Big Ideas Math: Modeling Real Life ©2019
Learning Targets and Success Criteria
Grade 6

		Learning Target	Success Criteria
Chapter 1: Numerical Expressions and Factors			
Chapter Learning Target Understand factors. **Chapter Success Criteria** · Identify factors of a number. · Explain order of operations. · Solve a problem using factors. · Model different types of multiples of numbers.	1.1 Powers and Exponents	Write and evaluate expressions involving exponents.	· I can write products of repeated factors as powers. · I can evaluate powers.
	1.2 Order of Operations	Write and evaluate numerical expressions using the order of operations.	· I can explain why there is a need for a standard order of operations. · I can evaluate numerical expressions involving several operations, exponents, and grouping symbols. · I can write numerical expressions involving exponents to represent a real-life problem.
	1.3 Prime Factorization	Write a number as a product of prime factors and represent the product using exponents.	· I can find factor pairs of a number. · I can explain the meanings of prime and composite numbers. · I can create a factor tree to find the prime factors of a number. · I can write the prime factorization of a number.
	1.4 Greatest Common Factor	Find the greatest common factor of two numbers.	· I can explain the meaning of factors of a number. · I can use lists of factors to identify the greatest common factor of numbers. · I can use prime factors to identify the greatest common factor of numbers.
	1.5 Least Common Multiple	Find the least common multiple of two numbers.	· I can explain the meaning of multiples of a number. · I can use lists of multiples to identify the least common multiple of numbers. · I can use prime factors to identify the least common multiple of numbers.

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	Learning Target	Success Criteria
Chapter 2: Fractions and Decimals		
Chapter Learning Target Understand fractions and decimals. **Chapter Success Criteria** · Identify a fraction and a decimal. · Add, subtract, multiply, and divide fractions and decimals. · Evaluate expressions involving fractions and decimals using the order of operations. · Solve a problem using fractions and decimals.	2.1 Multiplying Fractions Find products involving fractions and mixed numbers.	· I can draw a model to explain fraction multiplication. · I can multiply fractions. · I can find products involving mixed numbers. · I can interpret products involving fractions and mixed numbers to solve real-life problems.
	2.2 Dividing Fractions Compute quotients of fractions and solve problems involving division by fractions.	· I can draw a model to explain division of fractions. · I can find reciprocals of numbers. · I can divide fractions by fractions. · I can divide fractions and whole numbers.
	2.3 Dividing Mixed Numbers Compute quotients with mixed numbers and solve problems involving division with mixed numbers.	· I can draw a model to explain division of mixed numbers. · I can write a mixed number as an improper fraction. · I can divide with mixed numbers. · I can evaluate expressions involving mixed numbers using the order of operations.
	2.4 Adding and Subtracting Decimals Add and subtract decimals and solve problems involving addition and subtraction of decimals.	· I can explain why it is necessary to line up the decimal points when adding and subtracting decimals. · I can add decimals. · I can subtract decimals. · I can evaluate expressions involving addition and subtraction of decimals.

		Learning Target	Success Criteria
Chapter 2 continued			
	2.5 Multiplying Decimals	Multiply decimals and solve problems involving multiplication of decimals.	· I can multiply decimals by whole numbers. · I can multiply decimals by decimals. · I can evaluate expressions involving multiplication of decimals.
	2.6 Dividing Whole Numbers	Divide whole numbers and solve problems involving division of whole numbers.	· I can use long division to divide whole numbers. · I can write a number as a fraction. · I can interpret quotients in real-life problems.
	2.7 Dividing Decimals	Divide decimals and solve problems involving division of decimals.	· I can divide decimals by whole numbers. · I can divide decimals by decimals. · I can divide whole numbers by decimals.

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	Learning Target	Success Criteria
Chapter 3: Ratios and Rates		
Chapter Learning Target Understand ratios. **Chapter Success Criteria** · Write and interpret ratios. · Name ratios equivalent to a given ratio. · Solve a problem using ratios. · Convert units of measure using ratio reasoning.	3.1 Ratios Understand the concepts of ratios and equivalent ratios.	· I can write and interpret ratios using appropriate notation and language. · I can recognize multiplicative relationships in ratios. · I can describe how to determine whether ratios are equivalent. · I can name ratios equivalent to a given ratio.
	3.2 Using Tape Diagrams Use tape diagrams to model and solve ratio problems.	· I can interpret tape diagrams that represent ratio relationships. · I can draw tape diagrams to model ratio relationships. · I can find the value of one part of a tape diagram. · I can use tape diagrams to solve ratio problems.
	3.3 Using Ratio Tables Use ratio tables to represent equivalent ratios and solve ratio problems.	· I can use various operations to create tables of equivalent ratios. · I can use ratio tables to solve ratio problems. · I can use ratio tables to compare ratios.
	3.4 Graphing Ratio Relationships Represent ratio relationships in a coordinate plane.	· I can create and plot ordered pairs from a ratio relationship. · I can create graphs to solve ratio problems. · I can create graphs to compare ratios.

