
Grade 6 | Mathematics Standards of Learning for Virginia Public Schools (2023) Correlation to *Eureka Math*²® (2027)

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

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

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

Teachability

*Eureka Math*² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built into the teacher materials.

Accessibility

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

The curriculum also carries a focus on readability. By eliminating unnecessary words and using clear sentences, the *Eureka Math*² teacher-writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

Math Confidence

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

Mathematical Process Goals for Students	Aligned Components of <i>Eureka Math</i>²
Mathematical Problem Solving	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Communication	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Reasoning	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Connections	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Representations	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.

Number and Number Sense

6.NS.1 The student will reason and use multiple strategies to express equivalency, compare, and order numbers written as fractions, mixed numbers, decimals, and percents.

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<p>6.NS.1.a</p> <p>Estimate and determine the percent represented by a given model (e.g., number line, picture, verbal description), including percents greater than 100% and less than 1%.</p>	<p>6 M1 Lesson 22: Introduction to Percents</p> <p>6 M1 Lesson 23: Finding the Percent</p> <p>6 M1 Lesson 24: Finding a Part</p> <p>6 M1 Lesson 25: Finding the Whole</p> <p>6 M1 Lesson 26: Solving Percent Problems</p>
<p>6.NS.1.b</p> <p>Represent and determine equivalencies among decimals (through the thousandths place) and percents incorporating the use of number lines, and concrete and pictorial models.</p>	<p>6 M1 Lesson 22: Introduction to Percents</p> <p>6 M1 Lesson 23: Finding the Percent</p> <p>6 M1 Lesson 24: Finding a Part</p> <p>6 M1 Lesson 25: Finding the Whole</p> <p>6 M1 Lesson 26: Solving Percent Problems</p>
<p>6.NS.1.c</p> <p>Represent and determine equivalencies among fractions (proper or improper) and mixed numbers that have denominators that are 12 or less or factors of 100 and percents incorporating the use of number lines, and concrete and pictorial models.</p>	<p>6 M1 Lesson 22: Introduction to Percents</p> <p>6 M1 Lesson 23: Finding the Percent</p> <p>6 M1 Lesson 24: Finding a Part</p> <p>6 M1 Lesson 25: Finding the Whole</p> <p>6 M1 Lesson 26: Solving Percent Problems</p>

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<p>6.NS.1.d</p> <p>Represent and determine equivalencies among decimals, percents, fractions (proper or improper), and mixed numbers that have denominators that are 12 or less or factors of 100 incorporating the use of number lines, and concrete and pictorial models.</p>	<p>6 M1 Lesson 22: Introduction to Percents</p> <p>6 M1 Lesson 23: Finding the Percent</p> <p>6 M1 Lesson 24: Finding a Part</p> <p>6 M1 Lesson 25: Finding the Whole</p> <p>6 M1 Lesson 26: Solving Percent Problems</p>
<p>6.NS.1.e</p> <p>Use multiple strategies (e.g., benchmarks, number line, equivalency) to compare and order no more than four positive rational numbers expressed as fractions (proper or improper), mixed numbers, decimals, and percents (decimals through thousandths, fractions with denominators of 12 or less or factors of 100) with and without models. Justify solutions orally, in writing or with a model. Ordering may be in ascending or descending order.</p>	<p>6 M1 Lesson 22: Introduction to Percents</p> <p>6 M1 Lesson 23: Finding the Percent</p> <p>6 M1 Lesson 24: Finding a Part</p> <p>6 M1 Lesson 25: Finding the Whole</p> <p>6 M1 Lesson 26: Solving Percent Problems</p>

Number and Number Sense

6.NS.2 The student will reason and use multiple strategies to represent, compare, and order integers.

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<p>6.NS.2.a</p> <p>Represent integers (e.g., number lines, concrete materials, pictorial models), including models derived from contextual situations, and identify an integer represented by a point on a number line.</p>	<p>6 M3 Lesson 10: The Four Quadrants of the Coordinate Plane</p> <p>6 M3 Lesson 11: Plotting Points in the Coordinate Plane</p> <p>6 M3 Lesson 12: Reflections in the Coordinate Plane</p> <p>6 M3 Lesson 13: Constructing the Coordinate Plane</p>
<p>6.NS.2.b</p> <p>Compare and order integers using a number line.</p>	<p>6 M3 Lesson 2: Integers</p> <p>6 M3 Lesson 3: Rational Numbers</p> <p>6 M3 Lesson 4: Rational Numbers in Real-World Situations</p>
<p>6.NS.2.c</p> <p>Compare integers, using mathematical symbols (<, >, =).</p>	<p>6 M3 Lesson 5: Comparing Rational Numbers</p> <p>6 M3 Lesson 6: Ordering Rational Numbers</p> <p>6 M3 Lesson 8: Absolute Value and Order</p>
<p>6.NS.2.d</p> <p>Identify and describe the absolute value of an integer as the distance from zero on the number line.</p>	<p>6 M3 Lesson 5: Comparing Rational Numbers</p> <p>6 M3 Lesson 6: Ordering Rational Numbers</p> <p>6 M3 Lesson 8: Absolute Value and Order</p>

Number and Number Sense

6.NS.3 The student will recognize and represent patterns with whole number exponents and perfect squares.

