Grade 7 | Mathematics Standards of Learning for Virginia Public Schools Correlation to *Eureka Math*®

About *Eureka Math*

Created by Great Minds®, a mission-driven Public Benefit Corporation, *Eureka Math*® helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students' mastery of math.

Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.

Aligned

Great Minds offers detailed analyses that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

Data

Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

Full Suite of Resources

Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

The teacher–writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources

Mathematical Process Goals for Students	Aligned Components of *Eureka Math*
Mathematical Problem Solving	Lessons in every module engage students in mathematical processes.
Mathematical Communication	
Mathematical Reasoning	
Mathematical Connections	
Mathematical Representations	

Number and Number Sense

7.NS.1 The student will investigate and describe the concept of exponents for powers of ten and compare and order numbers greater than zero written in scientific notation.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.NS.1.a Investigate and describe powers of 10 with negative exponents by examining patterns.	G8 M1 Lesson 5: Negative Exponents and the Laws of Exponents G8 M1 Lesson 7: Magnitude
7.NS.1.b Represent a power of 10 with a negative exponent in fraction and decimal form.	G8 M1 Topic B: Magnitude and Scientific Notation
7.NS.1.c Convert between numbers greater than 0 written in scientific notation and decimals.	G8 M1 Topic B: Magnitude and Scientific Notation
7.NS.1.d Compare and order no more than four numbers greater than 0 written in scientific notation. Ordering may be in ascending or descending order.	*Supplemental material is necessary to address this standard.*

Number and Number Sense
7.NS.2 The student will reason and use multiple strategies to compare and order rational numbers.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.NS.2.a Use multiple strategies (e.g., benchmarks, number line, equivalency) to compare (using symbols $<$, $>$, $=$) and order (a set of no more than four) rational numbers expressed as integers, fractions (proper or improper), mixed numbers, decimals, and percents. Fractions and mixed numbers may be positive or negative. Decimals may be positive or negative and are limited to the thousandths place. Ordering may be in ascending or descending order. Justify solutions orally, in writing or with a model.	G6 M3 Lesson 7: Ordering Integers and Other Rational Numbers G6 M3 Lesson 8: Ordering Integers and Other Rational Numbers G6 M3 Lesson 9: Comparing Integers and Other Rational Numbers *Supplemental material is necessary to address comparing and ordering rational numbers that include percents.*

Number and Number Sense
7.NS.3 The student will recognize and describe the relationship between square roots and perfect squares.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.NS.3.a Determine the positive square root of a perfect square from 0 to 400.	G8 M7 Lesson 2: Square Roots G8 M7 Lesson 3: Existence and Uniqueness of Square Roots and Cube Roots G8 M7 Lesson 5: Solving Equations with Radicals
7.NS.3.b Describe the relationship between square roots and perfect squares.	G8 M7 Lesson 2: Square Roots G8 M7 Lesson 3: Existence and Uniqueness of Square Roots and Cube Roots

Computation and Estimation

7.CE.1 The student will estimate, solve, and justify solutions to multistep contextual problems involving operations with rational numbers.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.CE.1.a Estimate, solve, and justify solutions to contextual problems involving addition, subtraction, multiplication, and division with rational numbers expressed as integers, fractions (proper or improper), mixed numbers, and decimals. Fractions may be positive or negative. Decimals may be positive or negative and are limited to the thousandths place.	G7 M3 Lesson 7: Understanding Equations G7 M3 Lesson 8: Using If-Then Moves in Solving Equations G7 M3 Lesson 9: Using If-Then Moves in Solving Equations G7 M3 Lesson 10: Angle Problems and Solving Equations G7 M3 Lesson 11: Angle Problems and Solving Equations G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities G7 M4 Lesson 7: Markup and Markdown Problems G7 M4 Lesson 8: Percent Error Problems G7 M4 Lesson 9: Problem Solving When the Percent Changes G7 M4 Topic D: Population, Mixture, and Counting Problems Involving Percents

Computation and Estimation

7.CE.2 The student will solve problems, including those in context, involving proportional relationships.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.CE.2.a Given a proportional relationship between two quantities, create and use a ratio table to determine missing values.	G7 M1 Topic A: Proportional Relationships

