
7–8 | Wyoming Mathematics Content and Performance Standards 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.

Standards for Mathematical Practice	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>

Ratios and Proportional Relationships

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

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<p>7.RP.A.1</p> <p>Compute unit rates, including those involving complex fractions, with like or different units.</p>	<p>7–8 M2 Lesson 12: An Experiment with Ratios and Rates</p> <p>7–8 M2 Lesson 13: Exploring Tables of Proportional Relationships</p>
<p>7.RP.A.2</p> <p>Recognize and represent proportional relationships between quantities.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.RP.A.2A</p> <p>Decide whether two quantities in a table or graph are in a proportional relationship.</p>	<p>7–8 M2 Lesson 12: An Experiment with Ratios and Rates</p> <p>7–8 M2 Lesson 13: Exploring Tables of Proportional Relationships</p> <p>7–8 M2 Lesson 14: Exploring Graphs of Proportional Relationships</p> <p>7–8 M2 Lesson 19: Proportional Reasoning and Percents</p>
<p>7.RP.A.2B</p> <p>Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p>	<p>7–8 M2 Lesson 14: Exploring Graphs of Proportional Relationships</p> <p>7–8 M2 Lesson 15: Relating Representations of Proportional Relationships</p> <p>7–8 M2 Lesson 16: Applying Proportional Reasoning</p>
<p>7.RP.A.2C</p> <p>Represent proportional relationships with equations.</p>	<p>7–8 M2 Lesson 13: Exploring Tables of Proportional Relationships</p> <p>7–8 M2 Lesson 15: Relating Representations of Proportional Relationships</p> <p>7–8 M2 Lesson 16: Applying Proportional Reasoning</p> <p>7–8 M2 Lesson 17: Using Proportional Reasoning to Solve Multi-Step Problems</p> <p>7–8 M2 Lesson 18: Handstand Sprint</p> <p>7–8 M2 Lesson 19: Proportional Reasoning and Percents</p>

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<p>7.RP.A.2D</p> <p>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.</p>	<p>7–8 M2 Lesson 14: Exploring Graphs of Proportional Relationships</p> <p>7–8 M2 Lesson 15: Relating Representations of Proportional Relationships</p>
<p>7.RP.A.3</p> <p>Solve multistep real world and mathematical problems involving ratios and percentages.</p>	<p>7–8 M2 Lesson 16: Applying Proportional Reasoning</p> <p>7–8 M2 Lesson 17: Using Proportional Reasoning to Solve Multi-Step Problems</p> <p>7–8 M2 Lesson 18: Handstand Sprint</p> <p>7–8 M2 Topic D: Percents and Proportional Relationships</p>

The Number System

7.NS.B Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

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<p>7.NS.B.1</p> <p>Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.NS.B.1A</p> <p>Describe situations in which opposite quantities combine to make zero (the additive identity).</p>	<p>7–8 M1 Lesson 1: Adding Integers and Rational Numbers</p>

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<p>7.NS.B.1B</p> <p>Understand that $p + q$ represents the distance q from p whose placement is determined by the sign of q. Interpret sums of rational numbers by describing real-world contexts.</p>	<p>7–8 M1 Lesson 1: Adding Integers and Rational Numbers</p>
<p>7.NS.B.1C</p> <p>Show that a number and its opposite have a sum of 0 (are additive inverses).</p>	<p>7–8 M1 Lesson 1: Adding Integers and Rational Numbers</p>
<p>7.NS.B.1D</p> <p>Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Apply this principal in real-world contexts.</p>	<p>7–8 M1 Lesson 3: Finding Distances to Find Differences</p> <p>7–8 M1 Lesson 4: Subtracting Integers</p> <p>7–8 M1 Lesson 5: Subtracting Rational Numbers</p>
<p>7.NS.B.1E</p> <p>Apply properties of addition as strategies to add and subtract rational numbers.</p>	<p>7–8 M1 Topic A: Add and Subtract Rational Numbers</p>
<p>7.NS.B.2</p> <p>Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>7.NS.B.2A.1</p> <p>Understand that the multiplicative inverse of a number is its reciprocal and their product is equal to one (the multiplicative identity).</p>	<p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p>
<p>7.NS.B.2A.2</p> <p>Understand positive and negative sign rules for multiplying rational numbers. Interpret products of rational numbers by describing real-world contexts.</p>	<p>7–8 M1 Lesson 6: Multiplying Integers and Rational Numbers</p> <p>7–8 M1 Lesson 7: Exponential Expressions and Relating Multiplication to Division</p>
<p>7.NS.B.2B</p> <p>Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers is a rational number. Recognize that if p and q are integers then $-\left(\frac{p}{q}\right) = \frac{-p}{q} = \frac{p}{-q}$. Interpret quotients of rational numbers by describing real-world contexts.</p>	<p>7–8 M1 Lesson 8: Dividing Integers and Rational Numbers</p>
<p>7.NS.B.2C</p> <p>Apply properties of multiplication (commutative, associative, distributive, or properties of identity and inverse elements) to multiply and divide rational numbers.</p>	<p>7–8 M1 Topic B: Multiply and Divide Rational Numbers</p>

