
Grade 6 | Minnesota K–12 Academic Standards in Mathematics Correlation to *Eureka Math*²®

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

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

Teachability

*Eureka 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.

Number & Operation

Read, write, represent and compare positive rational numbers expressed as fractions, decimals, percents and ratios; write positive integers as products of factors; use these representations in real-world and mathematical situations.

Minnesota K–12 Academic Standards in Mathematics

Aligned Components of *Eureka Math*²

<p>6.1.1.1</p> <p>Locate positive rational numbers on a number line and plot pairs of positive rational numbers on a coordinate grid.</p>	<p>4 M4 Topic A: Fraction Decomposition and Equivalence</p> <p>4 M5 Lesson 2: Decompose 1 one and express tenths in fraction form and decimal form.</p>
<p>6.1.1.2</p> <p>Compare positive rational numbers represented in various forms. Use the symbols $<$, $=$ and $>$.</p>	<p>4 M4 Topic C: Compare Fractions</p> <p>5 M4 Lesson 6: Compare decimal numbers to the thousandths place.</p>
<p>6.1.1.3</p> <p>Understand that percent represents parts out of 100 and ratios to 100.</p>	<p>6 M1 Topic E: Percents</p>
<p>6.1.1.4</p> <p>Determine equivalences among fractions, decimals and percents; select among these representations to solve problems.</p>	<p>6 M1 Topic E: Percents</p>
<p>6.1.1.5</p> <p>Factor whole numbers; express a whole number as a product of prime factors with exponents.</p>	<p>6 M2 Lesson 3: The Greatest Common Factor</p> <p>6 M4 Lesson 3: Exploring Exponents</p>

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<p>6.1.1.6</p> <p>Determine greatest common factors and least common multiples. Use common factors and common multiples to calculate with fractions and find equivalent fractions.</p>	<p>6 M2 Topic A: Factors, Multiples, and Divisibility</p> <p>6 M4 Lesson 13: The Distributive Property</p> <p>6 M4 Lesson 14: Using the Distributive Property to Factor Expressions</p>
<p>6.1.1.7</p> <p>Convert between equivalent representations of positive rational numbers.</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>

Number & Operation

Understand the concept of ratio and its relationship to fractions and to the multiplication and division of whole numbers. Use ratios to solve real-world and mathematical problems.

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Aligned Components of *Eureka Math*²

<p>6.1.2.1</p> <p>Identify and use ratios to compare quantities; understand that comparing quantities using ratios is not the same as comparing quantities using subtraction.</p>	<p>6 M1 Topic A: Ratios</p> <p>6 M1 Topic B: Collections of Equivalent Ratios</p> <p>6 M1 Topic C: Comparing Ratio Relationships</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p>
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<p>6.1.2.2</p> <p>Apply the relationship between ratios, equivalent fractions and percents to solve problems in various contexts, including those involving mixtures and concentrations.</p>	<p>6 M1 Topic A: Ratios</p> <p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M1 Topic E: Percents</p> <p>6 M4 Lesson 22: Relationship Between Two Variables</p> <p>6 M4 Lesson 23: Graphs of Ratio Relationships</p>
<p>6.1.2.3</p> <p>Determine the rate for ratios of quantities with different units.</p>	<p>6 M1 Lesson 15: The Value of the Ratio</p> <p>6 M1 Topic D: Rates</p>
<p>6.1.2.4</p> <p>Use reasoning about multiplication and division to solve ratio and rate problems.</p>	<p>6 M1 Lesson 1: Jars of Jelly Beans</p> <p>6 M1 Lesson 3: Ratios and Tape Diagrams</p> <p>6 M1 Lesson 4: Exploring Ratios by Making Batches</p> <p>6 M1 Lesson 5: Equivalent Ratios</p> <p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M4 Lesson 22: Relationship Between Two Variables</p> <p>6 M4 Lesson 23: Graphs of Ratio Relationships</p>

Number & Operation

Multiply and divide decimals, fractions and mixed numbers; solve real-world and mathematical problems using arithmetic with positive rational numbers.

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<p>6.1.3.1</p> <p>Multiply and divide decimals and fractions, using efficient and generalizable procedures, including standard algorithms.</p>	<p>5 M3 Topic B: Multiplication of Fractions</p> <p>5 M3 Topic C: Division with a Unit Fraction and a Whole Number</p> <p>5 M4 Topic C: Multiplication of Decimal Numbers</p> <p>5 M4 Topic D: Division of Decimal Numbers</p> <p>5 M5 Lesson 12: Multiply mixed numbers.</p> <p>6 M2 Topic B: Dividing Fractions</p> <p>6 M2 Topic C: Dividing Fractions Fluently</p>
<p>6.1.3.2</p> <p>Use the meanings of fractions, multiplication, division and the inverse relationship between multiplication and division to make sense of procedures for multiplying and dividing fractions.</p>	<p>6 M2 Topic B: Dividing Fractions</p> <p>6 M2 Topic C: Dividing Fractions Fluently</p>
<p>6.1.3.3</p> <p>Calculate the percent of a number and determine what percent one number is of another number to solve problems in various contexts.</p>	<p>6 M1 Topic E: Percents</p>