	Learning Target	Success Criteria
Chapter 3 continued		
3.5 Rates and Unit Rates	Understand the concept of a unit rate and solve rate problems.	• I can find unit rates. • I can use unit rates to solve rate problems. • I can use unit rates to compare rates.
3.6 Converting Measures	Use ratio reasoning to convert units of measure.	• I can write conversion facts as unit rates. • I can convert units of measure using ratio tables. • I can convert units of measure using conversion factors. • I can convert rates using conversion factors.

	Learning Target	Success Criteria
Chapter 4: Percents		
Chapter Learning Target Understand percents. **Chapter Success Criteria** · Write fractions and decimals as percents. · Write percents as fractions and as decimals. · Order fractions, decimals, and percents. · Solve percent problems.	4.1 Percents and Fractions	Write percents as fractions and fractions as percents.	· I can draw models to represent fractions and percents. · I can write percents as fractions. · I can write equivalent fractions with denominators of 100. · I can write fractions as percents.
	4.2 Percents and Decimals	Write percents as decimals and decimals as percents.	· I can draw models to represent decimals. · I can explain why the decimal point moves when multiplying and dividing by 100. · I can write percents as decimals. · I can write decimals as percents.
	4.3 Comparing and Ordering Fractions, Decimals, and Percents	Compare and order fractions, decimals, and percents.	· I can rewrite a group of fractions, decimals, and percents using the same representation. · I can explain how to compare fractions, decimals, and percents. · I can order fractions, decimals, and percents from least to greatest.
	4.4 Solving Percent Problems	Find a percent of a quantity and solve percent problems.	· I can represent percents of numbers using an equation, a ratio table, or a model. · I can find percents of numbers. · I can find the whole given a part and the percent.

		Learning Target	Success Criteria
Chapter 5: Algebraic Expressions and Properties			
Chapter Learning Target Understand algebraic expressions. **Chapter Success Criteria** • Identify parts of an algebraic expression. • Write algebraic expressions. • Solve a problem using algebraic expressions. • Interpret algebraic expressions in real-life problems.	5.1 Algebraic Expressions	Evaluate algebraic expressions given values of their variables.	• I can identify parts of an algebraic expression. • I can evaluate algebraic expressions with one or more variables. • I can evaluate algebraic expressions with one or more operations.
	5.2 Writing Expressions	Write algebraic expressions and solve problems involving algebraic expressions.	• I can write numerical expressions. • I can write algebraic expressions. • I can write and evaluate algebraic expressions that represent real-life problems.
	5.3 Properties of Addition and Multiplication	Identify equivalent expressions and apply properties to generate equivalent expressions.	• I can explain the meaning of equivalent expressions. • I can use properties of addition to generate equivalent expressions. • I can use properties of multiplication to generate equivalent expressions.
	5.4 The Distributive Property	Apply the Distributive Property to generate equivalent expressions.	• I can explain how to apply the Distributive Property. • I can use the Distributive Property to simplify algebraic expressions. • I can use the Distributive Property to combine like terms.

	Learning Target	Success Criteria
Chapter 5 continued		
5.5 Factoring Expressions	Factor numerical and algebraic expressions.	• I can use the Distributive Property to factor numerical expressions. • I can identify the greatest common factor of terms including variables. • I can use the Distributive Property to factor algebraic expressions. • I can interpret factored expressions in real-life problems.

		Learning Target	Success Criteria
Chapter 6: Equations			
Chapter Learning Target Understand equations. **Chapter Success Criteria** · Identify key words and phrases. · Write word sentences as equations. · Solve equations using properties of equality. · Model different types of equations to solve real-life problems.	6.1 Writing Equations in One Variable	Write equations in one variable and write equations that represent real-life problems.	· I can identify key words and phrases that indicate equality. · I can write word sentences as equations. · I can create equations to represent real-life problems.
	6.2 Solving Equations Using Addition or Subtraction	Write and solve equations using addition or subtraction.	· I can determine whether a value is a solution of an equation. · I can apply the Addition and Subtraction Properties of Equality to generate equivalent equations. · I can solve equations using addition or subtraction. · I can create equations involving addition or subtraction to solve real-life problems.
	6.3 Solving Equations Using Multiplication or Division	Write and solve equations using multiplication or division.	· I can apply the Multiplication and Division Properties of Equality to generate equivalent equations. · I can solve equations using multiplication or division. · I can create equations involving multiplication or division to solve real-life problems.

