Math*² is a research-proven math curriculum that empowers teachers to center instructional techniques on student success. Teachers can foster more “aha!” learning moments by providing the support needed for all learners to build a more confident math mindset.

This *Eureka Math*² edition builds on a strong foundation of effective instruction. It provides teachers with guidance on delivering rigorous instruction that honors student choice and encourages confident problem-solving.

*Eureka Math*² carefully sequences mathematical content to maximize vertical alignment from kindergarten through high school. This kind of sequencing has proven to be essential in students’ mastery of math.

Teachability

*Eureka Math*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 into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning (UDL) principles so all learners can access the mathematics and take on challenging math concepts. UDL, Differentiation, and Multilingual Learner supports are built into the instructional design and are clearly identified in the *Teach* book.

The curriculum also carries a focus on readability. By eliminating unnecessary words and using clear sentences, the *Eureka Math*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.

Math Confidence

*Eureka Math*² fosters a classroom culture of learning by encouraging student-led discourse and cognitive engagement that results in confident learners. By leveraging consistent models, routines, and progressions, teachers can remove barriers and allow all students an avenue to success. Within the digital platform, each grade includes wordless videos and digital interactives that spark students’ curiosity and help them make conceptual connections. Using the *Learn* books, students wonder, explore, and make sense of mathematics, which helps them develop a strong, positive mathematical identity.

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

Operations and Algebraic Thinking

Solve problems with whole numbers using the four operations.

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<p>4.OA.1</p> <p>Interpret and write equations for multiplicative comparisons.</p>	<p>4 M1 Lesson 1: Interpret multiplication as multiplicative comparison.</p> <p>4 M1 Lesson 2: Solve multiplicative comparison problems with unknowns in various positions.</p> <p>4 M1 Lesson 3: Describe relationships between measurements by using multiplicative comparison.</p> <p>4 M1 Lesson 4: Represent the composition of larger units of money by using multiplicative comparison.</p> <p>4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right.</p>
<p>4.OA.2</p> <p>Solve word problems involving multiplicative comparison using drawings and write equations to represent the problem, using a symbol for the unknown number.</p>	<p>4 M1 Lesson 1: Interpret multiplication as multiplicative comparison.</p> <p>4 M1 Lesson 2: Solve multiplicative comparison problems with unknowns in various positions.</p> <p>4 M1 Lesson 3: Describe relationships between measurements by using multiplicative comparison.</p> <p>4 M1 Lesson 4: Represent the composition of larger units of money by using multiplicative comparison.</p> <p>4 M2 Lesson 9: Solve multiplication word problems.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p>
<p>4.OA.3</p> <p>Determine and justify solutions for multi-step word problems, including problems where remainders must be interpreted.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>4.OA.3.a</p> <p>Write equations to show solutions for multi-step word problems with a letter standing for the unknown quantity.</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 16: Add by using the standard algorithm.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M3 Lesson 21: Find whole-number quotients and remainders.</p> <p>4 M3 Lesson 22: Represent estimate, and solve division word problems.</p> <p>4 M3 Lesson 23: Solve multi-step word problems and interpret remainders.</p> <p>4 M3 Lesson 24: Solve multi-step word problems and assess the reasonableness of solutions.</p>
<p>4.OA.3.b</p> <p>Determine reasonableness of answers for multi-step word problems, using mental computation and estimation strategies including rounding.</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 16: Add by using the standard algorithm.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M3 Lesson 21: Find whole-number quotients and remainders.</p> <p>4 M3 Lesson 22: Represent estimate, and solve division word problems.</p> <p>4 M3 Lesson 23: Solve multi-step word problems and interpret remainders.</p> <p>4 M3 Lesson 24: Solve multi-step word problems and assess the reasonableness of solutions.</p>

Operations and Algebraic Thinking

Gain familiarity with factors and multiples.