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.CE.2.b Write and solve a proportion that represents a proportional relationship between two quantities to find a missing value, including problems in context.	G7 M1 Lesson 2: Proportional Relationships G7 M1 Lesson 8: Representing Proportional Relationships with Equations G7 M1 Lesson 9: Representing Proportional Relationships with Equations *Supplemental material is necessary to fully address this standard.*
7.CE.2.c Apply proportional reasoning to solve problems in context, including converting units of measurement, when given the conversion factor.	G7 M1 Lesson 2: Proportional Relationships G7 M1 Lesson 8: Representing Proportional Relationships with Equations G7 M1 Lesson 9: Representing Proportional Relationships with Equations G7 M1 Lesson 10: Interpreting Graphs of Proportional Relationships G7 M1 Lesson 14: Multi-Step Ratio Problems G7 M4 Topic A: Finding the Whole G7 M4 Topic B: Percent Problems Including More than One Whole G7 M4 Topic D: Population, Mixture, and Counting Problems Involving Percents
7.CE.2.d Estimate and determine the percentage of a given whole number, including but not limited to the use of benchmark percentages.	G6 M1 Topic D: Percent

Measurement and Geometry

7.MG.1 The student will investigate and determine the volume formula for right cylinders and the surface area formulas for rectangular prisms and right cylinders and apply the formulas in context.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.1.a Develop the formulas for determining the volume of right cylinders and solve problems, including those in contextual situations, using concrete objects, diagrams, and formulas.	G8 M5 Lesson 10: Volumes of Familiar Solids—Cones and Cylinders *Supplemental material is necessary to address using concrete objects to develop the formula for determining the volume of a right cylinder.*
7.MG.1.b Develop the formulas for determining the surface area of rectangular prisms and right cylinders and solve problems, including those in contextual situations, using concrete objects, two-dimensional diagrams, nets, and formulas.	G7 M3 Lesson 21: Surface Area G7 M3 Lesson 25: Volume and Surface Area G7 M3 Lesson 26: Volume and Surface Area *Supplemental material is necessary to address surface area of right cylinders and using concrete objects to develop the formulas for surface area of right prisms and cylinders.*
7.MG.1.c Determine if a problem in context, involving a rectangular prism or right cylinder, represents the application of volume or surface area.	G7 M3 Lesson 25: Volume and Surface Area G7 M3 Lesson 26: Volume and Surface Area

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.1.d Describe how the volume of a rectangular prism is affected when one measured attribute is multiplied by a factor of $\frac{1}{4}, \frac{1}{3}, \frac{1}{2}$, 2, 3, or 4, including those in contextual situations.	*Supplemental material is necessary to address this standard.*
7.MG.1.e Describe how the surface area of a rectangular prism is affected when one measured attribute is multiplied by a factor of $\frac{1}{2}$ or 2, including those in contextual situations.	*Supplemental material is necessary to address this standard.*