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<p>6.NS.3.a</p> <p>Recognize and represent patterns with bases and exponents that are whole numbers.</p>	<p>6 M4 Lesson 1: Expressions with Addition and Subtraction</p> <p>6 M4 Lesson 2: Expressions with Multiplication and Division</p> <p>6 M4 Lesson 3: Exploring Exponents</p> <p>6 M4 Lesson 4: Evaluating Expressions with Exponents</p> <p>6 M4 Lesson 5: Exploring Order of Operations</p> <p>6 M4 Lesson 6: Order of Operations</p>
<p>6.NS.3.b</p> <p>Recognize and represent patterns of perfect squares not to exceed 20^2, by using concrete and pictorial models.</p>	<p>6 M4 Lesson 1: Expressions with Addition and Subtraction</p> <p>6 M4 Lesson 2: Expressions with Multiplication and Division</p> <p>6 M4 Lesson 3: Exploring Exponents</p> <p>6 M4 Lesson 4: Evaluating Expressions with Exponents</p> <p>6 M4 Lesson 5: Exploring Order of Operations</p> <p>6 M4 Lesson 6: Order of Operations</p>
<p>6.NS.3.c</p> <p>Justify if a number between 0 and 400 is a perfect square through modeling or mathematical reasoning.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>6.NS.3.d</p> <p>Recognize and represent powers of 10 with whole number exponents by examining patterns in place value.</p>	<p>5 M1 Lesson 2: Multiply and divide by 10, 100, and 1,000 and identify patterns in the products and quotients.</p> <p>5 M1 Lesson 3: Use exponents to multiply and divide by powers of 10.</p> <p>5 M1 Lesson 4: Estimate products and quotients by using powers of 10 and their multiples.</p> <p>5 M4 Lesson 5: Multiply and divide decimal numbers by powers of 10.</p>

Computation and Estimation

6.CE.1 The student will estimate, demonstrate, solve, and justify solutions to problems using operations with fractions and mixed numbers, including those in context.

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<p>6.CE.1.a</p> <p>Demonstrate/model multiplication and division of fractions (proper or improper) and mixed numbers using multiple representations.</p>	<p>5 M3 Lesson 17: Solve word problems involving fractions with multiplication and division.</p> <p>5 M3 Lesson 21: Solve multi-step word problems involving fractions.</p> <p>5 M5 Lesson 14: Solve real-world problems involving areas of composite figures with mixed-number side lengths.</p> <p>5 M5 Lesson 15: Solve multi-step word problems involving multiplication of mixed numbers.</p>
<p>6.CE.1.b</p> <p>Multiply and divide fractions (proper or improper) and mixed numbers that include denominators of 12 or less. Answers are expressed in simplest form.</p>	<p>5 M3 Lesson 3: Multiply a whole number by a fraction less than 1.</p> <p>5 M3 Lesson 9: Multiply fractions by unit fractions by making simpler problems.</p> <p>5 M3 Lesson 10: Multiply fractions greater than 1 by fractions.</p> <p>5 M5 Lesson 12: Multiply mixed numbers.</p> <p>6 M2 Lesson 6: Dividing a Whole Number by a Fraction</p> <p>6 M2 Lesson 7: Dividing a Fraction by a Whole Number</p> <p>6 M2 Lesson 8: Dividing Fractions by Making Common Denominators</p> <p>6 M2 Lesson 9: Dividing Fractions by Using Tape Diagrams</p> <p>6 M2 Lesson 10: Dividing Fractions by Using the Invert and Multiply Strategy</p> <p>6 M2 Lesson 11: Applications of Fraction Division</p> <p>6 M2 Lesson 12: Fraction Operations in a Real-World Situation</p> <p><i>Supplemental material is necessary to address expressing answers in simplest form.</i></p>