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<p>4.OA.4</p> <p>For whole numbers in the range 1 to 100, find all factor pairs, identifying a number as a multiple of each of its factors.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>4.OA.4.a</p> <p>Determine whether a whole number in the range 1 to 100 is a multiple of a given one-digit number.</p>	<p>4 M2 Lesson 23: Determine whether a whole number is a multiple of another number.</p> <p>4 M2 Lesson 24: Recognize that a number is a multiple of each of its factors.</p> <p>4 M2 Lesson 25: Explore properties of prime and composite numbers up to 100 by using multiples.</p>
<p>4.OA.4.b</p> <p>Determine whether a whole number in the range 1 to 100 is prime or composite.</p>	<p>4 M2 Lesson 21: Find factor pairs for numbers up to 100 and use factors to identify numbers as prime or composite.</p> <p>4 M2 Lesson 22: Use division and the associative property of multiplication to find factors.</p> <p>4 M2 Lesson 23: Determine whether a whole number is a multiple of another number.</p> <p>4 M2 Lesson 24: Recognize that a number is a multiple of each of its factors.</p> <p>4 M2 Lesson 25: Explore properties of prime and composite numbers up to 100 by using multiples.</p>

Operations and Algebraic Thinking

Generate and analyze patterns.

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<p>4.OA.5</p> <p>Generate and analyze a number or shape pattern that follows a given rule.</p>	<p>4 M2 Lesson 26: Use relationships within a pattern to find an unknown term in the sequence.</p>

Operations with Numbers: Base Ten

Generalize place value understanding for multi-digit whole numbers.

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<p>4.NBT.6</p> <p>Using models and quantitative reasoning, explain that in a multi-digit whole number, a digit in any place represents ten times what it represents in the place to its right.</p>	<p>4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right.</p>
<p>4.NBT.7</p> <p>Read and write multi-digit whole numbers using standard form, word form, and expanded form.</p>	<p>4 M1 Lesson 5: Organize, count, and represent a collection of objects.</p> <p>4 M1 Lesson 7: Write numbers to 1,000,000 in unit form and expanded form by using place value structure.</p> <p>4 M1 Lesson 8: Write numbers to 1,000,000 in standard form and word form.</p> <p>4 M1 Lesson 10: Name numbers by using place value understanding.</p> <p>4 M1 Lesson 11: Find 1, 10, and 100 thousand more than and less than a given number.</p>

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<p>4.NBT.8</p> <p>Use place value understanding to compare two multi-digit numbers using $>$, $=$, and $<$ symbols.</p>	<p>4 M1 Lesson 9: Compare numbers within 1,000,000 by using $>$, $=$, and $<$.</p>
<p>4.NBT.9</p> <p>Round multi-digit whole numbers to any place using place value understanding.</p>	<p>4 M1 Lesson 12: Round to the nearest thousand.</p> <p>4 M1 Lesson 13: Round to the nearest ten thousand and hundred thousand.</p> <p>4 M1 Lesson 14: Round multi-digit numbers to any place.</p> <p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p>

Operations with Numbers: Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers.

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<p>4.NBT.10</p> <p>Use place value strategies to fluently add and subtract multi-digit whole numbers and connect strategies to the standard algorithm.</p>	<p>4 M1 Lesson 16: Add by using the standard algorithm.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 18: Subtract by using the standard algorithm, decomposing larger units once.</p> <p>4 M1 Lesson 19: Subtract by using the standard algorithm, decomposing larger units up to 3 times.</p> <p>4 M1 Lesson 20: Subtract by using the standard algorithm, decomposing larger units multiple times.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p>

