
7–8 | South Carolina College and Career Ready Standards for 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.

Mathematical Process Standards	Aligned Components of <i>Eureka Math</i> ²
<p>1. Make sense of problems and persevere in solving them.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>
<p>2. Reason both contextually and abstractly.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>
<p>3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>
<p>4. Connect mathematical ideas and real-world situations through modeling.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>
<p>5. Use a variety of mathematical tools effectively and strategically.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>
<p>6. Communicate mathematically and approach mathematical situations with precision.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>
<p>7. Identify and utilize structure and patterns.</p>	<p>Lessons in every module engage students in mathematical process standards. These are indicated in margin notes included with every lesson.</p>

The Number System

7.NS The Number System

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<p>7.NS.1</p> <p>Extend prior knowledge of operations with positive rational numbers to add and to subtract all rational numbers and represent the sum or difference on a number line.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.NS.1.a</p> <p>Understand that the additive inverse of a number is its opposite and their sum is equal to zero.</p>	<p>7–8 M1 Lesson 1: Adding Integers and Rational Numbers</p>
<p>7.NS.1.b</p> <p>Understand that the sum of two rational numbers $(p + q)$ represents a distance from p on the number line equal to q where the direction is indicated by the sign of q.</p>	<p>7–8 M1 Lesson 1: Adding Integers and Rational Numbers</p>
<p>7.NS.1.c</p> <p>Translate between the subtraction of rational numbers and addition using the additive inverse, $p - q = p + (-q)$.</p>	<p>7–8 M1 Lesson 4: Subtracting Integers 7–8 M1 Lesson 5: Subtracting Rational Numbers</p>
<p>7.NS.1.d</p> <p>Demonstrate that the distance between two rational numbers on the number line is the absolute value of their difference.</p>	<p>7–8 M1 Lesson 3: Finding Distances to Find Differences</p>

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<p>7.NS.1.e</p> <p>Apply mathematical properties (e.g., commutative, associative, distributive, or the properties of identity and inverse elements) to add and subtract rational numbers.</p>	<p>7–8 M1 Topic A: Add and Subtract Rational Numbers</p>
<p>7.NS.2</p> <p>Extend prior knowledge of operations with positive rational numbers to multiply and to divide all rational numbers.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.NS.2.a</p> <p>Understand that the multiplicative inverse of a number is its reciprocal and their product is equal to one.</p>	<p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p>
<p>7.NS.2.b</p> <p>Understand sign rules for multiplying rational numbers.</p>	<p>7–8 M1 Lesson 6: Multiplying Integers and Rational Numbers 7–8 M1 Lesson 7: Exponential Expressions and Relating Multiplication to Division</p>
<p>7.NS.2.c</p> <p>Understand sign rules for dividing rational numbers and that a quotient of integers (with a non-zero divisor) is a rational number.</p>	<p>7–8 M1 Lesson 7: Exponential Expressions and Relating Multiplication to Division 7–8 M1 Lesson 8: Dividing Integers and Rational Numbers</p>

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<p>7.NS.2.d</p> <p>Apply mathematical properties (e.g., commutative, associative, distributive, or the 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>
<p>7.NS.2.e</p> <p>Understand that some rational numbers can be written as integers and all 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.3</p> <p>Apply the concepts of all four operations with rational numbers to solve real-world and mathematical problems.</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>
<p>7.NS.4</p> <p>Understand and apply the concepts of comparing and ordering to rational numbers.</p>	<p><i>This standard is addressed by the lessons aligned to its subsections.</i></p>

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<p>7.NS.4.a</p> <p>Interpret statements using less than ($<$), greater than ($>$), less than or equal to (\leq), greater than or equal to (\geq), and equal to ($=$) as relative locations on the number line.</p>	<p>6 M3 Lesson 5: Comparing Rational Numbers</p> <p>6 M3 Lesson 6: Ordering Rational Numbers</p> <p><i>Supplemental material is necessary to address the less than or equal to symbol and the greater than or equal to symbol.</i></p>
<p>7.NS.4.b</p> <p>Use concepts of equality and inequality to write and explain real-world and mathematical situations.</p>	<p>6 M3 Lesson 5: Comparing Rational Numbers</p> <p>6 M3 Lesson 6: Ordering Rational Numbers</p>
<p>7.NS.5</p> <p>Extend prior knowledge to translate among multiple representations of rational numbers (fractions, decimal numbers, percentages). Exclude the conversion of repeating decimal numbers to fractions.</p>	<p>6 M1 Lesson 22: Introduction to Percents</p> <p>7–8 M1 Lesson 9: Decimal Expansions of Rational Numbers</p>