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<p>6.CE.1.c</p> <p>Investigate and explain the effect of multiplying or dividing a fraction, whole number, or mixed number by a number between zero and one.</p>	<p>5 M3 Lesson 1: Find fractions of a set with arrays.</p> <p>5 M3 Lesson 2: Interpret fractions as division to find fractions of a set with tape diagrams and number lines.</p> <p>5 M3 Lesson 4: Multiply a whole number by a fraction.</p> <p>5 M3 Lesson 5: Convert larger customary measurement units to smaller measurement units.</p> <p>5 M3 Lesson 6: Convert smaller customary measurement units to larger measurement units.</p> <p>5 M3 Lesson 7: Multiply fractions less than 1 by unit fractions pictorially.</p> <p>5 M3 Lesson 8: Multiply fractions less than 1 pictorially.</p> <p>5 M3 Lesson 9: Multiply fractions by unit fractions by making simpler problems.</p> <p>5 M3 Lesson 10: Multiply fractions greater than 1 by fractions.</p> <p>5 M3 Lesson 11: Multiply fractions.</p>
<p>6.CE.1.d</p> <p>Estimate, determine, and justify the solution to single-step and multistep problems in context that involve addition and subtraction with fractions (proper or improper) and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less. Answers are expressed in simplest form.</p>	<p>5 M2 Lesson 10: Add whole numbers and mixed numbers and add mixed numbers with related units.</p> <p>5 M2 Lesson 11: Add mixed numbers with unrelated units.</p> <p>5 M2 Lesson 12: Subtract whole numbers from mixed numbers and mixed numbers from whole numbers.</p> <p>5 M2 Lesson 13: Subtract mixed numbers from mixed numbers with related units.</p> <p>5 M2 Lesson 14: Subtract mixed numbers from mixed numbers with unrelated units.</p> <p>5 M2 Lesson 17: Solve problems by equally redistributing a total amount.</p> <p><i>Supplemental material is necessary to address expressing answers in simplest form.</i></p>

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<p>6.CE.1.e</p> <p>Estimate, determine, and justify the solution to single-step and multistep problems in context that involve multiplication and division with fractions (proper or improper) and mixed numbers that include denominators of 12 or less. Answers are expressed in simplest form.</p>	<p>5 M3 Lesson 17: Solve word problems involving fractions with multiplication and division.</p> <p>5 M3 Lesson 21: Solve multi-step word problems involving fractions.</p> <p>5 M5 Lesson 14: Solve real-world problems involving areas of composite figures with mixed-number side lengths.</p> <p>5 M5 Lesson 15: Solve multi-step word problems involving multiplication of mixed numbers.</p> <p>6 M2 Lesson 6: Dividing a Whole Number by a Fraction</p> <p>6 M2 Lesson 7: Dividing a Fraction by a Whole Number</p> <p>6 M2 Lesson 8: Dividing Fractions by Making Common Denominators</p> <p>6 M2 Lesson 9: Dividing Fractions by Using Tape Diagrams</p> <p>6 M2 Lesson 10: Dividing Fractions by Using the Invert and Multiply Strategy</p> <p>6 M2 Lesson 11: Applications of Fraction Division</p> <p>6 M2 Lesson 12: Fraction Operations in a Real-World Situation</p> <p><i>Supplemental material is necessary to address expressing answers in simplest form.</i></p>
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Computation and Estimation

6.CE.2 The student will estimate, demonstrate, solve, and justify solutions to problems using operations with integers, including those in context.

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<p>6.CE.2.a</p> <p>Demonstrate/model addition, subtraction, multiplication, and division of integers using pictorial representations or concrete manipulatives.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
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<p>6.CE.2.b</p> <p>Add, subtract, multiply, and divide two integers.</p>	<p>7 M2 Lesson 1: Combining Opposites</p> <p>7 M2 Lesson 2: Adding Integers</p> <p>7 M2 Lesson 3: Adding Integers Efficiently</p> <p>7 M2 Lesson 4: KAKOOMA[®]</p> <p>7 M2 Lesson 5: Decomposing Rational Numbers to Make Addition More Efficient</p> <p>7 M2 Lesson 6: Adding Rational Numbers</p> <p>7 M2 Lesson 7: What Subtraction Means</p> <p>7 M2 Lesson 8: Subtracting Integers, Part 1</p> <p>7 M2 Lesson 9: Subtracting Integers, Part 2</p> <p>7 M2 Lesson 10: Subtracting Rational Numbers, Part 1</p> <p>7 M2 Lesson 11: Subtracting Rational Numbers, Part 2</p> <p>7 M2 Lesson 12: The Integer Game</p> <p>7 M2 Lesson 13: Understanding Multiples of Negative Numbers</p> <p>7 M2 Lesson 14: Understanding the Product of Two Negative Numbers</p> <p>7 M2 Lesson 15: Multiplying Rational Numbers</p> <p>7 M2 Lesson 16: Exponential Expressions with Rational Numbers</p> <p>7 M2 Lesson 17: Understanding Negative Dividends</p> <p>7 M2 Lesson 18: Understanding Negative Divisors</p> <p>7 M2 Lesson 19: Rational Numbers as Decimals, Part 1</p> <p>7 M2 Lesson 20: Rational Numbers as Decimals, Part 2</p> <p>7 M2 Lesson 21: Comparing and Ordering Rational Numbers</p> <p>7 M2 Lesson 22: Multiplication and Division Expressions</p> <p>7 M2 Lesson 25: Writing and Evaluating Expressions with Rational Numbers, Part 1</p> <p>7 M2 Lesson 26: Writing and Evaluating Expressions with Rational Numbers, Part 2</p>
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<p>6.CE.2.c</p> <p>Simplify an expression that contains absolute value bars $$ and an operation with two integers (e.g., $- 5 - 8$ or $\frac{ -12 }{8}$) and represent the result on a number line.</p>	<p>6 M3 Lesson 7: Absolute Value</p>
<p>6.CE.2.d</p> <p>Estimate, determine, and justify the solution to one and two-step contextual problems, involving addition, subtraction, multiplication, and division with integers.</p>	<p>6 M4 Lesson 17: Equations and Solutions</p> <p>6 M4 Lesson 19: Solving Equations with Addition and Subtraction</p> <p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p> <p>6 M4 Lesson 21: Solving Problems with Equations</p> <p>6 M5 Lesson 2: The Area of a Right Triangle</p> <p>7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures</p> <p>7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 12: Solving Equations Algebraically and Arithmetically</p> <p>7 M3 Lesson 13: Solving Equations—Puzzles</p> <p>7 M3 Lesson 14: Solving Equations—Scavenger Hunt</p> <p>7 M3 Lesson 15: Solving Equations Fluently</p> <p>7 M3 Lesson 16: Using Equations to Solve Rate Problems</p>