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<p>4.NBT.11</p> <p>Find the product of two factors (up to four digits by a one-digit number and two two-digit numbers), using strategies based on place value and the properties of operations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>
<p>4.NBT.11.a</p> <p>Illustrate and explain the product of two factors using equations, rectangular arrays, and area models.</p>	<p>4 M2 Lesson 1: Multiply multiples of 10 by one-digit numbers by using the associative property of multiplication.</p> <p>4 M2 Lesson 4: Multiply by using familiar strategies.</p> <p>4 M2 Lesson 5: Multiply by using place value strategies and the distributive property.</p> <p>4 M2 Lesson 6: Multiply with regrouping by using place value strategies and the distributive property.</p> <p>4 M2 Lesson 7: Multiply by using an area model and the distributive property.</p> <p>4 M2 Lesson 8: Multiply by applying the distributive property and write equations.</p> <p>4 M2 Lesson 9: Solve multiplication word problems.</p> <p>4 M2 Lesson 10: Multiply by applying simplifying strategies.</p> <p>4 M3 Lesson 2: Multiply by multiples of 100 and 1,000.</p> <p>4 M3 Lesson 3: Multiply a two-digit multiple of 10 by a two-digit multiple of 10.</p> <p>4 M3 Lesson 9: Apply place value strategies to multiply three-digit numbers by one-digit numbers.</p> <p>4 M3 Lesson 10: Apply place value strategies to multiply four-digit numbers by one-digit numbers.</p> <p>4 M3 Lesson 11: Represent multiplication by using partial products.</p> <p>4 M3 Lesson 12: Multiply by using various recording methods in vertical form.</p> <p>4 M3 Lesson 13: Multiply two-digit numbers by two-digit multiples of 10.</p> <p>4 M3 Lesson 14: Apply place value strategies to multiply two-digit numbers by two-digit numbers.</p> <p>4 M3 Lesson 15: Multiply with four partial products.</p> <p>4 M3 Lesson 16: Multiply with two partial products.</p> <p>4 M3 Lesson 17: Apply the distributive property to multiply.</p>

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<p>4.NBT.12</p> <p>Use strategies based on place value, properties of operations, and/or the relationship between multiplication and division to find whole-number quotients and remainders with one-digit divisors and up to four-digit dividends.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>
<p>4.NBT.12.a</p> <p>Illustrate and/or explain quotients using equations, rectangular arrays, and/or area models.</p>	<p>4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers.</p> <p>4 M2 Lesson 11: Divide by using familiar strategies.</p> <p>4 M2 Lesson 12: Divide two-digit numbers by one-digit numbers by using an area model.</p> <p>4 M2 Lesson 13: Divide three-digit numbers by one-digit numbers by using an area model.</p> <p>4 M2 Lesson 14: Divide two-digit numbers by one-digit numbers by using place value strategies.</p> <p>4 M2 Lesson 15: Divide three-digit numbers by one-digit numbers by using place value strategies.</p> <p>4 M2 Lesson 16: Divide by using the break apart and distribute strategy.</p> <p>4 M3 Lesson 1: Divide multiples of 100 and 1,000.</p> <p>4 M3 Lesson 4: Apply place value strategies to divide hundreds, tens, and ones.</p> <p>4 M3 Lesson 5: Apply place value strategies to divide thousands, hundreds, tens, and ones.</p> <p>4 M3 Lesson 6: Connect pictorial representations of division to long division.</p> <p>4 M3 Lesson 7: Represent division by using partial quotients.</p> <p>4 M3 Lesson 8: Choose and apply a method to divide multi-digit numbers.</p> <p>4 M3 Lesson 21: Find whole-number quotients and remainders.</p> <p>4 M3 Lesson 22: Represent, estimate, and solve division word problems.</p>

Operations with Numbers: Fractions

Extend understanding of fraction equivalence and ordering.

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<p>4.NF.13</p> <p>Using area and length fraction models, explain why one fraction is equivalent to another, taking into account that the number and size of the parts differ even though the two fractions themselves are the same size.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>
<p>4.NF.13.a</p> <p>Apply principles of fraction equivalence to recognize and generate equivalent fractions.</p>	<p>4 M4 Lesson 8: Generate equivalent fractions with smaller units for unit fractions.</p> <p>4 M4 Lesson 9: Generate equivalent fractions with smaller units for non-unit fractions.</p> <p>4 M4 Lesson 10: Generate equivalent fractions with larger units.</p> <p>4 M4 Lesson 11: Represent equivalent fractions by using tape diagrams, number lines, and multiplication or division.</p> <p>4 M4 Lesson 12: Generate equivalent fractions for fractions greater than 1 and generate equivalent mixed numbers.</p>
<p>4.NF.14</p> <p>Compare two fractions with different numerators and different denominators using concrete models, benchmarks ($0, \frac{1}{2}, 1$), common denominators, and/or common numerators, recording the comparisons with symbols $>$, $=$, or $<$, and justifying the conclusions.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>