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		Learning Target	Success Criteria
Chapter 6 continued			
	6.4 Writing Equations in Two Variables	Write equations in two variables and analyze the relationship between the two quantities.	· I can determine whether an ordered pair is a solution of an equation in two variables. · I can distinguish between independent and dependent variables. · I can write and graph an equation in two variables. · I can create equations in two variables to solve real-life problems.

	Learning Target	Success Criteria
Chapter 7: Area, Surface Area, and Volume		
Chapter Learning Target Understand measurement. **Chapter Success Criteria** · Explain how to find areas of figures. · Explain how to find surface areas and volumes of solids. · Describe and draw three-dimensional figures. · Apply units of measurement to solve real-life problems.	7.1 Areas of Parallelograms	Find areas and missing dimensions of parallelograms.	· I can explain how the area of a rectangle is used to find the area of a parallelogram. · I can use the base and the height of a parallelogram to find its area. · I can use the area of a parallelogram and one of its dimensions to find the other dimension.
	7.2 Areas of Triangles	Find areas and missing dimensions of triangles and find areas of composite figures.	· I can explain how the area of a parallelogram is used to find the area of a triangle. · I can use the base and the height of a triangle to find its area. · I can use the area of a triangle and one of its dimensions to find the other dimension. · I can use decomposition to find the area of a figure.
	7.3 Areas of Trapezoids and Kites	Find areas of trapezoids, kites, and composite figures.	· I can explain how the area of a parallelogram is used to find the area of a trapezoid. · I can decompose trapezoids and kites into smaller shapes. · I can use decomposition to find the area of a figure. · I can use the bases and the height of a trapezoid to find its area.

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	Learning Target	Success Criteria
Chapter 7 continued		
7.4 Surface Areas of Pyramids	Represent pyramids using nets and use nets to find surface areas of pyramids.	• I can draw nets to represent pyramids. • I can use nets to find surface areas of pyramids. • I can apply surface areas of pyramids to solve real-life problems.
7.5 Volumes of Rectangular Prisms	Find volumes and missing dimensions of rectangular prisms.	• I can use a formula to find the volume of a rectangular prism. • I can use a formula to find the volume of a cube. • I can use the volume of a rectangular prism and two of its dimensions to find the other dimension. • I can apply volumes of rectangular prisms to solve real-life problems.
7.6 Three-Dimensional Figures	Describe and draw three-dimensional figures.	• I can find the numbers of faces, edges, and vertices of a three-dimensional figure. • I can draw prisms and pyramids. • I can draw the front, side, and top views of a three-dimensional figure.
7.7 Surface Areas of Prisms	Represent prisms using nets and use nets to find surface areas of prisms.	• I can draw nets to represent prisms. • I can use nets to find surface areas of prisms. • I can use a formula to find the surface area of a cube. • I can apply surface areas of prisms to solve real-life problems.

	Learning Target	Success Criteria
Chapter 8: Integers, Number Lines, and the Coordinate Plane		
Chapter Learning Target Understand integers. **Chapter Success Criteria** · Write integers to represent quantities. · Describe quantities. · Order and compare quantities. · Apply integers to model real-life problems.	8.1 Integers *Learning Target:* Understand the concept of negative numbers and that they are used along with positive numbers to describe quantities.	· I can write integers to represent quantities in real life. · I can graph integers on a number line. · I can find the opposite of an integer. · I can apply integers to model real-life problems.
	8.2 Comparing and Ordering Integers Compare and order integers.	· I can explain how to determine which of two integers is greater. · I can order a set of integers from least to greatest. · I can interpret statements about order in real-life problems.
	8.3 Rational Numbers Compare and order rational numbers.	· I can explain the meaning of a rational number. · I can graph rational numbers on a number line. · I can determine which of two rational numbers is greater. · I can order a set of rational numbers from least to greatest.
	8.4 Absolute Value Understand the concept of absolute value.	· I can find the absolute value of a number. · I can make comparisons that involve absolute values of numbers. · I can apply absolute value in real-life problems.

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		Learning Target	Success Criteria
Chapter 8 continued			
	8.5 The Coordinate Plane	Plot and reflect ordered pairs in all four quadrants of a coordinate plane.	· I can identify ordered pairs in a coordinate plane · I can plot ordered pairs in a coordinate plane and describe their locations. · I can reflect points in the x-axis, the y-axis, or both axes. · I can apply plotting points in all four quadrants to solve real-life problems.
	8.6 Polygons in the Coordinate Plane	Draw polygons in the coordinate plane and find distances between points in the coordinate plane.	· I can draw polygons in the coordinate plane. · I can find distances between points in the coordinate plane with the same x-coordinates or the same y-coordinates. · I can find horizontal and vertical side lengths of polygons in the coordinate plane. · I can draw polygons in the coordinate plane to solve real-life problems.
	8.7 Writing and Graphing Inequalities	Write inequalities and represent solutions of inequalities on number lines.	· I can write word sentences as inequalities. · I can determine whether a value is a solution of an inequality. · I can graph the solutions of inequalities.