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<p>7.NS.B.2D</p> <p>Convert a rational number to a decimal. Recognize that rational numbers can be written as fractions or decimal numbers that terminate or repeat.</p>	<p>7–8 M1 Lesson 9: Decimal Expansions of Rational Numbers</p>
<p>7.NS.B.3</p> <p>Solve real-world and mathematical problems involving the four arithmetic operations with rational numbers.</p>	<p>7–8 M1 Lesson 1: Adding Integers and Rational Numbers</p> <p>7–8 M1 Lesson 3: Finding Distances to Find Differences</p> <p>7–8 M1 Lesson 4: Subtracting Integers</p> <p>7–8 M1 Lesson 5: Subtracting Rational Numbers</p> <p>7–8 M1 Lesson 6: Multiplying Integers and Rational Numbers</p> <p>7–8 M1 Lesson 8: Dividing Integers and Rational Numbers</p>

The Number System

8.NS.A Know that there are numbers that are not rational, and approximate them by rational numbers.

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<p>8.NS.A.1</p> <p>Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. Explore the real number system and its appropriate usage in real-world situations.</p>	<p>7–8 M1 Lesson 20: Using the Pythagorean Theorem</p> <p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p> <p>7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes</p> <p>7–8 M2 Lesson 6: Expressing Repeating Decimals as Fractions</p> <p><i>Supplemental material is necessary to address the real number system in real-world situations.</i></p>
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<p>8.NS.A.1A</p> <p>Make comparisons between rational and irrational numbers.</p>	<p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p>
<p>8.NS.A.1B</p> <p>Understand that all real numbers have a decimal expansion.</p>	<p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p>
<p>8.NS.A.1C</p> <p>Model the hierarchy of the real number system, including natural, whole, integer, rational, and irrational numbers.</p>	<p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p> <p><i>Supplemental material is necessary to fully address the hierarchy of real numbers.</i></p>
<p>8.NS.A.1D</p> <p>Convert repeating decimals to fractions.</p>	<p>7–8 M2 Lesson 6: Expressing Repeating Decimals as Fractions</p>
<p>8.NS.A.2</p> <p>Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions.</p>	<p>7–8 M1 Lesson 21: Approximating Values of Roots</p> <p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p>

Expressions and Equations

7.EE.C Use properties of operations to generate equivalent expressions.

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<p>7.EE.C.1</p> <p>Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p>	<p>7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations</p>
<p>7.EE.C.2</p> <p>Recognize that algebraic expressions may have a variety of equivalent forms that reveal different information, and determine an appropriate form for a given real-world situation.</p>	<p>7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations</p> <p>7–8 M2 Lesson 21: Discount, Markup, Sales Tax, and Tip</p> <p>7–8 M2 Lesson 22: Percent Increase and Percent Decrease</p>

Expressions and Equations

7.EE.D Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

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<p>7.EE.D.3</p> <p>Solve multi-step real-world and mathematical problems involving rational numbers. Include fraction bars as a grouping symbol.</p>	<p>7–8 M1 Lesson 8: Dividing Integers and Rational Numbers</p> <p>7–8 M2 Lesson 11: Using Linear Equations to Solve Real-World Problems</p> <p>7–8 M2 Lesson 17: Using Proportional Reasoning to Solve Multi-Step Problems</p> <p>7–8 M2 Lesson 18: Handstand Sprint</p> <p>7–8 M2 Lesson 23: What Is the Best Deal?</p>