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<p>4.NF.14.a</p> <p>Explain that comparison of two fractions is valid only when the two fractions refer to the same whole.</p>	<p>4 M4 Lesson 13: Compare fractions by using the benchmarks, 0, $\frac{1}{2}$, and 1.</p> <p>4 M4 Lesson 14: Compare fractions with related denominators.</p> <p>4 M4 Lesson 15: Compare fractions with related numerators.</p> <p>4 M4 Lesson 16: Generate a common numerator or denominator to compare fractions.</p> <p>4 M4 Lesson 17: Apply fraction comparison strategies to compare fractions greater than 1.</p>

Operations with Numbers: Fractions

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

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<p>4.NF.15</p> <p>Model and justify decompositions of fractions and explain addition and subtraction of fractions as joining or separating parts referring to the same whole.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>4.NF.15.a</p> <p>Decompose a fraction as a sum of unit fractions and as a sum of fractions with the same denominator in more than one way using area models, length models, and equations.</p>	<p>4 M4 Lesson 1: Decompose whole numbers into a sum of unit fractions.</p> <p>4 M4 Lesson 2: Decompose fractions into a sum of unit fractions.</p> <p>4 M4 Lesson 3: Decompose fractions into a sum of fractions.</p> <p>4 M4 Lesson 4: Represent fractions by using various fraction models.</p> <p>4 M4 Lesson 5: Rename fractions greater than 1 as mixed numbers.</p> <p>4 M4 Lesson 6: Rename mixed numbers as fractions greater than 1.</p> <p>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions.</p> <p>4 M4 Lesson 18: Estimate sums and differences of fractions by using benchmarks.</p> <p>4 M4 Lesson 19: Add and subtract fractions with like units.</p> <p>4 M4 Lesson 20: Subtract a fraction from a whole number.</p> <p>4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers.</p> <p>4 M4 Lesson 22: Add two fractions with related units.</p>
<p>4.NF.15.b</p> <p>Add and subtract fractions and mixed numbers with like denominators using fraction equivalence, properties of operations, and the relationship between addition and subtraction.</p>	<p>4 M4 Lesson 23: Add a fraction to a mixed number.</p> <p>4 M4 Lesson 24: Add a mixed number to a mixed number.</p> <p>4 M4 Lesson 25: Subtract a fraction from a mixed number, part 1.</p> <p>4 M4 Lesson 26: Subtract a fraction from a mixed number, part 2.</p> <p>4 M4 Lesson 27: Subtract a mixed number from a mixed number.</p>

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<p>4.NF.15.c</p> <p>Solve word problems involving addition and subtraction of fractions and mixed numbers having like denominators, using drawings, visual fraction models, and equations to represent the problem.</p>	<p>4 M4 Lesson 18: Estimate sums and differences of fractions by using benchmarks.</p> <p>4 M4 Lesson 20: Subtract a fraction from a whole number.</p> <p>4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers.</p> <p>4 M4 Lesson 24: Add a mixed number to a mixed number.</p> <p>4 M4 Lesson 27: Subtract a mixed number from a mixed number.</p> <p>4 M4 Lesson 28: Represent and solve word problems with mixed numbers by using drawings and equations.</p>
<p>4.NF.16</p> <p>Apply and extend previous understandings of multiplication to multiply a whole number times a fraction.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>4.NF.16.a</p> <p>Model and explain how a non-unit fraction can be represented by a whole number times the unit fraction.</p>	<p>4 M4 Lesson 31: Decompose non-unit fractions into a product of a whole number and a unit fraction.</p>
<p>4.NF.16.b</p> <p>Extend previous understanding of multiplication to multiply a whole number times any fraction less than one.</p>	<p>4 M4 Lesson 32: Multiply a fraction by a whole number by using the associative property.</p> <p>4 M4 Lesson 33: Solve word problems involving multiplication of a fraction by a whole number.</p> <p>4 M4 Lesson 34: Multiply a mixed number by a whole number by using the distributive property.</p>