Measurement and Geometry

6.MG.1 The student will identify the characteristics of circles and solve problems, including those in context, involving circumference and area.

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<p>6.MG.1.a</p> <p>Identify and describe chord, diameter, radius, circumference, and area of a circle.</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>
<p>6.MG.1.b</p> <p>Investigate and describe the relationship between:</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>
<p>6.MG.1.b.i</p> <p>diameter and radius;</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>

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<p>6.MG.1.b.ii radius and circumference; and</p>	<p>7 M4 Lesson 10: The Outside of a Circle 7 M4 Lesson 11: The Inside of a Circle 7 M4 Lesson 12: Exploring the Area and Circumference of a Circle 7 M4 Lesson 13: Finding Areas of Circular Regions 7 M4 Lesson 14: Composite Figures with Circular Regions 7 M4 Lesson 15: Watering a Lawn</p>
<p>6.MG.1.b.iii diameter and circumference.</p>	<p>7 M4 Lesson 10: The Outside of a Circle 7 M4 Lesson 11: The Inside of a Circle 7 M4 Lesson 12: Exploring the Area and Circumference of a Circle 7 M4 Lesson 13: Finding Areas of Circular Regions 7 M4 Lesson 14: Composite Figures with Circular Regions 7 M4 Lesson 15: Watering a Lawn</p>
<p>6.MG.1.c Develop an approximation for pi (3.14) by gathering data and comparing the circumference to the diameter of various circles, using concrete manipulatives or technological models.</p>	<p>7 M4 Lesson 10: The Outside of a Circle 7 M4 Lesson 11: The Inside of a Circle 7 M4 Lesson 12: Exploring the Area and Circumference of a Circle 7 M4 Lesson 13: Finding Areas of Circular Regions 7 M4 Lesson 14: Composite Figures with Circular Regions 7 M4 Lesson 15: Watering a Lawn</p>

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<p>6.MG.1.d</p> <p>Develop the formula for circumference using the relationship between diameter, radius, and pi.</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>
<p>6.MG.1.e</p> <p>Solve problems, including those in context, involving circumference and area of a circle when given the length of the diameter or radius.</p>	<p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>

Measurement and Geometry

6.MG.2 The student will reason mathematically to solve problems, including those in context, that involve the area and perimeter of triangles and parallelograms.

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<p>6.MG.2.a</p> <p>Develop the formula for determining the area of parallelograms and triangles using pictorial representations and concrete manipulatives (e.g., two-dimensional diagrams, grid paper).</p>	<p>6 M5 Lesson 1: The Area of a Parallelogram</p> <p>6 M5 Lesson 2: The Area of a Right Triangle</p> <p>6 M5 Lesson 3: The Area of a Triangle</p> <p>6 M5 Lesson 4: Areas of Triangles in Real-World Situations</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p> <p>6 M5 Lesson 6: Problem Solving with Area in the Coordinate Plane</p> <p>6 M5 Lesson 7: Areas of Trapezoids and Other Polygons</p> <p>6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations</p>
<p>6.MG.2.b</p> <p>Solve problems, including those in context, involving the perimeter and area of triangles and parallelograms.</p>	<p>6 M5 Lesson 1: The Area of a Parallelogram</p> <p>6 M5 Lesson 2: The Area of a Right Triangle</p> <p>6 M5 Lesson 3: The Area of a Triangle</p> <p>6 M5 Lesson 4: Areas of Triangles in Real-World Situations</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p> <p>6 M5 Lesson 6: Problem Solving with Area in the Coordinate Plane</p> <p>6 M5 Lesson 7: Areas of Trapezoids and Other Polygons</p> <p>6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations</p>

Measurement and Geometry

6.MG.3 The student will describe the characteristics of the coordinate plane and graph ordered pairs.