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<p>7.EE.D.4</p> <p>Apply the concepts of linear equations and inequalities in one variable to real-world and mathematical situations.</p>	<p>7–8 M2 Lesson 3: Solving Equations</p> <p>7–8 M2 Lesson 4: Using Equations to Solve Inequalities</p> <p>7–8 M2 Lesson 5: Solving Problems Involving Equations and Inequalities</p>
<p>7.EE.D.4A</p> <p>Write and fluently solve linear equations of the form $ax + b = c$ and $a(x + b) = c$ where a, b, and c are rational numbers.</p>	<p>7–8 M2 Lesson 1: Finding Unknown Angle Measures</p> <p>7–8 M2 Lesson 3: Solving Equations</p> <p>7–8 M2 Lesson 5: Solving Problems Involving Equations and Inequalities</p>
<p>7.EE.D.4B</p> <p>Write and solve multi-step linear equations that include the use of the distributive property and combining like terms. Exclude equations that contain variables on both sides.</p>	<p>7–8 M2 Lesson 1: Finding Unknown Angle Measures</p> <p>7–8 M2 Lesson 3: Solving Equations</p> <p>7–8 M2 Lesson 5: Solving Problems Involving Equations and Inequalities</p>
<p>7.EE.D.4C</p> <p>Write and solve two-step linear inequalities. Graph the solution set on a number line and interpret its meaning.</p>	<p>7–8 M2 Lesson 4: Using Equations to Solve Inequalities</p> <p>7–8 M2 Lesson 5: Solving Problems Involving Equations and Inequalities</p>
<p>7.EE.D.4D</p> <p>Identify and justify the steps for solving multi-step linear equations and two-step linear inequalities.</p>	<p>7–8 M2 Lesson 1: Finding Unknown Angle Measures</p> <p>7–8 M2 Lesson 7: Solving Multi-Step Equations</p> <p>7–8 M2 Lesson 8: Solving Equations with Rational Coefficients</p> <p><i>Supplementary material is needed to address justifying the steps for solving linear inequalities.</i></p>

Expressions and Equations

8.EE.B Work with radicals and integer exponents.

Wyoming Mathematics Content and Performance Standards	Aligned Components of <i>Eureka Math</i> ²
<p>8.EE.B.1</p> <p>Understand and apply the laws of exponents (i.e., product rule, quotient rule, power to a power, product to a power, quotient to a power, zero power property, negative exponents) to generate equivalent numerical expressions limited to integer exponents.</p>	<p>7–8 M1 Lesson 11: Products of Exponential Expressions with Positive Whole-Number Exponents</p> <p>7–8 M1 Lesson 12: More Properties of Exponents</p> <p>7–8 M1 Lesson 13: Making Sense of Integer Exponents</p>
<p>8.EE.B.2</p> <p>Investigate concepts of square and cube roots.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.EE.B.2A</p> <p>Use radical notation, if applicable, to represent the exact solutions to equations of the form $x^2 = p$ and $x^3 = q$ where p is a positive rational number and q is any rational number.</p>	<p>7–8 M1 Lesson 20: Using the Pythagorean Theorem</p> <p>7–8 M1 Lesson 21: Approximating Values of Roots</p> <p>7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes</p>
<p>8.EE.B.2B</p> <p>Evaluate square roots of small perfect squares and cube roots of small perfect cubes.</p>	<p>7–8 M1 Lesson 18: Solving Equations with Squares and Cubes</p> <p>7–8 M1 Lesson 19: The Pythagorean Theorem</p> <p>7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes</p>

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<p>8.EE.B.2C</p> <p>Recognize that square roots of non-perfect squares and the cube roots of non-perfect cubes are irrational.</p>	<p>7–8 M1 Lesson 20: Using the Pythagorean Theorem</p> <p>7–8 M1 Lesson 21: Approximating Values of Roots</p> <p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p> <p>7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes</p>
<p>8.EE.B.3</p> <p>Explore the relationship between quantities in decimal and scientific notation.</p> <p>A. Express very large and very small quantities, p, in scientific notation in the form $a \times 10^b = p$ where $1 \leq a < 10$ and b is an integer.</p> <p>B. Translate between decimal notation and scientific notation.</p> <p>C. Estimate and compare the relative size of two quantities in scientific notation.</p>	<p>7–8 M1 Lesson 10: Large and Small Positive Numbers</p> <p>7–8 M1 Lesson 14: Writing Very Large and Very Small Numbers in Scientific Notation</p> <p>7–8 M1 Lesson 15: Operations with Numbers Written in Scientific Notation</p> <p>7–8 M1 Lesson 16: Applications with Numbers Written in Scientific Notation</p> <p>7–8 M1 Lesson 17: Get to the Point</p>
<p>8.EE.B.4</p> <p>Apply the concepts of decimal and scientific notation to real-world and mathematical problems.</p> <p>A. Select appropriate units of measure when representing answers in scientific notation.</p> <p>B. Interpret scientific notation that has been generated by a variety of technologies.</p>	<p>7–8 M1 Lesson 15: Operations with Numbers Written in Scientific Notation</p> <p>7–8 M1 Lesson 16: Applications with Numbers Written in Scientific Notation</p> <p>7–8 M1 Lesson 17: Get to the Point</p>