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<p>4.NF.16.c</p> <p>Solve word problems involving multiplying a whole number times a fraction using visual fraction models and equations to represent the problem.</p>	<p>4 M4 Lesson 33: Solve word problems involving multiplication of a fraction by a whole number.</p>

Operations with Numbers: Fractions

Understand decimal notation for fractions, and compare decimal fractions.

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<p>4.NF.17</p> <p>Express, model, and explain the equivalence between fractions with denominators of 10 and 100.</p>	<p>4 M5 Lesson 5: Decompose 1 one and express hundredths in fraction form and decimal form.</p> <p>4 M5 Lesson 6: Represent hundredths as a place value unit.</p> <p>4 M5 Lesson 7: Write mixed numbers in decimal form with hundredths.</p> <p>4 M5 Lesson 8: Represent decimal numbers in expanded form.</p>
<p>4.NF.17.a</p> <p>Use fraction equivalency to add two fractions with denominators of 10 and 100.</p>	<p>4 M5 Lesson 12: Apply fraction equivalence to add tenths and hundredths.</p> <p>4 M5 Lesson 13: Apply fraction equivalence to add mixed numbers with tenths and hundredths.</p> <p>4 M5 Lesson 14: Solve word problems with tenths and hundredths.</p>

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<p>4.NF.18</p> <p>Use models and decimal notation to represent fractions with denominators of 10 and 100.</p>	<p>4 M5 Lesson 1: Organize, count, and represent a collection of money.</p> <p>4 M5 Lesson 2: Decompose 1 one and express tenths in fraction form and decimal form.</p> <p>4 M5 Lesson 3: Represent tenths as a place value unit.</p> <p>4 M5 Lesson 4: Write mixed numbers in decimal form with tenths.</p> <p>4 M5 Lesson 5: Decompose 1 one and express hundredths in fraction form and decimal form.</p> <p>4 M5 Lesson 6: Represent hundredths as a place value unit.</p> <p>4 M5 Lesson 7: Write mixed numbers in decimal form with hundredths.</p> <p>4 M5 Lesson 8: Represent decimal numbers in expanded form.</p>
<p>4.NF.19</p> <p>Use visual models and reasoning to compare two decimals to hundredths (referring to the same whole), recording comparisons using symbols $>$, $=$, or $<$, and justifying the conclusions.</p>	<p>4 M5 Lesson 9: Compare measurements expressed as decimal numbers.</p> <p>4 M5 Lesson 10: Use pictorial representations to compare decimal numbers.</p> <p>4 M5 Lesson 11: Compare and order decimal numbers.</p>

Data Analysis

Represent and interpret data.

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<p>4.DA.20</p> <p>Interpret data in graphs (picture, bar, and line plots) to solve problems using numbers and operations.</p>	<p>3 Data Talk: Green Power</p> <p>3 Data Talk: Mama Bears</p> <p>3 Data Talk: How Loud is Too Loud?</p> <p>3 Data Talk: Breathtaking Animals</p> <p>3 Data Talk: Disappearing Plants and Animals</p> <p>4 Data Talk: Wind Turbines Over Time</p> <p>4 Data Talk: Oh, Babies!</p> <p>4 Data Talk: Missed Field Goals in Basketball</p> <p>4 Data Talk: Where Do People Work?</p> <p>4 M4 Lesson 29: Solve problems by using data from a line plot.</p> <p>4 M4 Lesson 30: Represent data on a line plot.</p>
<p>4.DA.20.a</p> <p>Create a line plot to display a data set of measurements in fractions of a unit $\left(\frac{1}{2}, \frac{1}{4}, \frac{1}{8}\right)$.</p>	<p>4 M4 Lesson 30: Represent data on a line plot.</p>
<p>4.DA.20.b</p> <p>Solve problems involving addition and subtraction of fractions using information presented in line plots.</p>	<p>4 M4 Lesson 29: Solve problems by using data from a line plot.</p> <p>4 M4 Lesson 30: Represent data on a line plot.</p>

