Grade 6H Yearlong Mathematics Map

Resources: Approved from Board of Education	Assessments: PARCC Assessments, Performance Series, District Benchmark Assessments

Common Core State Standards – Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.	2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.	4. Model with mathematics.
5. Use appropriate tools strategically.	6. Attend to precision.
7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.	Ratio Unit Rate	7.RP.1 Compute unit rates with ratio of fractions including ratios of length, areas, and other quantities of like or different units.	Complex fraction
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.2 Recognize and represent proportional relationships between quantities.	Proportional Relationships	7.RP.2 Identify proportional relationships between quantities.	Proportion
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.2 Recognize and represent proportional relationships between quantities.	Proportional Relationship	7.RP.2 Represent proportional relationships between quantities.	Proportion Means and Extremes property (Cross Multiplication)

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.2a Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	Proportional Relationships	7.RP.2a Decide whether two quantities are in a proportional relationship.	Origin x-coordinate y-coordinate quadrant x-axis y-axis
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.2b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Unit Rate	7.RP.2b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Constant of Proportionality Table Graphs Equations
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.2c Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as $t = pn$.	Proportional Relationships	7.RP.2c Write equations to represent proportional relationships.	Equation Proportion
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.2d Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	Proportional Relationships	7.RP.2d Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	Constant of Proportionality Graphs Equations
RP	Analyze proportional relationships and use them to solve real-world and mathematical problems.	7.RP.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Proportional Relationships	7.RP.3 Solve multi-step ratio and percent problems using proportional relationships.	Proportion Simple Interest Percent increase Percent decrease Markup Sales Tax

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NS	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi? Compute fluently with multi-digit numbers and find common factors and multiples.	Divison of Fractions	6.NS.1 Divide fractions using fraction models and equations and solve word problems involving division of fractions	Reciprocal
NS	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi? Compute fluently with multi-digit numbers and find common factors and multiples.	Common Factors Common Multiples	6.NS.1 Find common factors and multiples of multi-digit numbers	

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NS	Compute fluently with multi-digit numbers and find common factors and multiples.	6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	Addition, Subtraction, Multiplication, and Division of Decimals	6.NS.3 Compute addition, subtraction, multiplication, and division with multi-digit decimals	
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	Integers	6.NS.5 Represent positive and negative numbers and zero in real-world contexts	Integers
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	Rational Numbers	6.NS.6 Plot rational numbers on a number line, including negative number coordinates	Axes
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	Integers	6.NS.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself	
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.6b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	Coordinate Plane	6.NS.6b Distinguish the quadrant in the coordinate plane based on the signs of numbers in the ordered pairs; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes	Ordered Pairs

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NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	Integers Number Lines	6.NS.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram	Integer Rational Numbers
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	Integers Coordinate Plane	6.NS.6c Find and position pairs of integers and other rational numbers on a coordinate plane	Integers Rational Numbers
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.7 Understand ordering and absolute value of rational numbers.	Rational Numbers	6.NS.7 Order Rational Numbers and calculate absolute value	Absolute Value
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret −3 > −7 as a statement that −3 is located to the right of −7 on a number line oriented from left to right.	Inequalities	6.NS.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram	Inequality
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write −3 oC > −7 oC to express the fact that −3 oC is warmer than −7 oC.	Ordering	6.NS.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts	Rational Numbers

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NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.	Absolute Value	6.NS.7c Recognize the absolute value of a rational number as its distance from 0 on the number line	Absolute Value Rational Number
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.	Absolute Value	6.NS.7c Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation	Absolute Value
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.7d Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.	Absolute Value	6.NS.7d Distinguish comparisons of absolute value from statements about order	Absolute Value
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Coordinate Plane Absolute Value	6.NS.8 Solve mathematical problems by graphing points in all four quadrants of the coordinate plane	
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Coordinate Plane Absolute Value	6.NS.8 Solve real-world problems by graphing points in all four quadrants of the coordinate plane	

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NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Coordinate Plane Absolute Value	6.NS.8 Find distances between points with the same first coordinate or the same second coordinate using coordinates	
NS	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Coordinate Plane Absolute Value	6.NS.8 Find distances between points with the same first coordinate or the same second coordinate using absolute value	
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Addition Rational numbers	7.NS.1 Add rational numbers on a horizontal or vertical number line.	Rational numbers Vertical number line Horizontal number line
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Subtraction Rational numbers	7.NS.1 Subtract rational numbers on a horizontal or vertical number line.	Rational numbers Vertical number line Horizontal number line

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NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1a Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.	Rational Numbers	7.NS.1a Describe situations in which opposite quantities combine to make 0.	Property of Opposites
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1b Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Rational Numbers	7.NS.1b Explain p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative.	Combine
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1b Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Rational Numbers	7.NS.1b Show that a number and its opposite have a sum of 0 (are additive inverses).	Combine
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1b Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Rational Numbers	7.NS.1b Interpret sums of rational numbers by describing real-world contexts.	Combine