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<p>6.MG.3.a</p> <p>Identify and label the axes, origin, and quadrants of a coordinate plane.</p>	<p>5 M6 Lesson 1: Construct a coordinate system on a line.</p> <p>5 M6 Lesson 2: Construct a coordinate system in a plane.</p> <p>5 M6 Lesson 3: Identify and plot points by using ordered points.</p> <p>5 M6 Lesson 4: Describe the distance and direction between points in the coordinate plane.</p> <p>6 M3 Lesson 14: Modeling with the Coordinate Plane</p> <p>6 M3 Lesson 15: Distance in the Coordinate Plane</p> <p>6 M3 Lesson 16: Figures in the Coordinate Plane</p> <p>6 M3 Lesson 17: Problem Solving with the Coordinate Plane</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p>
<p>6.MG.3.b</p> <p>Identify and describe the location (quadrant or the axis) of a point given as an ordered pair. Ordered pairs will be limited to coordinates expressed as integers.</p>	<p>5 M6 Lesson 1: Construct a coordinate system on a line.</p> <p>5 M6 Lesson 2: Construct a coordinate system in a plane.</p> <p>5 M6 Lesson 3: Identify and plot points by using ordered points.</p> <p>5 M6 Lesson 4: Describe the distance and direction between points in the coordinate plane.</p> <p>6 M3 Lesson 14: Modeling with the Coordinate Plane</p> <p>6 M3 Lesson 15: Distance in the Coordinate Plane</p> <p>6 M3 Lesson 16: Figures in the Coordinate Plane</p> <p>6 M3 Lesson 17: Problem Solving with the Coordinate Plane</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p>

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<p>6.MG.3.c</p> <p>Graph ordered pairs in the four quadrants and on the axes of a coordinate plane. Ordered pairs will be limited to coordinates expressed as integers.</p>	<p>5 M6 Lesson 1: Construct a coordinate system on a line.</p> <p>5 M6 Lesson 2: Construct a coordinate system in a plane.</p> <p>5 M6 Lesson 3: Identify and plot points by using ordered points.</p> <p>5 M6 Lesson 4: Describe the distance and direction between points in the coordinate plane.</p> <p>6 M3 Lesson 14: Modeling with the Coordinate Plane</p> <p>6 M3 Lesson 15: Distance in the Coordinate Plane</p> <p>6 M3 Lesson 16: Figures in the Coordinate Plane</p> <p>6 M3 Lesson 17: Problem Solving with the Coordinate Plane</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p>
<p>6.MG.3.d</p> <p>Identify ordered pairs represented by points in the four quadrants and on the axes of the coordinate plane. Ordered pairs will be limited to coordinates expressed as integers.</p>	<p>5 M6 Lesson 1: Construct a coordinate system on a line.</p> <p>5 M6 Lesson 2: Construct a coordinate system in a plane.</p> <p>5 M6 Lesson 3: Identify and plot points by using ordered points.</p> <p>5 M6 Lesson 4: Describe the distance and direction between points in the coordinate plane.</p> <p>6 M3 Lesson 14: Modeling with the Coordinate Plane</p> <p>6 M3 Lesson 15: Distance in the Coordinate Plane</p> <p>6 M3 Lesson 16: Figures in the Coordinate Plane</p> <p>6 M3 Lesson 17: Problem Solving with the Coordinate Plane</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p>

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<p>6.MG.3.e</p> <p>Relate the coordinates of a point to the distance from each axis and relate the coordinates of a single point to another point on the same horizontal or vertical line. Ordered pairs will be limited to coordinates expressed as integers.</p>	<p>5 M6 Lesson 1: Construct a coordinate system on a line.</p> <p>5 M6 Lesson 2: Construct a coordinate system in a plane.</p> <p>5 M6 Lesson 3: Identify and plot points by using ordered points.</p> <p>5 M6 Lesson 4: Describe the distance and direction between points in the coordinate plane.</p> <p>6 M3 Lesson 14: Modeling with the Coordinate Plane</p> <p>6 M3 Lesson 15: Distance in the Coordinate Plane</p> <p>6 M3 Lesson 16: Figures in the Coordinate Plane</p> <p>6 M3 Lesson 17: Problem Solving with the Coordinate Plane</p> <p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p>
<p>6.MG.3.f</p> <p>Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to determine the length of a side joining points with the same first coordinate or the same second coordinate. Ordered pairs will be limited to coordinates expressed as integers. Apply these techniques in the context of solving contextual and mathematical problems.</p>	<p>6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane</p> <p>6 M5 Lesson 6: Problem Solving with Area in the Coordinate Plane</p>

Measurement and Geometry

6.MG.4 The student will determine congruence of segments, angles, and polygons.