Measurement

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

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<p>4.M.21</p> <p>Select and use an appropriate unit of measurement for a given attribute (length, mass, liquid volume, time) within one system of units: metric—km, m, cm; kg, g, l, ml; customary—lb, oz; time—hr, min, sec.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>
<p>4.M.21.a</p> <p>Within one system of units, express measurements of a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.</p>	<p>4 M1 Lesson 23: Express metric measurements of length in terms of smaller units.</p> <p>4 M1 Lesson 24: Express metric measurements of mass and liquid volume in terms of smaller units.</p> <p>4 M2 Lesson 17: Express measurements of length in terms of smaller units.</p> <p>4 M3 Lesson 18: Express units of time in terms of smaller units.</p> <p>4 M3 Lesson 19: Express customary measurements of weight in terms of smaller units.</p> <p>4 M3 Lesson 20: Express customary measurements of liquid volume in terms of smaller units.</p>
<p>4.M.22</p> <p>Use the four operations to solve measurement word problems with distance, intervals of time, liquid volume, mass of objects, and money.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>4.M.22.a</p>	<p>Solve measurement problems involving simple fractions or decimals.</p>	<p>4 M2 Lesson 17: Express measurements of length in terms of smaller units.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p> <p>4 M3 Lesson 18: Express units of time in terms of smaller units.</p> <p>4 M3 Lesson 19: Express customary measurements of weight in terms of smaller units.</p> <p>4 M3 Lesson 20: Express customary measurements of liquid volume in terms of smaller units.</p> <p>4 M4 Lesson 18: Estimate sums and differences of fractions by using benchmarks.</p> <p>4 M4 Lesson 20: Subtract a fraction from a whole number.</p> <p>4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers.</p> <p>4 M4 Lesson 24: Add a mixed number to a mixed number.</p> <p>4 M4 Lesson 27: Subtract a mixed number from a mixed number.</p> <p>4 M4 Lesson 28: Represent and solve word problems with mixed numbers by using drawings and equations.</p> <p>4 M4 Lesson 33: Solve word problems involving multiplication of a fraction by a whole number.</p> <p>4 M5 Lesson 14: Solve word problems with tenths and hundredths.</p>
<p>4.M.22.b</p>	<p>Solve measurement problems that require expressing measurements given in a larger unit in terms of a smaller unit.</p>	<p>4 M2 Lesson 17: Express measurements of length in terms of smaller units.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p> <p>4 M3 Lesson 18: Express units of time in terms of smaller units.</p> <p>4 M3 Lesson 19: Express customary measurements of weight in terms of smaller units.</p> <p>4 M3 Lesson 20: Express customary measurements of liquid volume in terms of smaller units.</p>

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<p>4.M.22.c</p> <p>Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p>	<p>4 M2 Lesson 17: Express measurements of length in terms of smaller units.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p> <p>4 M3 Lesson 18: Express units of time in terms of smaller units.</p> <p>4 M3 Lesson 19: Express customary measurements of weight in terms of smaller units.</p> <p>4 M3 Lesson 20: Express customary measurements of liquid volume in terms of smaller units.</p> <p>4 M4 Lesson 28: Represent and solve word problems with mixed numbers by using drawings and equations.</p> <p>4 M5 Lesson 14: Solve word problems with tenths and hundredths.</p>
<p>4.M.23</p> <p>Apply area and perimeter formulas for rectangles in real-world and mathematical situations.</p>	<p>4 M2 Lesson 3: Investigate and use a formula for the area of a rectangle.</p> <p>4 M2 Lesson 7: Multiply by using an area model and the distributive property.</p> <p>4 M2 Lesson 18: Investigate and use formulas for the perimeter of a rectangle.</p> <p>4 M2 Lesson 19: Apply area and perimeter formulas to solve problems.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p>

Measurement

Geometric measurement: understand concepts of angle and measure angles.