The Number System

8.NS The Number System

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Aligned Components of *Eureka Math*²

<p>8.NS.1</p> <p>Explore the real number system and its appropriate usage in real-world situations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
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<p>8.NS.1.a</p> <p>Recognize the differences between rational and irrational numbers.</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>8.NS.1.b</p> <p>Understand that all real numbers have a decimal expansion.</p>	<p>7–8 M1 Lesson 20: Using the Pythagorean Theorem</p> <p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p>
<p>8.NS.1.c</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 the real number system.</i></p>
<p>8.NS.2</p> <p>Estimate and compare the value of irrational numbers by plotting them on a number line.</p>	<p>7–8 M1 Lesson 21: Approximating Values of Roots</p> <p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p>
<p>8.NS.3</p> <p>Extend prior knowledge to translate among multiple representations of rational numbers (fractions, decimal numbers, percentages). Include the conversion of repeating decimal numbers to fractions.</p>	<p>7–8 M1 Lesson 9: Decimal Expansions of Rational Numbers</p> <p>7–8 M1 Lesson 22: Rational and Irrational Numbers</p> <p>7–8 M2 Lesson 6: Expressing Repeating Decimals as Fractions</p>

Ratios and Proportional Relationships

7.RP Ratios and Proportional Relationships

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Aligned Components of *Eureka Math*²

<p>7.RP.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.2</p> <p>Identify and model proportional relationships given multiple representations, including tables, graphs, equations, diagrams, verbal descriptions, and real-world situations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.RP.2.a</p> <p>Determine when two quantities 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.2.b</p> <p>Recognize or compute the constant of proportionality.</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.2.c</p> <p>Understand that the constant of proportionality 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>7–8 M2 Lesson 16: Applying Proportional Reasoning</p>

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<p>7.RP.2.d</p> <p>Use equations to model proportional relationships.</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>
<p>7.RP.2.e</p> <p>Investigate the graph of a proportional relationship and explain the meaning of specific points (e.g., origin, unit rate) in the context of the situation.</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.3</p> <p>Solve real-world and mathematical problems involving ratios and percentages using proportional reasoning (e.g., multi-step dimensional analysis, percent increase/decrease, tax).</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>

Expressions, Equations, and Inequalities

7.EE1 Expressions, Equations, and Inequalities

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Aligned Components of *Eureka Math*²

<p>7.EE1.1</p> <p>Apply mathematical properties (e.g., commutative, associative, distributive) to simplify and to factor linear algebraic expressions with rational coefficients.</p>	<p>7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations</p>
<p>7.EE1.2</p> <p>Recognize that algebraic expressions may have a variety of equivalent forms 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>
<p>7.EE1.3</p> <p>Extend previous understanding of Order of Operations to solve multi-step real-world and mathematical problems involving rational numbers. Include fraction bars as a grouping symbol.</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>
<p>7.EE1.4</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 5: Solving Problems Involving Equations and Inequalities</p>

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<p>7.EE1.4.a</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.EE1.4.b</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.EE1.4.c</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.EE1.4.d</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 4: Using Equations to Solve Inequalities</p> <p><i>Supplemental material is necessary to fully address identifying and justifying the steps for solving multi-step linear equations and two-step linear equalities.</i></p>

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<p>7.EE1.5</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) to simplify numerical expressions that include whole-number 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>
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Expressions, Equations, and Inequalities

8.EE1 Expressions, Equations, and Inequalities

South Carolina College and Career Ready Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>8.EE1.1</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 simplify numerical expressions that include 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.EE1.2</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>

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Aligned Components of *Eureka Math*²