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<p>6.MG.4.a Identify regular polygons.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>6.MG.4.b Draw lines of symmetry to divide regular polygons into two congruent parts.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>6.MG.4.c Determine the congruence of segments, angles, and polygons given their properties.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>6.MG.4.d Determine whether polygons are congruent or noncongruent according to the measures of their sides and angles.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

Probability and Statistics

6.PS.1 The student will apply the data cycle (formulate questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on circle graphs.

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<p>6.PS.1.a</p> <p>Formulate questions that require the collection or acquisition of data with a focus on circle graphs.</p>	<p>6 M6 Lesson 1: Posing Statistical Questions</p> <p>6 M6 Lesson 6: Selecting a Data Display</p> <p>6 M6 Lesson 17: Developing a Statistical Project</p>
<p>6.PS.1.b</p> <p>Determine the data needed to answer a formulated question and collect the data (or acquire existing data) using various methods (e.g., observations, measurement, surveys, experiments).</p>	<p>6 M6 Lesson 2: Describing a Data Distribution</p> <p>6 M6 Lesson 3: Creating a Dot Plot</p> <p>6 M6 Lesson 4: Creating a Histogram</p> <p>6 M6 Lesson 9: Variability in a Data Distribution</p> <p>6 M6 Lesson 14: Using a Box Plot to Summarize a Distribution</p> <p>6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures</p>
<p>6.PS.1.c</p> <p>Determine the factors that will ensure that the data collected is a sample that is representative of a larger population.</p>	<p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p> <p>7 M6 Lesson 15: Sampling Variability and the Effect of Sample Size</p> <p>7 M6 Lesson 16: Sampling Variability When Estimating a Population Proportion</p>

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<p>6.PS.1.d</p> <p>Organize and represent data using circle graphs, with and without the use of technology tools. The number of data values should be limited to allow for comparisons that have denominators of 12 or less or those that are factors of 100 (e.g., in a class of 20 students, 7 choose apples as a favorite fruit, so the comparison is 7 out of 20, $\frac{7}{20}$, or 35%).</p>	<p>7 Data Investigation: A Typical Day</p> <p>7 Data Investigation: Language Diversity</p> <p><i>Supplemental material is necessary to address representing circle graphs with technology tools.</i></p>
<p>6.PS.1.e</p> <p>Analyze data represented in a circle graph by making observations and drawing conclusions.</p>	<p>5 Data Talk: Eye Colors of the US Population</p> <p>5 Data Talk: American Pastimes</p> <p>7 Data Investigation: A Typical Day</p> <p>7 Data Investigation: Language Diversity</p>
<p>6.PS.1.f</p> <p>Compare data represented in a circle graph with the same data represented in other graphs, including but not limited to bar graphs, pictographs, and line plots (dot plots), and justify which graphical representation best represents the data.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

Probability and Statistics

6.PS.2 The student will represent the mean as a balance point and determine the effect on statistical measures when a data point is added, removed, or changed.

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<p>6.PS.2.a</p> <p>Represent the mean of a set of data graphically as the balance point represented in a line plot (dot plot).</p>	<p>6 M6 Lesson 7: Using the Mean to Describe the Center</p> <p>6 M6 Lesson 8: The Mean as a Balance Point</p> <p>6 M6 Lesson 10: The Mean Absolute Deviation</p> <p>6 M6 Lesson 11: Using the Mean and Mean Absolute Deviation</p> <p>6 M6 Lesson 12: Using the Median to Describe the Center</p> <p>6 M6 Lesson 13: Using the Interquartile Range to Describe Variability</p> <p>6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures</p> <p>6 M6 Lesson 21: Comparing Measures of Variability</p>
<p>6.PS.2.b</p> <p>Determine the effect on measures of center when a single value of a data set is added, removed, or changed.</p>	<p>6 M6 Lesson 1: Posing Statistical Questions</p> <p>6 M6 Lesson 5: Comparing Data Displays</p> <p>6 M6 Lesson 17: Developing a Statistical Project</p> <p>6 M6 Lesson 21: Comparing Measures of Variability</p>
<p>6.PS.2.c</p> <p>Observe patterns in data to identify outliers and determine their effect on mean, median, mode, or range.</p>	<p>6 M6 Lesson 2: Describing a Data Distribution</p> <p>6 M6 Lesson 3: Creating a Dot Plot</p> <p>6 M6 Lesson 4: Creating a Histogram</p> <p>6 M6 Lesson 9: Variability in a Data Distribution</p> <p>6 M6 Lesson 14: Using a Box Plot to Summarize a Distribution</p> <p>6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures</p>

Patterns, Functions, and Algebra

6.PFA.1 The student will use ratios to represent relationships between quantities, including those in context.