Expressions and Equations

8.EE.C Understand the connections between proportional relationships, lines, and linear equations.

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<p>8.EE.C.5</p> <p>Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.</p>	<p>7–8 M4 Lesson 4: Comparing Proportional Relationships</p> <p>7–8 M4 Lesson 5: Proportional Relationships and Slope</p>
<p>8.EE.C.6</p> <p>Explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $(0, b)$.</p>	<p>7–8 M4 Lesson 5: Proportional Relationships and Slope</p> <p>7–8 M4 Lesson 6: Slopes of Rising Lines and Falling Lines</p> <p>7–8 M4 Lesson 7: Using Coordinates to Find Slope</p> <p>7–8 M4 Lesson 8: Slope-Intercept Form of the Equation of a Line</p>

Expressions and Equations

8.EE.D Analyze and solve linear equations and pairs of simultaneous linear equations.

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<p>8.EE.D.7</p> <p>Extend concepts of linear equations and inequalities in one variable to more complex multi-step equations and inequalities in real-world and mathematical situations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>8.EE.D.7A</p> <p>Solve linear equations and inequalities with rational number coefficients that include the use of the distributive property, combining like terms, and variable terms on both sides.</p>	<p>7–8 M2 Lesson 6: Expressing Repeating Decimals as Fractions</p> <p>7–8 M2 Topic B: Multi-Step Equations and Their Solutions</p> <p>A1 M1 Lesson 13: Solving Linear Inequalities in One Variable</p>
<p>8.EE.D.7B</p> <p>Recognize the three types of solutions to linear equations: one solution, infinitely many solutions, or no solutions.</p>	<p>7–8 M2 Lesson 8: Solving Equations with Rational Coefficients</p> <p>7–8 M2 Lesson 9: Linear Equations with More Than One Solution</p> <p>7–8 M2 Lesson 10: Another Possible Number of Solutions</p>
<p>8.EE.D.7C</p> <p>Generate linear equations with the three types of solutions.</p>	<p>7–8 M2 Lesson 10: Another Possible Number of Solutions</p>
<p>8.EE.D.7D</p> <p>Justify why linear equations have a specific type of solution.</p>	<p>7–8 M2 Lesson 8: Solving Equations with Rational Coefficients</p> <p>7–8 M2 Lesson 9: Linear Equations with More Than One Solution</p> <p>7–8 M2 Lesson 10: Another Possible Number of Solutions</p>
<p>8.EE.D.8</p> <p>Analyze and solve pairs of simultaneous linear equations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>8.EE.D.8A</p> <p>Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.</p>	<p>7–8 M4 Lesson 11: Introduction to Systems of Linear Equations</p> <p>7–8 M4 Lesson 12: Identifying Solutions</p> <p>7–8 M4 Lesson 13: More Than One Solution</p> <p>7–8 M4 Lesson 16: Choosing a Solution Method</p> <p>7–8 M4 Lesson 19: Back to the Coordinate Plane</p> <p>7–8 M4 Lesson 20: Modeling a Real-World Problem</p>
<p>8.EE.D.8B</p> <p>Solve systems of two linear equations in two variables with integer solutions by graphing the equations.</p>	<p>7–8 M4 Lesson 11: Introduction to Systems of Linear Equations</p> <p>7–8 M4 Lesson 12: Identifying Solutions</p> <p>7–8 M4 Lesson 13: More Than One Solution</p>
<p>8.EE.D.8C</p> <p>Solve simple real-world and mathematical problems leading to two linear equations in two variables given $y = mx + b$ form with integer solutions.</p>	<p>7–8 M4 Lesson 16: Choosing a Solution Method</p> <p>7–8 M4 Lesson 19: Back to the Coordinate Plane</p> <p>7–8 M4 Lesson 20: Modeling a Real-World Problem</p>

Geometry

7.G.E Draw, construct, and describe geometrical figures and describe the relationships between them.