Measurement and Geometry

7.MG.2 The student will solve problems and justify relationships of similarity using proportional reasoning.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.2.a Identify corresponding congruent angles of similar quadrilaterals and triangles, through the use of geometric markings.	*Supplemental material is necessary to address this standard.*
7.MG.2.b Identify corresponding sides of similar quadrilaterals and triangles.	G8 M3 Lesson 8: Similarity G8 M3 Lesson 9: Basic Properties of Similarity G8 M3 Lesson 11: More About Similar Triangles *Supplemental material is necessary to address similar quadrilaterals.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.2.c Given two similar quadrilaterals or triangles, write similarity statements using symbols.	G8 M3 Lesson 8: Similarity G8 M3 Lesson 9: Basic Properties of Similarity G8 M3 Lesson 11: More About Similar Triangles *Supplemental material is necessary to address similar quadrilaterals.*
7.MG.2.d Write proportions to express the relationships between the lengths of corresponding sides of similar quadrilaterals and triangles.	G8 M3 Lesson 8: Similarity G8 M3 Lesson 9: Basic Properties of Similarity G8 M3 Lesson 11: More About Similar Triangles *Supplemental material is necessary to address similar quadrilaterals.*
7.MG.2.e Recognize and justify if two quadrilaterals or triangles are similar using the ratios of corresponding side lengths.	G8 M3 Lesson 8: Similarity G8 M3 Lesson 9: Basic Properties of Similarity G8 M3 Lesson 11: More About Similar Triangles *Supplemental material is necessary to address similar quadrilaterals.*
7.MG.2.f Solve a proportion to determine a missing side length of similar quadrilaterals or triangles.	G8 M3 Lesson 11: More About Similar Triangles G8 M3 Lesson 12: Modeling Using Similarity *Supplemental material is necessary to address solving a proportion to determine a missing side length of similar quadrilaterals.*
7.MG.2.g Given angle measures in a quadrilateral or triangle, determine unknown angle measures in a similar quadrilateral or triangle.	G8 M3 Lesson 10: Informal Proof of AA Criterion for Similarity *Supplemental material is necessary to address determining unknown angle measures in similar quadrilaterals.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.2.h Apply proportional reasoning to solve problems in context including scale drawings. Scale factors shall have denominators no greater than 12 and decimals no less than tenths.	G7 M1 Lesson 17: The Unit Rate as the Scale Factor G7 M1 Lesson 18: Computing Actual Lengths from a Scale Drawing G7 M1 Lesson 19: Computing Actual Areas from a Scale Drawing G7 M1 Lesson 20: An Exercise in Creating a Scale Drawing G7 M1 Lesson 21: An Exercise in Changing Scales G7 M1 Lesson 22: An Exercise in Changing Scales G7 M4 Topic C: Scale Drawings

Measurement and Geometry

7.MG.3 The student will compare and contrast quadrilaterals based on their properties and determine unknown side lengths and angle measures of quadrilaterals.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.3.a Compare and contrast properties of the following quadrilaterals: parallelogram, rectangle, square, rhombus, and trapezoid:	*Supplemental material is necessary to address this standard.*
7.MG.3.a.i parallel/perpendicular sides and diagonals;	*Supplemental material is necessary to address this standard.*
7.MG.3.a.ii congruence of angle measures, side, and diagonal lengths; and	*Supplemental material is necessary to address this standard.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.3.a.iii lines of symmetry.	*Supplemental material is necessary to address this standard.*
7.MG.3.b Sort and classify quadrilaterals as parallelograms, rectangles, trapezoids, rhombi, and/or squares based on their properties:	*Supplemental material is necessary to address this standard.*
7.MG.3.b.i parallel/perpendicular sides and diagonals;	*Supplemental material is necessary to address this standard.*
7.MG.3.b.ii congruence of angle measures, side, and diagonal lengths; and	*Supplemental material is necessary to address this standard.*
7.MG.3.b.iii lines of symmetry.	*Supplemental material is necessary to address this standard.*
7.MG.3.c Given a diagram, determine an unknown angle measure in a quadrilateral, using properties of quadrilaterals.	*Supplemental material is necessary to address this standard.*
7.MG.3.d Given a diagram, determine an unknown side length in a quadrilateral using properties of quadrilaterals.	*Supplemental material is necessary to address this standard.*

Measurement and Geometry

7.MG.4 The student will apply dilations of polygons in the coordinate plane.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.MG.4.a Given a preimage in the coordinate plane, identify the coordinates of the image of a polygon that has been dilated. Scale factors are limited to $\frac{1}{4}, \frac{1}{2}$, 2, 3, or 4. The center of the dilation will be the origin.	G8 M3 Lesson 6: Dilations on the Coordinate Plane
7.MG.4.b Sketch the image of a dilation of a polygon limited to a scale factor of $\frac{1}{4}, \frac{1}{2}$, 2, 3, or 4. The center of the dilation will be the origin.	G8 M3 Lesson 6: Dilations on the Coordinate Plane
7.MG.4.c Identify and describe dilations in context including, but not limited to, scale drawings and graphic design.	G7 M4 Topic C: Scale Drawings *Supplemental material is necessary to address dilations in the context of graphic design.*