<p>8.EE1.2.a</p> <p>Find the exact and approximate solutions to equations of the form $x^2 = p$ and $x^3 = p$ where p is a positive rational number.</p>	<p>7–8 M1 Topic D: Rational and Irrational Numbers</p>
<p>8.EE1.2.b</p> <p>Evaluate square roots of perfect squares.</p>	<p>7–8 M1 Lesson 18: Solving Equations with Squares and Cubes 7–8 M1 Lesson 19: The Pythagorean Theorem 7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes</p>
<p>8.EE1.2.c</p> <p>Evaluate cube roots of perfect cubes.</p>	<p>7–8 M1 Lesson 18: Solving Equations with Squares and Cubes</p>
<p>8.EE1.2.d</p> <p>Recognize that square roots of non-perfect squares are irrational.</p>	<p>7–8 M1 Lesson 20: Using the Pythagorean Theorem 7–8 M1 Lesson 21: Approximating Values of Roots 7–8 M1 Lesson 22: Rational and Irrational Numbers 7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes</p>
<p>8.EE1.3</p> <p>Explore the relationship between quantities in decimal and scientific notation.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.EE1.3.a</p> <p>Express very large and very small quantities in scientific notation in the form $a \times 10^b = p$ where $1 \leq a < 10$ and b is an integer.</p>	<p>7–8 M1 Lesson 10: Large and Small Positive Numbers 7–8 M1 Lesson 14: Writing Very Large and Very Small Numbers in Scientific Notation 7–8 M1 Lesson 15: Operations with Numbers Written in Scientific Notation 7–8 M1 Lesson 16: Applications with Numbers Written in Scientific Notation 7–8 M1 Lesson 17: Get to the Point</p>

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<p>8.EE1.3.b</p> <p>Translate between decimal notation and 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.EE1.3.c</p> <p>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 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.EE1.4</p> <p>Apply the concepts of decimal and scientific notation to solve real-world and mathematical problems.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.EE1.4.a</p> <p>Multiply and divide numbers expressed in both decimal and 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.EE1.4.b</p> <p>Select appropriate units of measure when representing answers 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>

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<p>8.EE1.4.c</p> <p>Translate how different technological devices display numbers in scientific notation.</p>	<p>7–8 M1 Lesson 15: Operations with Numbers Written in Scientific Notation</p>
<p>8.EE1.5</p> <p>Apply concepts of proportional relationships to real-world and mathematical situations.</p>	<p>7–8 M4 Lesson 4: Comparing Proportional Relationships</p>
<p>8.EE1.5.a</p> <p>Graph proportional relationships.</p>	<p>7–8 M2 Lesson 14: Exploring Graphs of Proportional Relationships</p>
<p>8.EE1.5.b</p> <p>Interpret unit rate as the slope of the graph.</p>	<p>7–8 M4 Lesson 4: Comparing Proportional Relationships 7–8 M4 Lesson 5: Proportional Relationships and Slope</p>
<p>8.EE1.5.c</p> <p>Compare two different proportional relationships given multiple representations, including tables, graphs, equations, diagrams, and verbal descriptions.</p>	<p>7–8 M4 Lesson 4: Comparing Proportional Relationships</p>
<p>8.EE1.6</p> <p>Apply concepts of slope and y-intercept to graphs, equations, and proportional relationships.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>8.EE1.6.a</p> <p>Explain why the slope, m, is the same between any two distinct points on a non-vertical line using similar triangles.</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>
<p>8.EE1.6.b</p> <p>Derive the slope-intercept form ($y = mx + b$) for a non-vertical line.</p>	<p>7–8 M4 Lesson 8: Slope-Intercept Form of the Equation of a Line</p>
<p>8.EE1.6.c</p> <p>Relate equations for proportional relationships ($y = kx$) with the slope-intercept form ($y = mx + b$) where $b = 0$.</p>	<p>7–8 M4 Lesson 5: Proportional Relationships and Slope</p> <p>7–8 M4 Lesson 8: Slope-Intercept Form of the Equation of a Line</p>
<p>8.EE1.7</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>
<p>8.EE1.7.a</p> <p>Solve linear equations and inequalities with rational number coefficients that include the use of the distributive property, combining like terms, and variables 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>

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<p>8.EE1.7.b</p> <p>Recognize the three types of solutions to linear equations: one solution ($x = a$), infinitely many solutions ($a = a$), or no solutions ($a = b$).</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.EE1.7.c</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.EE1.7.d</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.EE1.8</p> <p>Investigate and solve real-world and mathematical problems involving systems of linear equations in two variables with integer coefficients and solutions.</p>	<p>7–8 M4 Topic D: Writing and Solving Systems of Linear Equations</p>
<p>8.EE1.8.a</p> <p>Graph systems of linear equations and estimate their point of intersection.</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 20: Modeling a Real-World Problem</p>