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<p>7.G.E.1</p> <p>Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing.</p>	<p>7–8 M3 Topic D: Scale Drawings and Dilations</p>
<p>7.G.E.2</p> <p>Draw geometric shapes with given conditions using a variety of tools (e.g., ruler and protractor, or technology). Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p>	<p>7–8 M3 Lesson 1: Sketching and Constructing Geometric Figures</p> <p>7–8 M3 Lesson 2: Conditions of Unique Triangles</p> <p>7–8 M3 Lesson 3: Exploring and Constructing Circles</p>
<p>7.G.E.3</p> <p>Describe the two-dimensional figures that result from slicing three-dimensional figures parallel to the base, as in plane sections of right rectangular prisms and right rectangular pyramids.</p>	<p>7–8 M5 Lesson 13: Understanding Planes and Cross Sections</p> <p>7–8 M5 Lesson 14: Cross Section Scavenger Hunt</p> <p>7–8 M5 Lesson 15: Proportionality and Scale Factor of Cross Sections</p>

Geometry

7.G.F Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

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<p>7.G.F.4 Investigate the concept of circles.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.G.F.4A Demonstrate an understanding of the proportional relationships between diameter, radius, and circumference of a circle.</p>	<p>7–8 M3 Lesson 3: Exploring and Constructing Circles</p>
<p>7.G.F.4B Understand that pi is defined by the constant of proportionality between the circumference and diameter.</p>	<p>7–8 M3 Lesson 3: Exploring and Constructing Circles</p>
<p>7.G.F.4C Given the formulas for circumference and area of circles, solve real-world and mathematical problems.</p>	<p>7–8 M3 Lesson 3: Exploring and Constructing Circles 7–8 M3 Lesson 4: Area and Circumference of a Circle 7–8 M3 Lesson 5: Area and Circumference of Circular Regions 7–8 M3 Lesson 6: Watering a Lawn</p>
<p>7.G.F.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p>	<p>7–8 M2 Lesson 1: Finding Unknown Angle Measures 7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations 7–8 M2 Lesson 7: Solving Multi-Step Equations</p>

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<p>7.G.F.6</p> <p>Solve real-world and mathematical problems involving</p> <ul style="list-style-type: none"> A. area and surface area of objects composed of triangles and quadrilaterals; B. volume of objects composed only of right prisms having triangular or quadrilateral bases. 	<p>7–8 M5 Lesson 11: Surface Areas of Prisms and Pyramids</p> <p>7–8 M5 Lesson 16: Volume of Prisms</p> <p>7–8 M5 Lesson 18: Designing a Fish Tank</p> <p>7–8 M5 Lesson 21: Volume of Composite Solids</p>
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Geometry

8.G.G Understand congruence and similarity using physical models, transparencies, or geometry software.

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<p>8.G.G.1</p> <p>Verify experimentally the properties of rotations, reflections, and translations.</p> <ul style="list-style-type: none"> A. Lines are taken to lines, and line segments to line segments of the same length. B. Angles are taken to angles of the same measure. C. Parallel lines are taken to parallel lines. 	<p>7–8 M3 Lesson 7: Motions of the Plane</p> <p>7–8 M3 Lesson 8: Translations, Reflections, and Rotations</p> <p>7–8 M3 Lesson 9: Rigid Motions on the Coordinate Plane</p> <p>7–8 M3 Lesson 10: Sequencing the Rigid Motions</p>
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<p>8.G.G.2</p> <p>Recognize through visual comparison that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.</p>	<p>7–8 M3 Lesson 10: Sequencing the Rigid Motions</p> <p>7–8 M3 Lesson 11: Showing Figures Are Congruent</p> <p>7–8 M3 Lesson 12: Lines Cut by a Transversal</p>
<p>8.G.G.3</p> <p>Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.</p>	<p>7–8 M3 Lesson 9: Rigid Motions on the Coordinate Plane</p> <p>7–8 M3 Lesson 22: Dilations</p> <p>7–8 M3 Lesson 23: Using Lined Paper to Explore Dilations</p> <p>7–8 M3 Lesson 24: Figures and Dilations</p> <p>7–8 M3 Lesson 25: The Shadowy Hand</p> <p>7–8 M3 Lesson 26: Dilations on the Coordinate Plane</p>
<p>8.G.G.4</p> <p>Recognize through visual comparison that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.</p>	<p>7–8 M3 Lesson 27: Similar Figures</p> <p>7–8 M3 Lesson 28: Exploring Angles in Similar Triangles</p>