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<p>6.1.3.4</p> <p>Solve real-world and mathematical problems requiring arithmetic with decimals, fractions and mixed numbers.</p>	<p>5 M2 Topic C: Addition and Subtraction of Fractions, Whole Numbers, and Mixed Numbers</p> <p>5 M2 Lesson 17: Solve problems by equally redistributing a total amount.</p> <p>5 M3 Lesson 12: Divide a nonzero whole number by a unit fraction to find the number of groups.</p> <p>5 M3 Lesson 13: Divide a nonzero whole number by a unit fraction to find the size of the group.</p> <p>5 M3 Lesson 14: Divide a unit fraction by a nonzero whole number.</p> <p>5 M3 Lesson 15: Divide by whole numbers and unit fractions.</p> <p>5 M3 Lesson 17: Solve word problems involving fractions with multiplication and division.</p> <p>5 M3 Lesson 19: Create and solve one-step word problems involving fractions.</p> <p>5 M3 Lesson 20: Solve multi-step word problems involving fractions and write equations with parentheses.</p> <p>5 M3 Lesson 21: Solve multi-step word problems involving fractions.</p> <p>5 M5 Lesson 14: Solve real-world problems involving areas of composite figures with mixed-number side lengths.</p> <p>5 M5 Lesson 15: Solve multi-step word problems involving multiplication of mixed numbers.</p> <p>6 M2 Topic B: Dividing Fractions</p> <p>6 M2 Topic C: Dividing Fractions Fluently</p>
<p>6.1.3.5</p> <p>Estimate solutions to problems with whole numbers, fractions and decimals and use the estimates to assess the reasonableness of results in the context of the problem.</p>	<p>6 M1 Lesson 1: Jars of Jelly Beans</p> <p>6 M1 Lesson 7: Graphs of Ratio Relationships</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p> <p>6 M1 Lesson 23: Finding the Percent</p> <p>6 M2 Lesson 13: Decimal Addition and Subtraction</p> <p>6 M2 Lesson 15: Decimal Multiplication</p> <p>6 M2 Topic E: Division of Multi-Digit Numbers</p>

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<p>6.1.3.5 <i>continued</i></p>	<p>6 M2 Lesson 21: Dividing a Decimal by a Whole Number</p> <p>6 M2 Lesson 22: Dividing a Decimal by a Decimal Greater Than 1</p> <p>6 M2 Lesson 23: Dividing a Decimal by a Decimal Less Than 1</p> <p>6 M3 Lesson 14: Modeling with the Coordinate Plane</p> <p>6 M4 Lesson 25: The Statue of Liberty</p> <p>6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations</p> <p>6 M6 Lesson 2: Describing a Data Distribution</p>
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Algebra

Recognize and represent relationships between varying quantities; translate from one representation to another; use patterns, tables, graphs and rules to solve real-world and mathematical problems.

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<p>6.2.1.1</p> <p>Understand that a variable can be used to represent a quantity that can change, often in relationship to another changing quantity. Use variables in various contexts.</p>	<p>6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations</p>
<p>6.2.1.2</p> <p>Represent the relationship between two varying quantities with function rules, graphs and tables; translate between any two of these representations.</p>	<p>6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations</p> <p><i>Supplementary material is necessary to address function rules.</i></p>

Algebra

Use properties of arithmetic to generate equivalent numerical expressions and evaluate expressions involving positive rational numbers.

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Aligned Components of *Eureka Math*²

6.2.2.1 Apply the associative, commutative and distributive properties and order of operations to generate equivalent expressions and to solve problems involving positive rational numbers.	6 M4 Topic C: Equivalent Expressions Using the Properties of Operations
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Algebra

Understand and interpret equations and inequalities involving variables and positive rational numbers. Use equations and inequalities to represent real-world and mathematical problems; use the idea of maintaining equality to solve equations. Interpret solutions in the original context.

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Aligned Components of *Eureka Math*²

6.2.3.1 Represent real-world or mathematical situations using equations and inequalities involving variables and positive rational numbers.	6 M4 Lesson 17: Equations and Solutions 6 M4 Lesson 18: Inequalities and Solutions 6 M4 Lesson 21: Solving Problems with Equations
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<p>6.2.3.2</p> <p>Solve equations involving positive rational numbers using number sense, properties of arithmetic and the idea of maintaining equality on both sides of the equation. Interpret a solution in the original context and assess the reasonableness of results.</p>	<p>6 M4 Lesson 17: Equations and Solutions</p> <p>6 M4 Lesson 19: Solving Equations with Addition and Subtraction</p> <p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p> <p>6 M4 Lesson 21: Solving Problems with Equations</p> <p>6 M5 Lesson 2: The Area of a Right Triangle</p>
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Geometry & Measurement

Calculate perimeter, area, surface area and volume of two- and three-dimensional figures to solve real-world and mathematical problems.