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<p>8.EE1.8.b</p> <p>Understand and verify that a solution to a system of linear equations is represented on a graph as the point of intersection of the two lines.</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.EE1.8.c</p> <p>Solve systems of linear equations algebraically, including methods of substitution and elimination, or through inspection.</p>	<p>7–8 M4 Lesson 13: More Than One Solution</p> <p>7–8 M4 Lesson 14: Solving Systems of Linear Equations Without Graphing</p> <p>7–8 M4 Lesson 15: The Substitution Method</p> <p>7–8 M4 Lesson 16: Choosing a Solution Method</p> <p>7–8 M4 Topic D: Writing and Solving Systems of Linear Equations</p> <p>A1 M2 Lesson 9: A New Way to Solve Systems</p> <p>A1 M2 Lesson 10: The Elimination Method</p> <p>A1 M2 Lesson 11: Applications of Systems of Equations</p>
<p>8.EE1.8.d</p> <p>Understand that systems of linear equations can have one solution, no solution, or infinitely many solutions.</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>

Geometry and Measurement

7.GM Geometry and Measurement

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<p>7.GM.1</p> <p>Determine the scale factor and translate between scale models and actual measurements (e.g., lengths, area) of real-world objects and geometric figures using proportional reasoning.</p>	<p>7–8 M3 Topic D: Scale Drawings and Dilations</p>
<p>7.GM.2</p> <p>Construct triangles and special quadrilaterals using a variety of tools (e.g., freehand, ruler and protractor, technology).</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.GM.2.a</p> <p>Construct triangles given all measurements of either angles or sides.</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.GM.2.b</p> <p>Decide if the measurements 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.GM.2.c</p> <p>Construct special quadrilaterals (i.e., kite, trapezoid, isosceles trapezoid, rhombus, parallelogram, rectangle) given specific parameters about angles or sides.</p>	<p>7–8 M3 Lesson 1: Sketching and Constructing Geometric Figures</p>

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<p>7.GM.3</p> <p>Describe two-dimensional cross-sections of three-dimensional figures, specifically 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>
<p>7.GM.4</p> <p>Investigate the concept of circles.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.GM.4.a</p> <p>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>7–8 M3 Lesson 4: Area and Circumference of a Circle</p> <p>7–8 M3 Lesson 5: Area and Circumference of Circular Regions</p>
<p>7.GM.4.b</p> <p>Understand that the constant of proportionality between the circumference and diameter is equivalent to π.</p>	<p>7–8 M3 Lesson 3: Exploring and Constructing Circles</p> <p>7–8 M3 Lesson 4: Area and Circumference of a Circle</p> <p>7–8 M3 Lesson 5: Area and Circumference of Circular Regions</p>
<p>7.GM.4.c</p> <p>Explore the relationship between circumference and area using a visual model.</p>	<p>7–8 M3 Lesson 4: Area and Circumference of a Circle</p>
<p>7.GM.4.d</p> <p>Use the formulas for circumference and area of circles appropriately to solve real-world and mathematical problems.</p>	<p>7–8 M3 Lesson 3: Exploring and Constructing Circles</p> <p>7–8 M3 Lesson 4: Area and Circumference of a Circle</p> <p>7–8 M3 Lesson 5: Area and Circumference of Circular Regions</p> <p>7–8 M3 Lesson 6: Watering a Lawn</p>

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<p>7.GM.5</p> <p>Write equations to solve problems involving the relationships between angles formed by two intersecting lines, including supplementary, complementary, vertical, and adjacent.</p>	<p>7–8 M2 Lesson 1: Finding Unknown Angle Measures</p> <p>7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations</p> <p>7–8 M2 Lesson 7: Solving Multi-Step Equations</p>
<p>7.GM.6</p> <p>Apply the concepts of two- and three-dimensional figures to real-world and mathematical situations.</p>	<p>7 M4 Lesson 16: Solving Area Problems by Composition and Decomposition</p> <p>7–8 M5 Lesson 11: Surface Areas of Prisms and Pyramids</p> <p>7–8 M5 Lesson 18: Designing a Fish Tank</p> <p>7–8 M5 Lesson 21: Volume of Composite Solids</p>
<p>7.GM.6.a</p> <p>Understand that the concept of area is applied to two-dimensional figures such as triangles, quadrilaterals, and polygons.</p>	<p>7 M4 Lesson 16: Solving Area Problems by Composition and Decomposition</p> <p>7–8 M5 Lesson 11: Surface Areas of Prisms and Pyramids</p>
<p>7.GM.6.b</p> <p>Understand that the concepts of volume and surface area are applied to three-dimensional figures such as cubes, right rectangular prisms, and right triangular prisms.</p>	<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>
<p>7.GM.6.c</p> <p>Decompose cubes, right rectangular prisms, and right triangular prisms into rectangles and triangles to derive the formulas for volume and surface area.</p>	<p>7–8 M5 Lesson 11: Surface Areas of Prisms and Pyramids</p> <p>7–8 M5 Lesson 16: Volume of Prisms</p>