Alabama Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i> ²
<p>4.M.24</p> <p>Identify an angle as a geometric shape formed wherever two rays share a common endpoint.</p>	<p>4 M6 Lesson 7: Explore angles as fractional turns through a circle.</p> <p>4 M6 Lesson 8: Use a circular protractor to recognize a 1° angle as a turn through $\frac{1}{360}$ of a circle.</p> <p>4 M6 Lesson 9: Identify and measure angles as turns and recognize them in various contexts.</p> <p>4 M6 Lesson 10: Use 180° protractors to measure angles.</p> <p>4 M6 Lesson 11: Estimate and measure angles with a 180° protractor.</p>

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<p>4.M.25</p> <p>Use a protractor to measure angles in whole-number degrees and sketch angles of specified measure.</p>	<p>4 M6 Lesson 7: Explore angles as fractional turns through a circle.</p> <p>4 M6 Lesson 8: Use a circular protractor to recognize a 1° angle as a turn through $\frac{1}{360}$ of a circle.</p> <p>4 M6 Lesson 9: Identify and measure angles as turns and recognize them in various contexts.</p> <p>4 M6 Lesson 10: Use 180° protractors to measure angles.</p> <p>4 M6 Lesson 11: Estimate and measure angles with a 180° protractor.</p> <p>4 M6 Lesson 12: Use a protractor to draw angles up to 180°.</p>
<p>4.M.26</p> <p>Decompose an angle into non-overlapping parts to demonstrate that the angle measure of the whole is the sum of the angle measures of the parts.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>
<p>4.M.26.a</p> <p>Solve addition and subtraction problems on a diagram to find unknown angles in real-world or mathematical problems.</p>	<p>4 M6 Lesson 13: Decompose angles by using pattern blocks.</p> <p>4 M6 Lesson 14: Find unknown angle measures within right and straight angles.</p> <p>4 M6 Lesson 15: Find unknown angle measures within a decomposed angle of up to 180°.</p> <p>4 M6 Lesson 16: Find unknown angle measures around a point.</p>

Geometry

Draw and identify lines and angles, and identify shapes by properties of their lines and angles.

Alabama Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i> ²
<p>4.G.27</p> <p>Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines, and identify these in two-dimensional figures.</p>	<p>4 M6 Lesson 1: Identify and draw points, lines, line segments, rays, and angles.</p> <p>4 M6 Lesson 2: Identify right, acute, obtuse, and straight angles.</p> <p>4 M6 Lesson 3: Draw right, acute, obtuse, and straight angles.</p> <p>4 M6 Lesson 4: Identify, define, and draw perpendicular lines.</p> <p>4 M6 Lesson 5: Identify, define, and draw parallel lines.</p> <p>4 M6 Lesson 6: Relate geometric figures to a real-world context.</p> <p>4 M6 Lesson 10: Use 180° protractors to measure angles.</p> <p>4 M6 Lesson 11: Estimate and measure angles with a 180° protractor.</p> <p>4 M6 Lesson 12: Use a protractor to draw angles up to 180°.</p> <p>4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both.</p> <p>4 M6 Lesson 19: Construct and classify triangles based on given attributes.</p> <p>4 M6 Lesson 20: Sort polygons based on a given rule.</p>
<p>4.G.28</p> <p>Identify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.</p>	<p>4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both.</p> <p>4 M6 Lesson 19: Construct and classify triangles based on given attributes.</p> <p>4 M6 Lesson 20: Sort polygons based on a given rule.</p>
<p>4.G.28.a</p> <p>Describe right triangles as a category, and identify right triangles.</p>	<p>4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both.</p> <p>4 M6 Lesson 19: Construct and classify triangles based on given attributes.</p>

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<p>4.G.29 Define a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsection.</i></p>
<p>4.G.29.a Identify line-symmetric figures and draw lines of symmetry.</p>	<p>4 M6 Lesson 17: Recognize, identify, and draw lines of symmetry.</p>