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<p>6.3.1.1</p> <p>Calculate the surface area and volume of prisms and use appropriate units, such as cm^2 and cm^3. Justify the formulas used. Justification may involve decomposition, nets or other models.</p>	<p>6 M5 Topic C: Nets and Surface Area</p> <p>6 M5 Topic D: Volumes of Right Rectangular Prisms</p>
<p>6.3.1.2</p> <p>Calculate the area of quadrilaterals. Quadrilaterals include squares, rectangles, rhombuses, parallelograms, trapezoids and kites. When formulas are used, be able to explain why they are valid.</p>	<p>6 M5 Lesson 1: The Area of a Parallelogram</p> <p>6 M5 Lesson 7: Areas of Trapezoids and Other Polygons</p>

Minnesota K–12 Academic Standards in Mathematics**Aligned Components of *Eureka Math*²**

<p>6.3.1.3</p> <p>Estimate the perimeter and area of irregular figures on a grid when they cannot be decomposed into common figures and use correct units, such as cm and cm².</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
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Geometry & Measurement

Understand and use relationships between angles in geometric figures.

Minnesota K–12 Academic Standards in Mathematics**Aligned Components of *Eureka Math*²**

<p>6.3.2.1</p> <p>Solve problems using the relationships between the angles formed by intersecting lines.</p>	<p>8 M2 Lesson 12: Lines Cut by a Transversal</p> <p>8 M2 Lesson 14: Showing Lines Are Parallel</p> <p>8 M2 Lesson 15: Exterior Angles of Triangles</p> <p>8 M2 Lesson 16: Find Unknown Angle Measures</p>
<p>6.3.2.2</p> <p>Determine missing angle measures in a triangle using the fact that the sum of the interior angles of a triangle is 180°. Use models of triangles to illustrate this fact.</p>	<p>8 M2 Lesson 13: Angle Sum of a Triangle</p> <p>8 M2 Lesson 16: Find Unknown Angle Measures</p>
<p>6.3.2.3</p> <p>Develop and use formulas for the sums of the interior angles of polygons by decomposing them into triangles.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

Geometry & Measurement

Choose appropriate units of measurement and use ratios to convert within measurement systems to solve real-world and mathematical problems.

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<p>6.3.3.1</p> <p>Solve problems in various contexts involving conversion of weights, capacities, geometric measurements and times within measurement systems using appropriate units.</p>	<p>6 M1 Lesson 19: Using Rates to Convert Units</p>
<p>6.3.3.2</p> <p>Estimate weights, capacities and geometric measurements using benchmarks in measurement systems with appropriate units.</p>	<p>Supplemental material is necessary to address this standard.</p>

Data Analysis & Probability

Use probabilities to solve real-world and mathematical problems; represent probabilities using fractions, decimals and percents.

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<p>6.4.1.1</p> <p>Determine the sample space (set of possible outcomes) for a given experiment and determine which members of the sample space are related to certain events. Sample space may be determined by the use of tree diagrams, tables or pictorial representations.</p>	<p>7 M6 Lesson 3: Outcomes of Chance Experiments</p> <p>7 M6 Lesson 4: Theoretical Probability</p> <p>7 M6 Lesson 5: Multistage Experiments</p>
<p>6.4.1.2</p> <p>Determine the probability of an event using the ratio between the size of the event and the size of the sample space; represent probabilities as percents, fractions and decimals between 0 and 1 inclusive. Understand that probabilities measure likelihood.</p>	<p>7 M6 Topic A: Calculating and Interpreting Probabilities</p> <p>7 M6 Topic B: Estimating Probabilities</p>
<p>6.4.1.3</p> <p>Perform experiments for situations in which the probabilities are known, compare the resulting relative frequencies with the known probabilities; know that there may be differences.</p>	<p>7 M6 Lesson 7: The Law of Large Numbers</p>

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<p>6.4.1.4</p> <p>Calculate experimental probabilities from experiments; represent them as percents, fractions and decimals between 0 and 1 inclusive. Use experimental probabilities to make predictions when actual probabilities are unknown.</p>	<p>7 M6 Lesson 2: Empirical Probability</p> <p>7 M6 Lesson 3: Outcomes of Chance Experiments</p> <p>7 M6 Lesson 6: Outcomes That Are Not Equally Likely</p> <p>7 M6 Lesson 8: Picking Blue</p>
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