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<p>7.GM.6.d</p> <p>Use the formulas for area, volume, and surface area appropriately.</p>	<p>7–8 M5 Lesson 18: Designing a Fish Tank</p>
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Geometry and Measurement
8.GM Geometry and Measurement

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<p>8.GM.1</p> <p>Investigate the properties of rigid transformations (rotations, reflections, translations) using a variety of tools (e.g., grid paper, reflective devices, graphing paper, technology).</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.GM.1.a</p> <p>Verify that lines are mapped to lines, including parallel lines.</p>	<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>
<p>8.GM.1.b</p> <p>Verify that corresponding angles are congruent.</p>	<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.GM.1.c</p> <p>Verify that corresponding line segments are congruent.</p>	<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>
<p>8.GM.2</p> <p>Apply the properties of rigid transformations (rotations, reflections, translations).</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.GM.2.a</p> <p>Rotate geometric figures 90, 180, and 270 degrees, both clockwise and counterclockwise, about the origin.</p>	<p>7–8 M3 Topic B: Rigid Motions and Congruence</p>
<p>8.GM.2.b</p> <p>Reflect geometric figures with respect to the x-axis and/or y-axis.</p>	<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>8.GM.2.c</p> <p>Translate geometric figures vertically and/or horizontally.</p>	<p>7–8 M3 Topic B: Rigid Motions and Congruence</p>
<p>8.GM.2.d</p> <p>Recognize that two-dimensional figures are only congruent if a series of rigid transformations can be performed to map the pre-image to the image.</p>	<p>7–8 M3 Lesson 10: Sequencing the Rigid Motions</p> <p>7–8 M3 Lesson 11: Showing Figures Are Congruent</p>

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<p>8.GM.2.e</p> <p>Given two congruent figures, describe the series of rigid transformations that justifies this congruence.</p>	<p>7–8 M3 Lesson 10: Sequencing the Rigid Motions</p> <p>7–8 M3 Lesson 11: Showing Figures Are Congruent</p>
<p>8.GM.3</p> <p>Investigate the properties of transformations (rotations, reflections, translations, dilations) using a variety of tools (e.g., grid paper, reflective devices, graphing paper, dynamic software).</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.GM.3.a</p> <p>Use coordinate geometry to describe the effect of transformations on two-dimensional figures.</p>	<p>7–8 M3 Lesson 9: Rigid Motions on the Coordinate Plane</p> <p>7–8 M3 Lesson 23: Using Lined Paper to Explore Dilations</p> <p>7–8 M3 Lesson 26: Dilations on the Coordinate Plane</p>
<p>8.GM.3.b</p> <p>Relate scale drawings to dilations of geometric figures.</p>	<p>7–8 M3 Lesson 22: Dilations</p>
<p>8.GM.4</p> <p>Apply the properties of transformations (rotations, reflections, translations, dilations).</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>8.GM.4.a</p> <p>Dilate geometric figures using scale factors that are positive rational numbers.</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.GM.4.b</p> <p>Recognize that two-dimensional figures are only similar if a series of transformations can be performed to map the pre-image to the image.</p>	<p>7–8 M3 Lesson 27: Similar Figures</p> <p>7–8 M3 Lesson 28: Exploring Angles in Similar Triangles</p>
<p>8.GM.4.c</p> <p>Given two similar figures, describe the series of transformations that justifies this similarity.</p>	<p>7–8 M3 Lesson 27: Similar Figures</p>
<p>8.GM.4.d</p> <p>Use proportional reasoning to find the missing side lengths of two similar figures.</p>	<p>7–8 M3 Lesson 29: Using Similar Figures to Find Unknown Side Lengths</p>
<p>8.GM.5</p> <p>Extend and apply previous knowledge of angles to properties of triangles, similar figures, and parallel lines cut by a transversal.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>8.GM.5.a</p> <p>Discover that the sum of the three angles in a triangle is 180 degrees.</p>	<p>7–8 M3 Lesson 13: Angle Sum of a Triangle</p>
<p>8.GM.5.b</p> <p>Discover and use the relationship between interior and exterior angles of a triangle.</p>	<p>7–8 M3 Lesson 14: Exterior Angles of Triangles</p>
<p>8.GM.5.c</p> <p>Identify congruent and supplementary pairs of angles when two parallel lines are cut by a transversal.</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>8.GM.5.d</p> <p>Recognize that two similar figures have congruent corresponding angles.</p>	<p>7–8 M3 Lesson 28: Exploring Angles in Similar Triangles</p>
<p>8.GM.6</p> <p>Use models to demonstrate a proof of the Pythagorean Theorem and its converse.</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.GM.7</p> <p>Apply the Pythagorean Theorem to model and solve real-world and mathematical problems in two and three dimensions involving right triangles.</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>