Probability and Statistics

7.PS.1 The student will use statistical investigation to determine the probability of an event and investigate and describe the difference between the experimental and theoretical probability.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PS.1.a Determine the theoretical probability of an event.	G7 M5 Lesson 4: Calculating Probabilities for Chance Experiments with Equally Likely Outcomes
7.PS.1.b Given the results of a statistical investigation, determine the experimental probability of an event.	G7 M5 Lesson 2: Estimating Probabilities by Collecting Data G7 M5 Lesson 3: Chance Experiments with Equally Likely Outcomes G7 M5 Lesson 4: Calculating Probabilities for Chance Experiments with Equally Likely Outcomes G7 M5 Lesson 5: Chance Experiments with Outcomes That Are Not Equally Likely G7 M5 Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities G7 M5 Lesson 12: Applying Probability to Make Informed Decisions
7.PS.1.c Describe changes in the experimental probability as the number of trials increases.	G7 M5 Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities
7.PS.1.d Investigate and describe the difference between the probability of an event found through experiment or simulation versus the theoretical probability of that same event.	G7 M5 Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities G7 M5 Lesson 9: Comparing Estimated Probabilities to Probabilities Predicted by a Model G7 M5 Lesson 10: Conducting a Simulation to Estimate the Probability of an Event G7 M5 Lesson 11: Conducting a Simulation to Estimate the Probability of an Event G7 M5 Lesson 12: Applying Probability to Make Informed Decisions

Probability and Statistics
7.PS.2 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 histograms.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PS.2.a Formulate questions that require the collection or acquisition of data with a focus on histograms.	G6 M6 Lesson 1: Posing Statistical Questions *Supplemental material is necessary to address the collection or acquisition of data with a specific focus on histograms.*
7.PS.2.b 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).	G7 M5 Lesson 13: Populations, Samples, and Generalizing from a Sample to a Population G7 M5 Lesson 14: Selecting a Sample G7 M5 Lesson 15: Random Sampling
7.PS.2.c Determine how sample size and randomness will ensure that the data collected is a sample that is representative of a larger population.	G7 M5 Lesson 13: Populations, Samples, and Generalizing from a Sample to a Population G7 M5 Lesson 14: Selecting a Sample G7 M5 Lesson 15: Random Sampling G7 M5 Lesson 16: Methods for Selecting a Random Sample G7 M5 Lesson 17: Sampling Variability

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PS.2.d Organize and represent numerical data using histograms with and without the use of technology.	G6 M6 Lesson 4: Creating a Histogram G6 M6 Lesson 5: Describing a Distribution Displayed in a Histogram G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation G6 M6 Lesson 21: Summarizing a Data Distribution by Describing Center, Variability, and Shape G6 M6 Lesson 22: Presenting a Summary of a Statistical Project *Supplemental material is necessary to address representing data using histograms created with technology.*
7.PS.2.e Investigate and explain how using different intervals could impact the representation of the data in a histogram.	G6 M6 Lesson 4: Creating a Histogram G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation
7.PS.2.f Compare data represented in histograms with the same data represented in other graphs, including but not limited to line plots (dot plots), circle graphs, and stem-and-leaf plots, and justify which graphical representation best represents the data.	G6 M6 Lesson 18: Connecting Graphical Representations and Numerical Summaries G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation *Supplemental material is necessary to address comparing data represented in histograms with data represented in circle graphs and stem-and-leaf plots, and justifying which graphical representation best represents the data.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PS.2.g Analyze data represented in histograms by making observations and drawing conclusions. Determine how histograms reveal patterns in data that cannot be easily seen by looking at the corresponding given data set.	G6 M6 Lesson 4: Creating a Histogram G6 M6 Lesson 5: Describing a Distribution Displayed in a Histogram G6 M6 Lesson 18: Connecting Graphical Representations and Numerical Summaries G6 M6 Lesson 20: Describing Center, Variability, and Shape of a Data Distribution from a Graphical Representation