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NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1c Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Subtraction Rational numbers	7.NS.1c Explain subtraction of rational numbers as adding the additive inverse	Additive Inverses Absolute Value
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1c Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Subtraction Rational numbers	7.NS.1c Prove that the distance between two rational numbers on the number line is the absolute value of their difference.	Absolute Value
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.1d Apply properties of operations as strategies to add and subtract rational numbers.	Properties of Operations	7.NS.1d Apply properties of operations as strategies to add and subtract rational numbers.	Associative Commutative Additive Identity Property of Opposites
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	Multiplication Rational Numbers	7.NS.2 Multiply rational numbers.	Rational numbers

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NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	Division Rational Numbers	7.NS.2 Divide rational numbers.	Rational numbers
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2a Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (−1)(−1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	Multiplication Rational Numbers	7.NS.2a Apply the properties of multiplication and rules for multiplying signed numbers to rational numbers.	Distributive Property Multiplicative Identify
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2a Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (−1)(−1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	Multiplication Rational Numbers	7.NS.2a Interpret products of rational numbers by describing real-world contexts.	Distributive Property
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then −(p/q) = (−p)/q = p/(−q). Interpret quotients of rational numbers by describing real-world contexts.	Divide rational numbers	7.NS.2b Explain that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number.	Rational numbers Undefined quotient

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NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.	Divide rational numbers	7.NS.2b Interpret quotients of rational numbers by describing real-world contexts.	Rational numbers Undefined quotient
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2c Apply properties of operations as strategies to multiply and divide rational numbers.	Multiplication Rational Numbers	7.NS.2c Apply properties of operations as strategies to multiply rational numbers.	Associative Commutative Mulitiplicative Identity
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2c Apply properties of operations as strategies to multiply and divide rational numbers.	divide rational numbers	7.NS.2c Apply properties of operations as strategies to divide rational numbers.	properties of operations rational numbers
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2d Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	rational numbers	7.NS.2d Convert a rational number to a decimal using long division	repeating decimal

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NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.2d Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	rational numbers	7.NS.2d Identify that the decimal form of a rational number terminates in 0s or eventually repeats.	terminating decimal repeating decimal
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.	rational numbers	7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.	Rational Numbers
NS	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.	rational numbers	7.NS.3 Extend the rules for manipulating fractions to complex fractions	Complex fraction
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.1 Write and evaluate numerical expressions involving whole-number exponents	Expressions Exponents	6.EE.1 Write and evaluate numerical expressions involving whole-number exponents	Numerical Expression Base Power

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EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2 Write and read expressions in which letters stand for numbers	Expressions	6.EE.2 Write and read expressions in which letters stand for numbers	Expression Variable
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2 Write and read expressions in which letters stand for numbers	Expressions	6.EE.2 Evaluate expressions in which letters stand for numbers	Expression Variable Substitution
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as 5 – y.	Expressions	6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers	Expression Variable
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.	Expressions	6.EE.2b Identify parts of an expression using mathematical terms	Coefficient Variable
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.	Expressions	6.EE.2b Identify one or more parts of an expression as a single entity	Expression Variable

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EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V = s3 and A = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2.	Expressions	6.EE.2c Evaluate expressions at specific values of their variables	Expression Variable
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V = s3 and A = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2.	Expressions	6.EE.2c Evaluate expressions that arise from formulas used in real-world problems	Expression Variable
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V = s3 and A = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2.	Expressions Order of Operations	6.EE.2c Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order	Expression Variable

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EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.3 Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.	Distributive Property Simplifying Expressions	6.EE.3 Apply the properties of operations to generate equivalent expressions	Distributive Property
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.3 Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.	Simplifying Expressions	6.EE.3 Apply the properties of operations to generate equivalent expressions	Expression Variable
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for. Reason about and solve one-variable equations and inequalities.	Equivalent Expressions	6.EE.4 Identify when two expressions are equivalent	
EE	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for. Reason about and solve one-variable equations and inequalities.	Equations Inequalities	6.EE.4 Solve one-variable equations and inequalities	

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EE	Represent and analyze quantitative relationships between dependent and independent variables.	6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.	Equations	6.EE.9 Write an equation with variables to represent two quantities in a real-world problem that change in relation to one another	Independent and Dependent Variables
EE	Represent and analyze quantitative relationships between dependent and independent variables.	6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.	Equations Graphing	6.EE.9 Analyze the relationship between dependent and independent variables using graphs and tables, and relate these to an equation	Independent and Dependent Variables

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EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.	Algebraic expressions Algebraic equations Numerical expressions Numerical equations	7.EE.3 Evaluate the reasonableness of answers using mental computation and estimation strategies.	Expression Equation
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Algebraic expressions	7.EE.4 Choose variables to represent quantities in a real-world or mathematical problem.	Variable Equation Inequality
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Algebraic equations	7.EE.4 Construct simple equations to solve problems by reasoning about the quantities	Variable Equation Inequality