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<p>8.GM.8</p> <p>Find the distance between any two points in the coordinate plane using the Pythagorean Theorem.</p>	<p>7–8 M3 Lesson 17: Applications of the Pythagorean Theorem</p>
<p>8.GM.9</p> <p>Solve real-world and mathematical problems involving volumes of cones, cylinders, and spheres and the surface area of cylinders.</p>	<p>7–8 M5 Lesson 12: Surface Area of Cylinders</p> <p>7–8 M5 Topic D: Volume</p>

Data Analysis, Statistics, and Probability

7.DSP Data Analysis, Statistics, and Probability

South Carolina College and Career Ready Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>7.DSP.1</p> <p>Investigate concepts of random sampling.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.DSP.1.a</p> <p>Understand that a sample is a subset of a population and both possess the same characteristics.</p>	<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>
<p>7.DSP.1.b</p> <p>Differentiate between random and non-random sampling.</p>	<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 17: Memory Games</p>

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<p>7.DSP.1.c</p> <p>Understand that generalizations from a sample are valid only if the sample is representative of the population.</p>	<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> <p>7–8 M6 Lesson 17: Memory Games</p>
<p>7.DSP.1.d</p> <p>Understand that random sampling is used to gather a representative sample and supports valid inferences about the population.</p>	<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>
<p>7.DSP.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>
<p>7.DSP.3</p> <p>Visually compare the centers, spreads, and overlap of two displays of data (i.e., 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>

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<p>7.DSP.4</p> <p>Compare the numerical measures of center (mean, median, mode) and variability (range, interquartile range, mean absolute deviation) from two random samples to draw inferences about the populations.</p>	<p>7–8 M6 Topic D: Comparing Populations</p>
<p>7.DSP.5</p> <p>Investigate the concept of probability of chance events.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>7.DSP.5.a</p> <p>Determine probabilities of simple events.</p>	<p>7–8 M6 Lesson 1: What Is Probability? 7–8 M6 Lesson 2: Outcomes of Chance Experiments 7–8 M6 Lesson 3: Theoretical Probability 7–8 M6 Lesson 6: The Law of Large Numbers 7–8 M6 Lesson 7: Picking Blue</p>
<p>7.DSP.5.b</p> <p>Understand that probability measures likelihood of a chance event occurring.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p>
<p>7.DSP.5.c</p> <p>Understand that the probability of a chance event is a number between 0 and 1.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p>

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<p>7.DSP.5.d</p> <p>Understand that a probability closer to 1 indicates a likely chance event.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p>
<p>7.DSP.5.e</p> <p>Understand that a probability close to $\frac{1}{2}$ indicates that a chance event is neither likely nor unlikely.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p>
<p>7.DSP.5.f</p> <p>Understand that a probability closer to 0 indicates an unlikely chance event.</p>	<p>7–8 M6 Lesson 1: What Is Probability?</p>
<p>7.DSP.6</p> <p>Investigate the relationship between 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.DSP.6.a</p> <p>Determine approximate outcomes using theoretical probability.</p>	<p>7–8 M6 Lesson 1: What Is Probability? 7–8 M6 Lesson 2: Outcomes of Chance Experiments 7–8 M6 Lesson 3: Theoretical Probability 7–8 M6 Topic B: Estimating Probabilities</p>
<p>7.DSP.6.b</p> <p>Perform experiments that model theoretical probability.</p>	<p>7–8 M6 Lesson 1: What Is Probability? 7–8 M6 Lesson 2: Outcomes of Chance Experiments 7–8 M6 Lesson 3: Theoretical Probability 7–8 M6 Topic B: Estimating Probabilities</p>