Patterns, Functions, and Algebra

7.PFA.1 The student will investigate and analyze proportional relationships between two quantities using verbal descriptions, tables, equations in $y = mx$ form, and graphs, including problems in context.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.1.a Determine the slope, m, as the rate of change in a proportional relationship between two quantities given a table of values, graph, or contextual situation and write an equation in the form $y = mx$ to represent the direct variation relationship. Slope may include positive or negative values (slope will be limited to positive values in a contextual situation).	G8 M4 Topic B: Linear Equations in Two Variables and Their Graphs G8 M4 Lesson 15: The Slope of a Non-Vertical Line G8 M4 Lesson 22: Constant Rates Revisited *Supplemental material is necessary to address the term direct variation.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.1.b Identify and describe a line with a slope that is positive, negative, or zero (0), given a graph.	G8 M4 Lesson 16: The Computation of the Slope of a Non-Vertical Line G8 M4 Lesson 17: The Line Joining Two Distinct Points of the Graph $y = mx + b$ Has Slope m G8 M4 Lesson 18: There Is Only One Line Passing Through a Given Point with a Given Slope G8 M4 Lesson 19: The Graph of a Linear Equation in Two Variables is a Line G8 M4 Lesson 20: Every Line is a Graph of a Linear Equation G8 M4 Lesson 21: Some Facts About Graphs of a Linear Equation in Two Variables G8 M4 Lesson 22: Constant Rates Revisited G8 M4 Lesson 23: The Defining Equation of a Line
7.PFA.1.c Graph a line representing a proportional relationship, between two quantities given an ordered pair on the line and the slope, m, as rate of change. Slope may include positive or negative values.	G8 M4 Lesson 11: Constant Rate *Supplemental material is necessary to fully address this standard.*
7.PFA.1.d Graph a line representing a proportional relationship between two quantities given the equation of the line in the form $y = mx$, where m represents the slope as rate of change. Slope may include positive or negative values.	G8 M4 Topic B: Linear Equations in Two Variables and Their Graphs *Supplemental material is necessary to address graphing lines representing a proportional relationship where the slope has a negative value.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.1.e Make connections between and among representations of a proportional relationship between two quantities using problems in context, tables, equations, and graphs. Slope may include positive or negative values (slope will be limited to positive values in a contextual situation).	G7 M1 Topic B: Unit Rate and Constant of Proportionality G8 M4 Lesson 10: A Critical Look at Proportional Relationships G8 M4 Lesson 11: Constant Rate

Patterns, Functions, and Algebra

7.PFA.2 The student will simplify numerical expressions, simplify and generate equivalent algebraic expressions in one variable, and evaluate algebraic expressions for given replacement values of the variables.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.2.a Use the order of operations and apply the properties of real numbers to simplify numerical expressions. Exponents are limited to 1, 2, 3, or 4 and bases are limited to positive integers. Expressions should not include braces { } but may include brackets [ ] and absolute value bars | |. Square roots are limited to perfect squares.	G6 M4 Topic B: Special Notations of Operations

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.2.b Represent equivalent algebraic expressions in one variable using concrete manipulatives and pictorial representations (e.g., colored chips, algebra tiles).	G6 M4 Topic A: Relationships of the Operations G6 M4 Lesson 9: Writing Addition and Subtraction Expressions G6 M4 Lesson 10: Writing and Expanding Multiplication Expressions G6 M4 Lesson 11: Factoring Expressions G6 M4 Lesson 12: Distributing Expressions *Supplemental material is necessary to address representing equivalent algebraic expressions using concrete manipulatives.*
7.PFA.2.c Simplify and generate equivalent algebraic expressions in one variable by applying the order of operations and properties of real numbers. Expressions may require combining like terms to simplify. Expressions will include only linear and numeric terms. Coefficients and numeric terms may be positive or negative rational numbers.	G7 M3 Topic A: Use Properties of Operations to Generate Equivalent Expressions

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.2.d Use the order of operations and apply the properties of real numbers to evaluate algebraic expressions for given replacement values of the variables. Exponents are limited to 1, 2, 3, or 4 and bases are limited to positive integers. Expressions should not include braces { } but may include brackets [ ] and absolute value bars | |. Square roots are limited to perfect squares. Limit the number of replacements to no more than three per expression. Replacement values may be positive or negative rational numbers.	G7 M3 Topic A: Use Properties of Operations to Generate Equivalent Expressions