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Algebraic inequalities	7.EE.4 Construct simple inequalities to solve problems by reasoning about the quantities.	Variable Equation Inequality
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4a Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	Algebraic equations	7.EE.4a Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently.	Two dimensional shapes
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4a Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	Algebraic equations	7.EE.4a Identify the sequence of the operations used in an algebriac solution and in arithmetic solution.	Three dimensional shapes
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4a Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	Algebraic Equations Numerical Equations	7.EE.4a Compare an algebraic solution to an arithmetic solution.	algebraic solution arithmetic solution

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4b Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Algebraic inequalities Numerical inequalities	7.EE.4b Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers.	inequality rational numbers
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4b Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Algebraic Inequality	7.EE.4b Graph the solution set of the inequality.	number line inequality
EE	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	7.EE.4b Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Algebraic Inequality	7.EE.4b Interpret it in the context of the problem.	number line inequality
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Proportional Relationships	7.G.1 Compute actual lengths and areas from a scale drawing.	scale Constant of Proportionality

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Proportional Relationships	7.G.1 Solve problems involving scale drawings of geometric figures.	scale Constant of Proportionality
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Proportional Relationships	7.G.1 Reproduce a scale drawing at a different scale.	scale Constant of Proportionality
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Two dimensional shapes	7.G.2 Draw, with a ruler, geometric shapes with given conditions.	Triangles
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Two dimensional shapes	7.G.2 Draw, with a protractor, geometric shapes with given conditions.	Triangles
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Two dimensional shapes	7.G.2 Draw, freehand or with technology geometric shapes with given conditions.	Triangles

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Two dimensional shapes	7.G.2 Determine if measures of three angles or sides create a unique triangle, more than one triangle, or no triangle.	Triangles
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Two dimensional shapes	7.G.2 Construct triangles from three measures of angles or sides.	Triangles
G	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	Three dimensional shapes	7.G.3 Identify and describe three-dimensional figures.	Two dimensional shapes Three dimensional shapes Polygons Slicing Cross Section
	Draw construct, and describe geometrical figures and describe the relationships between them.	7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	Two dimensional shapes	7.G.3 Identify and describe the two-dimensional figures that result from slicing three-dimensional figures	Two dimensional shapes Three dimensional shapes Polygons Slicing Cross Section
G	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Two dimensional shapes	7.G.4 Identify the formulas for the area and circumference of a circle.	Circumference Area

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
G	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Two dimensional shapes	7.G.4 Apply the formulas for the area and circumference of a circle and use them to solve problems.	Circumference Area
	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Two dimensional shapes	7.G.4 Interpret the relationship between the circumference and area of a circle.	Circumference Area
	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Angle Relationships	7.G.5 Write and solve simple equations for an unknown angle in a figure using facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem.	Supplementary Complementary Vertical angles Adjacent angles
G	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Area	7.G.6 Solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles, quadrilaterals, and polygons.	Two Dimensional Shapes Triangles Quadrilaterals Polygons Area
G	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Volume	7.G.6 Solve real-world and mathematical problems involving volume of three-dimensional objects composed of cubes and right prisms.	Three Dimensional Shapes Cubes Right prism Volume

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
G	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Surface Area	7.G.6 Solve real-world and mathematical problems involving surface area of three-dimensional objects composed of cubes and right prisms.	Three Dimensional Shapes Two Dimensional Shapes Cubes Right prism Surface Area Net
SP	Summarize and describe distributions.	6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	Statistics Graphing	6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots	Dot Plot Box Plot Histogram Number Line
SP	Summarize and describe distributions.	6.SP.5 Summarize numerical data sets in relation to their context, such as by:	Statistics	6.SP.5 Summarize numerical data sets in relation to their context	
SP	Summarize and describe distributions.	6.SP.5a Reporting the number of observations.	Statistics	6.SP.5a Summarize numerical data sets by reporting the number of observations	
SP	Summarize and describe distributions.	6.SP.5b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.	Statistics	6.SP.5b Summarize numerical data sets by describing the nature of the attribute under investigation, including how it was measured and its units of measurement	
SP	Summarize and describe distributions.	6.SP.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Statistics	6.SP.5c Summarize numerical data sets by giving quantitative measures of center, such as median and/or mean	Mean Median
SP	Summarize and describe distributions.	6.SP.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Statistics	6.SP.5c Summarize numerical data sets by giving variability, such as interquartile range and/or mean absolute deviation	Interquartile Range Mean Absolute Deviation

Domain	Cluster	Common Core Standard	Content	Skills	Academic Vocabulary
SP	Summarize and describe distributions.	6.SP.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Statistics	6.SP.5c Summarize numerical data sets by describing any overall pattern and any outliers from the overall pattern	Outliers
SP	Summarize and describe distributions.	6.SP.5d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	Statistics	6.SP.5d Summarize numerical data sets by relating the choice of measures of center and variability to the shape of the data distribution	Range