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<p>7.DSP.6.c</p> <p>Compare theoretical and experimental probabilities.</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 3: Theoretical Probability</p> <p>7–8 M6 Topic B: Estimating Probabilities</p>
<p>7.DSP.7</p> <p>Apply the concepts of theoretical and experimental probabilities for simple events.</p>	<p><i>This standard is addressed by the lessons aligned to its subsections.</i></p>
<p>7.DSP.7.a</p> <p>Differentiate between uniform and non-uniform probability models (distributions).</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>7.DSP.7.b</p> <p>Develop both uniform and non-uniform probability models.</p>	<p>7–8 M6 Lesson 3: Theoretical Probability</p> <p>7–8 M6 Lesson 6: The Law of Large Numbers</p> <p>7–8 M6 Lesson 7: Picking Blue</p>
<p>7.DSP.7.c</p> <p>Perform experiments to test the validity of probability models.</p>	<p>7–8 M6 Lesson 6: The Law of Large Numbers</p>
<p>7.DSP.8</p> <p>Extend the concepts of simple events to investigate compound events.</p>	<p><i>This standard is addressed by the lessons aligned to its subsections.</i></p>

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<p>7.DSP.8.a</p> <p>Understand that the probability of a compound event is between 0 and 1.</p>	<p>7–8 M6 Lesson 4: Multistage Experiments</p>
<p>7.DSP.8.b</p> <p>Identify the outcomes in a sample space using organized lists, tables, and tree diagrams.</p>	<p>7–8 M6 Lesson 4: Multistage Experiments</p>
<p>7.DSP.8.c</p> <p>Determine probabilities of compound events using organized lists, tables, and tree diagrams.</p>	<p>7–8 M6 Lesson 4: Multistage Experiments</p>
<p>7.DSP.8.d</p> <p>Design and use simulations to collect data and determine probabilities.</p>	<p>7–8 M6 Lesson 8: Probability Simulations 7–8 M6 Lesson 9: Simulations with Random Number Tables</p>
<p>7.DSP.8.e</p> <p>Compare theoretical and experimental probabilities for compound events.</p>	<p>7–8 M6 Lesson 6: The Law of Large Numbers</p>

Data Analysis, Statistics, and Probability

8.DSP Data Analysis, Statistics, and Probability

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<p>8.DSP.1 Investigate bivariate data.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.DSP.1.a Collect bivariate data.</p>	<p>8 M6 Lesson 16: Using the Investigative Process</p>
<p>8.DSP.1.b Graph the bivariate data on a scatter plot.</p>	<p>7–8 M6 Lesson 18: Scatter Plots 7–8 M6 Lesson 19: Patterns in Scatter Plots</p>
<p>8.DSP.1.c Describe patterns observed on a scatter plot, including clustering, outliers, and association (positive, negative, no correlation, linear, nonlinear).</p>	<p>7–8 M6 Lesson 18: Scatter Plots 7–8 M6 Lesson 19: Patterns in Scatter Plots</p>
<p>8.DSP.2 Draw an approximate line of best fit on a scatter plot that appears to have a linear association and informally assess the fit of the line to the data points.</p>	<p>7–8 M6 Lesson 20: Informally Fitting a Line to Data 7–8 M6 Lesson 21: Linear Models</p>
<p>8.DSP.3 Apply concepts of an approximate line of best fit in real-world situations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>

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<p>8.DSP.3.a</p> <p>Find an approximate equation for the line of best fit using two appropriate data points.</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.DSP.3.b</p> <p>Interpret 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>
<p>8.DSP.3.c</p> <p>Solve problems using the equation.</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.DSP.4</p> <p>Investigate bivariate categorical data in two-way tables.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.DSP.4.a</p> <p>Organize bivariate categorical data in a two-way table.</p>	<p>7–8 M6 Topic F: Bivariate Categorical Data</p>
<p>8.DSP.4.b</p> <p>Interpret data in two-way tables using relative frequencies.</p>	<p>7–8 M6 Topic F: Bivariate Categorical Data</p>
<p>8.DSP.4.c</p> <p>Explore patterns of possible association between the two categorical variables.</p>	<p>7–8 M6 Topic F: Bivariate Categorical Data</p>

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<p>8.DSP.5 Organize data in matrices with rational numbers and apply to real-world and mathematical situations.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.DSP.5.a Understand that a matrix is a way to organize data.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.DSP.5.b Recognize that a $m \times n$ matrix has m rows and n columns.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.DSP.5.c Add and subtract matrices of the same size.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.DSP.5.d Multiply a matrix by a scalar.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