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<p>6.PFA.1.a</p> <p>Represent a relationship between two quantities using ratios.</p>	<p>6 M1 Lesson 1: Jars of Jelly Beans</p> <p>6 M1 Lesson 2: Introduction to Ratios</p> <p>6 M1 Lesson 3: Ratios and Tape Diagrams</p> <p>6 M1 Lesson 4: Exploring Ratios by Making Batches</p> <p>6 M1 Lesson 5: Equivalent Ratios</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p>
<p>6.PFA.1.b</p> <p>Represent a relationship in context that makes a comparison by using the notations $\frac{a}{b}$, $a:b$, and a to b.</p>	<p>6 M1 Lesson 2: Introduction to Ratios</p> <p>6 M1 Lesson 3: Ratios and Tape Diagrams</p> <p>6 M1 Lesson 4: Exploring Ratios by Making Batches</p> <p>6 M1 Lesson 5: Equivalent Ratios</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p>

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<p>6.PFA.1.c</p> <p>Represent different comparisons within the same quantity or between different quantities (e.g., part to part, part to whole, whole to whole).</p>	<p>6 M1 Lesson 2: Introduction to Ratios</p> <p>6 M1 Lesson 3: Ratios and Tape Diagrams</p> <p>6 M1 Lesson 4: Exploring Ratios by Making Batches</p> <p>6 M1 Lesson 5: Equivalent Ratios</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p>
<p>6.PFA.1.d</p> <p>Create a relationship in words for a given ratio expressed symbolically.</p>	<p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 7: Graphs of Ratio Relationships</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M1 Lesson 12: Multiple Ratio Relationships</p> <p>6 M1 Lesson 13: Comparing Ratio Relationships, Part 1</p> <p>6 M1 Lesson 14: Comparing Ratio Relationships, Part 2</p> <p>6 M1 Lesson 15: The Value of the Ratio</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p>

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<p>6.PFA.1.e</p> <p>Create a table of equivalent ratios to represent a proportional relationship between two quantities, when given a ratio.</p>	<p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 7: Graphs of Ratio Relationships</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M1 Lesson 12: Multiple Ratio Relationships</p> <p>6 M1 Lesson 13: Comparing Ratio Relationships, Part 1</p> <p>6 M1 Lesson 14: Comparing Ratio Relationships, Part 2</p> <p>6 M1 Lesson 15: The Value of the Ratio</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p>
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Aligned Components of *Eureka Math*²

<p>6.PFA.1.f</p> <p>Create a table of equivalent ratios to represent a proportional relationship between two quantities, when given a contextual situation.</p>	<p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 7: Graphs of Ratio Relationships</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M1 Lesson 12: Multiple Ratio Relationships</p> <p>6 M1 Lesson 13: Comparing Ratio Relationships, Part 1</p> <p>6 M1 Lesson 14: Comparing Ratio Relationships, Part 2</p> <p>6 M1 Lesson 15: The Value of the Ratio</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p>
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Patterns, Functions, and Algebra

6.PFA.2 The student will identify and represent proportional relationships between two quantities, including those in context (unit rates are limited to positive values).

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<p>6.PFA.2.a</p> <p>Identify the unit rate of a proportional relationship represented by a table of values, a contextual situation, or a graph.</p>	<p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 17: Rates</p> <p>6 M1 Lesson 18: Comparing Rates</p> <p>6 M1 Lesson 19: Using Rates to Convert Units</p> <p>6 M1 Lesson 20: Solving Rate Problems</p> <p>6 M1 Lesson 21: Solving Multi-Step Rate Problems</p> <p>6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations</p> <p>6 M5 Lesson 13: Surface Area in Real-World Situations</p>
<p>6.PFA.2.b</p> <p>Determine a missing value in a ratio table that represents a proportional relationship between two quantities using a unit rate.</p>	<p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 7: Graphs of Ratio Relationships</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M1 Lesson 12: Multiple Ratio Relationships</p> <p>6 M1 Lesson 13: Comparing Ratio Relationships, Part 1</p> <p>6 M1 Lesson 14: Comparing Ratio Relationships, Part 2</p> <p>6 M1 Lesson 15: The Value of the Ratio</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p>

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<p>6.PFA.2.c</p> <p>Determine whether a proportional relationship exists between two quantities, when given a table of values, context, or graph.</p>	<p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 17: Rates</p> <p>6 M1 Lesson 18: Comparing Rates</p> <p>6 M1 Lesson 19: Using Rates to Convert Units</p> <p>6 M1 Lesson 20: Solving Rate Problems</p> <p>6 M1 Lesson 21: Solving Multi-Step Rate Problems</p> <p>6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations</p> <p>6 M5 Lesson 13: Surface Area in Real-World Situations</p>
<p>6.PFA.2.d</p> <p>When given a contextual situation representing a proportional relationship, find the unit rate and create a table of values or a graph.</p>	<p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 17: Rates</p> <p>6 M1 Lesson 18: Comparing Rates</p> <p>6 M1 Lesson 19: Using Rates to Convert Units</p> <p>6 M1 Lesson 20: Solving Rate Problems</p> <p>6 M1 Lesson 21: Solving Multi-Step Rate Problems</p> <p>6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations</p> <p>6 M5 Lesson 13: Surface Area in Real-World Situations</p>