Patterns, Functions, and Algebra

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

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.3.a Represent and solve two-step linear equations in one variable using a variety of concrete materials and pictorial representations.	G7 M2 Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions G7 M3 Lesson 7: Understanding Equations G7 M3 Lesson 8: Using If-Then Moves in Solving Equations

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.3.b Apply properties of real numbers and properties of equality to solve two-step linear equations in one variable. Coefficients and numeric terms will be rational.	G7 M2 Lesson 22: Solving Equations Using Algebra G7 M2 Lesson 23: Solving Equations Using Algebra G7 M3 Lesson 7: Understanding Equations G7 M3 Lesson 8: Using If-Then Moves in Solving Equations G7 M3 Lesson 9: Using If-Then Moves in Solving Equations G7 M3 Lesson 10: Angle Problems and Solving Equations G7 M3 Lesson 11: Angle Problems and Solving Equations G7 M4 Lesson 10: Simple Interest G7 M4 Lesson 11: Tax, Commissions, Fees, and Other Real-World Percent Applications G7 M4 Lesson 17: Mixture Problems
7.PFA.3.c Confirm algebraic solutions to linear equations in one variable.	G7 M3 Lesson 7: Understanding Equations
7.PFA.3.d Write a two-step linear equation in one variable to represent a verbal situation, including those in context.	G7 M2 Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions G7 M2 Lesson 22: Solving Equations Using Algebra G7 M2 Lesson 23: Solving Equations Using Algebra G7 M3 Lesson 7: Understanding Equations G7 M3 Lesson 8: Using If-Then Moves in Solving Equations G7 M3 Lesson 9: Using If-Then Moves in Solving Equations G7 M3 Lesson 10: Angle Problems and Solving Equations G7 M3 Lesson 11: Angle Problems and Solving Equations G7 M4 Lesson 10: Simple Interest G7 M4 Lesson 11: Tax, Commissions, Fees, and Other Real-World Percent Applications G7 M4 Lesson 17: Mixture Problems

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.3.e Create a verbal situation in context given a two-step linear equation in one variable.	*Supplemental material is necessary to address this standard.*
7.PFA.3.f Solve problems in context that require the solution of a two-step linear equation.	G7 M2 Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions G7 M2 Lesson 22: Solving Equations Using Algebra G7 M2 Lesson 23: Solving Equations Using Algebra G7 M3 Lesson 7: Understanding Equations G7 M3 Lesson 8: Using If-Then Moves in Solving Equations G7 M3 Lesson 9: Using If-Then Moves in Solving Equations G7 M3 Lesson 10: Angle Problems and Solving Equations G7 M3 Lesson 11: Angle Problems and Solving Equations G7 M4 Lesson 10: Simple Interest G7 M4 Lesson 11: Tax, Commissions, Fees, and Other Real-World Percent Applications G7 M4 Lesson 17: Mixture Problems

Patterns, Functions, and Algebra

7.PFA.4 The student will write and solve one- and two-step linear inequalities in one variable, including problems in context, that require the solution of a one- and two-step linear inequality in one variable.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.4.a Apply properties of real numbers and the addition, subtraction, multiplication, and division properties of inequality to solve one- and two-step inequalities in one variable. Coefficients and numeric terms will be rational.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities
7.PFA.4.b Investigate and explain how the solution set of a linear inequality is affected by multiplying or dividing both sides of the inequality statement by a rational number less than zero.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities
7.PFA.4.c Represent solutions to one- or two-step linear inequalities in one variable algebraically and graphically using a number line.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities
7.PFA.4.d Write one- or two-step linear inequalities in one variable to represent a verbal situation, including those in context.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math*
7.PFA.4.e Create a verbal situation in context given a one or two-step linear inequality in one variable.	*Supplemental material is necessary to address this standard.*
7.PFA.4.f Solve problems in context that require the solution of a one- or two-step inequality.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities
7.PFA.4.g Identify a numerical value(s) that is part of the solution set of as given one- or two-step linear inequality in one variable.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities
7.PFA.4.h Describe the differences and similarities between solving linear inequalities in one variable and linear equations in one variable.	G7 M3 Lesson 15: Graphing Solutions to Inequalities *Supplemental material is necessary to fully address this standard.*