Functions

8.F Functions

South Carolina College and Career Ready Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>8.F.1 Explore the concept of functions.</p>	<p><i>This standard is addressed by the lessons aligned to its subsections.</i></p>
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South Carolina College and Career Ready Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>8.F.1.a</p> <p>Understand that a function assigns to each input exactly one 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.1.b</p> <p>Relate inputs (x-values or domain) and outputs (y-values or range) to independent and dependent variables.</p>	<p>7–8 M5 Lesson 2: Definition of a Function</p>
<p>8.F.1.c</p> <p>Translate among the multiple representations of a function, including mappings, tables, graphs, equations, and verbal descriptions.</p>	<p>7–8 M5 Lesson 2: Definition of a Function</p> <p>7–8 M5 Lesson 3: Linear Functions and Proportionality</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><i>Supplemental material is necessary to address mappings of functions.</i></p>
<p>8.F.1.d</p> <p>Determine if a relation is a function using multiple representations, including mappings, tables, graphs, equations, and verbal descriptions.</p>	<p>7–8 M5 Topic A: Functions</p> <p><i>Supplemental material is necessary to address the terminology of relations.</i></p>
<p>8.F.1.e</p> <p>Graph a function from a table of values. Understand that the graph and table both represent a set of ordered pairs of that function.</p>	<p>7–8 M5 Lesson 5: Graphs of Functions and Equations</p>

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<p>8.F.2</p> <p>Compare multiple representations of two functions, including mappings, tables, graphs, equations, and verbal descriptions, in order to draw conclusions.</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><i>Supplemental material is necessary to address mappings of functions.</i></p>
<p>8.F.3</p> <p>Investigate the differences between linear and nonlinear functions using multiple representations (i.e., tables, graphs, equations, and verbal descriptions).</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.F.3.a</p> <p>Define an equation in slope-intercept form ($y = mx + b$) as being a linear function.</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>8.F.3.b</p> <p>Recognize that the graph of a linear function has a constant rate of change.</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>
<p>8.F.3.c</p> <p>Provide examples of nonlinear functions.</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>
<p>8.F.4</p> <p>Apply the concepts of linear functions to real-world and mathematical situations.</p>	<p>7–8 M5 Lesson 6: Linear Functions and Rate of Change</p> <p>7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>7–8 M5 Lesson 23: Applications of Volume</p>

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<p>8.F.4.a</p> <p>Understand that the slope is the constant rate of change and the y-intercept is the point where $x = 0$.</p>	<p>7–8 M5 Lesson 6: Linear Functions and Rate of Change</p> <p>7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value</p>
<p>8.F.4.b</p> <p>Determine the slope and the y-intercept of a linear function given multiple representations, including two points, tables, graphs, equations, and verbal descriptions.</p>	<p>7–8 M5 Lesson 6: Linear Functions and Rate of Change</p> <p>7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value</p>
<p>8.F.4.c</p> <p>Construct a function in slope-intercept form that models a linear relationship between two quantities.</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 7: Interpreting Rate of Change and Initial Value</p>
<p>8.F.4.d</p> <p>Interpret the meaning of the slope and the y-intercept of a linear function in the context of the situation.</p>	<p>7–8 M5 Lesson 6: Linear Functions and Rate of Change</p> <p>7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value</p>
<p>8.F.4.e</p> <p>Explore the relationship between linear functions and arithmetic sequences.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

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<p>8.F.5 Apply the concepts of linear and nonlinear functions to graphs in real-world and mathematical situations.</p>	<p><i>This standard is fully addressed by the lessons aligned to its subsections.</i></p>
<p>8.F.5.a Analyze and describe attributes of graphs of functions (e.g., constant, increasing/decreasing, linear/nonlinear, maximum/minimum, discrete/continuous).</p>	<p>7–8 M5 Lesson 9: Increasing and Decreasing Functions 7–8 M5 Lesson 10: Graphs of Nonlinear Functions</p>
<p>8.F.5.b Sketch the graph of a function from a verbal description.</p>	<p>7–8 M5 Lesson 9: Increasing and Decreasing Functions 7–8 M5 Lesson 10: Graphs of Nonlinear Functions</p>
<p>8.F.5.c Write a verbal description from the graph of a function with and without scales.</p>	<p>7–8 M5 Lesson 10: Graphs of Nonlinear Functions <i>Supplemental material is necessary to fully address writing a verbal description from the graph of a function.</i></p>