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<p>6.PFA.2.e</p> <p>Make connections between and among multiple representations of the same proportional relationship using verbal descriptions, ratio tables, and graphs.</p>	<p>6 M1 Lesson 6: Ratio Tables and Double Number Lines</p> <p>6 M1 Lesson 7: Graphs of Ratio Relationships</p> <p>6 M1 Lesson 8: Addition Patterns in Ratio Relationships</p> <p>6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships</p> <p>6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships</p> <p>6 M1 Lesson 11: Applications of Ratio Reasoning</p> <p>6 M1 Lesson 12: Multiple Ratio Relationships</p> <p>6 M1 Lesson 13: Comparing Ratio Relationships, Part 1</p> <p>6 M1 Lesson 14: Comparing Ratio Relationships, Part 2</p> <p>6 M1 Lesson 15: The Value of the Ratio</p> <p>6 M1 Lesson 16: Speed</p> <p>6 M1 Lesson 18: Comparing Rates</p>
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Patterns, Functions, and Algebra

6.PFA.3 The student will write and solve one-step linear equations in one variable, including contextual problems that require the solution of a one-step linear equation in one variable.

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<p>6.PFA.3.a</p> <p>Identify and develop examples of the following algebraic vocabulary: equation, variable, expression, term, and coefficient.</p>	<p>6 M4 Lesson 7: Algebraic Expressions with Addition and Subtraction</p> <p>6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division</p> <p>6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations</p> <p>6 M4 Lesson 11: Modeling Real-World Situations with Expressions</p>
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<p>6.PFA.3.b</p> <p>Represent and solve one-step linear equations in one variable, using a variety of concrete manipulatives and pictorial representations (e.g., colored chips, algebra tiles, weights on a balance scale).</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>6.PFA.3.c</p> <p>Apply properties of real numbers and properties of equality to solve a one-step equation in one variable. Coefficients are limited to integers and unit fractions. Numeric terms are limited to integers.</p>	<p>6 M4 Lesson 17: Equations and Solutions</p> <p>6 M4 Lesson 19: Solving Equations with Addition and Subtraction</p> <p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p> <p>6 M4 Lesson 21: Solving Problems with Equations</p> <p>6 M5 Lesson 2: The Area of a Right Triangle</p>
<p>6.PFA.3.d</p> <p>Confirm solutions to one-step linear equations in one variable using a variety of concrete manipulatives and pictorial representations (e.g., colored chips, algebra tiles, weights on a balance scale).</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>6.PFA.3.e</p> <p>Write a one-step linear equation in one variable to represent a verbal situation, including those in context.</p>	<p>6 M4 Lesson 17: Equations and Solutions</p> <p>6 M4 Lesson 19: Solving Equations with Addition and Subtraction</p> <p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p> <p>6 M4 Lesson 21: Solving Problems with Equations</p> <p>6 M5 Lesson 2: The Area of a Right Triangle</p>

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<p>6.PFA.3.f</p> <p>Create a verbal situation in context given a one-step linear equation in one variable.</p>	<p>6 M4 Lesson 7: Algebraic Expressions with Addition and Subtraction</p> <p>6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division</p> <p>6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations</p>
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Patterns, Functions, and Algebra

6.PFA.4 The student will represent a contextual situation using a linear inequality in one variable with symbols and graphs on a number line.

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<p>6.PFA.4.a</p> <p>Given the graph of a linear inequality in one variable on a number line, represent the inequality in two equivalent ways (e.g., $x < -5$ or $-5 > x$) using symbols. Symbols include $<$, $>$, \leq, \geq.</p>	<p>6 M4 Lesson 18: Inequalities and Solutions</p>
<p>6.PFA.4.b</p> <p>Write a linear inequality in one variable to represent a given constraint or condition in context or given a graph on a number line.</p>	<p>6 M4 Lesson 18: Inequalities and Solutions</p>
<p>6.PFA.4.c</p> <p>Given a linear inequality in one variable, create a corresponding contextual situation or create a number line graph.</p>	<p>6 M4 Lesson 18: Inequalities and Solutions</p>

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<p>6.PFA.4.d</p> <p>Use substitution or a number line graph to justify whether a given number in a specified set makes a linear inequality in one variable true.</p>	<p>6 M4 Lesson 18: Inequalities and Solutions</p>
<p>6.PFA.4.e</p> <p>Identify a numerical value(s) that is part of the solution set of a given inequality in one variable.</p>	<p>6 M4 Lesson 17: Equations and Solutions</p> <p>6 M4 Lesson 18: Inequalities and Solutions</p> <p>6 M4 Lesson 19: Solving Equations with Addition and Subtraction</p> <p>6 M4 Lesson 20: Solving Equations with Multiplication and Division</p>