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<p>8.G.G.5</p> <p>Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.</p>	<p>7–8 M3 Lesson 12: Lines Cut by a Transversal</p> <p>7–8 M3 Lesson 13: Angle Sum of a Triangle</p> <p>7–8 M3 Lesson 14: Exterior Angles of Triangles</p> <p>7–8 M3 Lesson 28: Exploring Angles in Similar Triangles</p> <p>7–8 M3 Lesson 29: Using Similar Figures to Find Unknown Side Lengths</p>
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Geometry

8.G.H Understand and apply the Pythagorean Theorem.

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<p>8.G.H.6</p> <p>Use models or diagrams to explain the Pythagorean Theorem and its converse.</p>	<p>7–8 M1 Lesson 19: The Pythagorean Theorem</p> <p>7–8 M3 Lesson 15: Proving the Pythagorean Theorem</p> <p>7–8 M3 Lesson 16: Proving the Converse of the Pythagorean Theorem</p>
<p>8.G.H.7</p> <p>Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems.</p>	<p>7–8 M1 Lesson 19: The Pythagorean Theorem</p> <p>7–8 M3 Lesson 16: Proving the Converse of the Pythagorean Theorem</p> <p>7–8 M3 Lesson 17: Applications of the Pythagorean Theorem</p> <p>7–8 M3 Lesson 29: Using Similar Figures to Find Unknown Side Lengths</p> <p>7–8 M5 Lesson 19: Volumes of Pyramids and Cones</p>
<p>8.G.H.8</p> <p>Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.</p>	<p>7–8 M3 Lesson 17: Applications of the Pythagorean Theorem</p>

Geometry

8.G.I Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

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<p>8.G.I.9</p> <p>Given the formulas, solve real-world and mathematical problems involving volume and surface area of cylinders.</p>	<p>7–8 M5 Lesson 12: Surface Area of Cylinders</p> <p>7–8 M5 Topic D: Volume</p>

Statistics and Probability

7.SP.G Use random sampling to draw inferences about a population.

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<p>7.SP.G.1</p> <p>Solve real-world and mathematical problems involving:</p> <ul style="list-style-type: none"> A. Understand that a sample is a subset of a population. B. Differentiate between random and non-random sampling. C. Understand that generalizations from a sample are valid only if the sample is representative of the population. D. Understand that random sampling is used to gather a representative sample and tends to support valid inferences about the population. 	<p>7–8 M6 Lesson 10: Populations and Samples</p> <p>7–8 M6 Lesson 11: Selecting a Sample</p> <p>7–8 M6 Lesson 12: Sampling Variability When Estimating a Population Mean</p>

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<p>7.SP.G.2</p> <p>Draw inferences about a population by collecting multiple random samples of the same size to investigate variability in estimates of the characteristic of interest.</p>	<p>7–8 M6 Lesson 12: Sampling Variability When Estimating a Population Mean</p> <p>7–8 M6 Lesson 13: Sampling Variability and the Effect of Sample Size</p> <p>7–8 M6 Lesson 14: Sampling Variability When Estimating a Population Proportion</p>
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Statistics and Probability

7.SP.H Draw informal comparative inferences about two populations.

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<p>7.SP.H.3</p> <p>Visually compare the centers, spreads, and overlap of two displays of data (e.g., back-to-back stem and leaf plots, dot plots, histograms, box plots) that are graphed on the same scale and draw inferences about this data.</p>	<p>7–8 M6 Topic D: Comparing Populations</p>
<p>7.SP.H.4</p> <p>Given measures of center and variability (mean, median and/or mode; range, interquartile range, and/or standard deviation), for numerical data from random samples, draw appropriate informal comparative inferences about two populations.</p>	<p>7–8 M6 Topic D: Comparing Populations</p> <p><i>Supplemental material is necessary to address standard deviation.</i></p>

Statistics and Probability

7.SP.I Investigate chance processes and develop, use, and evaluate probability models.

Wyoming Mathematics Content and Performance Standards	Aligned Components of <i>Eureka Math</i> ²
<p>7.SP.I.5</p> <p>Find and interpret the probability of a random event. Understand that the probability of a random event is a number between, and including, 0 and 1 that expresses the likelihood of the event occurring.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p>
<p>7.SP.I.6</p> <p>Collect multiple samples to compare the relationship between theoretical and experimental probabilities for simple events.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p> <p>7–8 M6 Lesson 2: Outcomes of Chance Experiments</p> <p>7–8 M6 Lesson 5: Outcomes That Are Not Equally Likely</p> <p>7–8 M6 Lesson 7: Picking Blue</p>
<p>7.SP.I.7</p> <p>Apply the concepts of theoretical and experimental probabilities for simple events.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.SP.I.7A</p> <p>Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.</p>	<p>7–8 M6 Lesson 3: Theoretical Probability</p> <p>7–8 M6 Lesson 6: The Law of Large Numbers</p>

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<p>7.SP.I.7B</p> <p>Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.</p>	<p>7–8 M6 Lesson 6: The Law of Large Numbers</p> <p>7–8 M6 Lesson 7: Picking Blue</p>
<p>7.SP.I.7C</p> <p>Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancies.</p>	<p>7–8 M6 Lesson 6: The Law of Large Numbers</p>
<p>7.SP.I.8</p> <p>Find probabilities of compound events using organized lists, tables, and tree diagrams.</p> <p>A. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.</p> <p>B. Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.</p>	<p>7–8 M6 Lesson 4: Multistage Experiments</p>

Statistics and Probability

8.SP.J Investigate patterns of association in bivariate data.

Wyoming Mathematics Content and Performance Standards	Aligned Components of <i>Eureka Math</i> ²
<p>8.SP.J.1</p> <p>Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe the association by form (linear/nonlinear), direction (positive/negative), strength (correlation), and unusual features.</p>	<p>7–8 M6 Lesson 18: Scatter Plots</p> <p>7–8 M6 Lesson 19: Patterns in Scatter Plots</p>
<p>8.SP.J.2</p> <p>Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.</p>	<p>7–8 M6 Lesson 20: Informally Fitting a Line to Data</p> <p>7–8 M6 Lesson 21: Linear Models</p>
<p>8.SP.J.3</p> <p>Use an equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.</p>	<p>7–8 M6 Lesson 20: Informally Fitting a Line to Data</p> <p>7–8 M6 Lesson 21: Linear Models</p>

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<p>8.SP.J.4</p> <p>Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table.</p> <ul style="list-style-type: none">A. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects.B. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.	<p>7–8 M6 Topic F: Bivariate Categorical Data</p>
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Functions

8.F.E Define, evaluate, and compare functions.

Wyoming Mathematics Content and Performance Standards	Aligned Components of <i>Eureka Math</i> ²
<p>8.F.E.1</p> <p>Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.</p>	<p>7–8 M5 Lesson 1: Motion and Speed</p> <p>7–8 M5 Lesson 2: Definition of a Function</p> <p>7–8 M5 Lesson 4: More Examples of Functions</p> <p>7–8 M5 Lesson 5: Graphs of Functions and Equations</p>
<p>8.F.E.2</p> <p>Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).</p>	<p>7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>7–8 M5 Lesson 8: Comparing Functions</p>
<p>8.F.E.3</p> <p>Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.</p>	<p>7–8 M5 Lesson 3: Linear Functions and Proportionality</p> <p>7–8 M5 Lesson 6: Linear Functions and Rate of Change</p> <p>7–8 M5 Lesson 10: Graphs of Nonlinear Functions</p>

Functions

8.F.F Use functions to model relationships between quantities.

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8.F.F.4

Apply the concepts of linear functions to real-world and mathematical situations.

- A. Understand that the slope is the constant rate of change and the y -intercept is the point where $x = 0$.
- B. Determine the slope and the y -intercept of a linear function given multiple representations, including two points, tables, graphs, equations, and verbal descriptions.
- C. Construct a function in slope-intercept form that models a linear relationship between two quantities.
- D. Interpret the meaning of the slope and the y -intercept of a linear function in the context of the situation.

7–8 M5 Lesson 6: Linear Functions and Rate of Change

7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value

7–8 M5 Lesson 23: Applications of Volume

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<p>8.F.F.5</p> <p>Describe qualitatively the functional relationship between two quantities by analyzing a graph where the function is increasing, decreasing, constant, linear, or nonlinear. Sketch a graph that exhibits the qualitative features of a function that has been described verbally.</p>	<p>7–8 M5 Lesson 9: Increasing and Decreasing Functions</p> <p>7–8 M5 Lesson 10: Graphs of Nonlinear Functions</p>