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		Learning Target	Success Criteria
Chapter 8 continued			
	8.8 Solving Inequalities	Write and solve inequalities.	· I can apply the properties of inequality to generate equivalent inequalities. · I can solve inequalities using addition or subtraction. · I can solve inequalities using multiplication or division. · I can write and solve inequalities that represent real-life problems

		Learning Target	Success Criteria
Chapter 9: Statistical Measures			
Chapter Learning Target Understand statistical measures. **Chapter Success Criteria** · Construct a data set. · Explain how a data set can be interpreted. · Find and interpret the measures of center and the measures of variation for a data set. · Compare the measures of center and the measures of variation for data sets.	9.1 Introduction to Statistics	Identify statistical questions and use data to answer statistical questions.	· I can recognize questions that anticipate a variety of answers. · I can construct and interpret a dot plot. · I can use data to answer a statistical question.
	9.2 Mean	Find and interpret the mean of a data set.	· I can explain how the mean summarizes a data set with a single number. · I can find the mean of a data set. · I can use the mean of a data set to answer a statistical question.
	9.3 Measures of Center	Find and interpret the median and mode of a data set.	· I can explain how the median and mode summarize a data set with a single number. · I can find the median and mode of a data set. · I can explain how changes to a data set affect the measures of center. · I can use a measure of center to answer a statistical question.
	9.4 Measures of Variation	Find and interpret the range and interquartile range of a data set.	· I can explain how the range and interquartile range describe the variability of a data set with a single number. · I can find the range and interquartile range of a data set. · I can use the interquartile range to identify outliers.

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	Learning Target	Success Criteria
Chapter 9 continued		
9.5 Mean Absolute Deviation	Find and interpret the mean absolute deviation of a data set.	• I can explain how the mean absolute deviation describes the variability of a data set with a single number. • I can find the mean absolute deviation of a data set. • I can compare data sets using the mean absolute deviation to draw conclusions.

		Learning Target	Success Criteria
Chapter 10: Data Displays			
Chapter Learning Target Understand data displays. **Chapter Success Criteria** · Construct a data display. · Interpret data in a data display. · Choose the appropriate measures of center and variation to describe a data set. · Compare data sets.	10.1 Stem-and-Leaf Plots	Display and interpret data in stem-and-leaf plots.	· I can explain how to choose stems and leaves of a data set. · I can make and interpret a stem-and-leaf plot. · I can use a stem-and-leaf plot to describe the distribution of a data set.
	10.2 Histograms	Display and interpret data in histograms.	· I can explain how to draw a histogram. · I can make and interpret a histogram. · I can determine whether a question can be answered using a histogram.
	10.3 Shapes of Distributions	Describe and compare shapes of distributions.	· I can explain what it means for a distribution to be skewed left, skewed right, or symmetric. · I can use data displays to describe shapes of distributions. · I can use shapes of distributions to compare data sets.
	10.4 Choosing Appropriate Measures	Determine which measures of center and variation best describe a data set.	· I can describe the shape of a distribution. · I can use the shape of a distribution to determine which measure of center best describes the data. · I can use the shape of a distribution to determine which measure of variation best describes the data.

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	Learning Target	Success Criteria
Chapter 10 continued		
10.5 Box-and-Whisker Plots	Display and interpret data in box-and-whisker plots.	• I can find the five-number summary of a data set. • I can make a box-and-whisker plot. • I can explain what the box and the whiskers of a box-and-whisker plot represent. • I can compare data sets represented by box-and-whisker plots.

	Learning Target	Success Criteria
Chapter 1: Adding and Subtracting Rational Numbers		
Chapter Learning Target Understand adding and subtracting rational numbers. **Chapter Success Criteria** · Represent rational numbers on a number line. · Explain the rules for adding and subtracting integers using absolute value. · Apply addition and subtraction with rational numbers to model real-life problems. · Solve problems involving addition and subtraction of rational numbers.	1.1 Rational Numbers Understand absolute values and ordering of rational numbers.	· I can graph rational numbers on a number line. · I can find the absolute value of a rational number. · I can use a number line to compare rational numbers.
	1.2 Adding Integers Find sums of integers.	· I can explain how to model addition of integers on a number line. · I can find sums of integers by reasoning about absolute values. · I can explain why the sum of a number and its opposite is 0.
	1.3 Adding Rational Numbers Find sums of rational numbers.	· I can explain how to model addition of rational numbers on a number line. · I can find sums of rational numbers by reasoning about absolute values. · I can use properties of addition to efficiently add rational numbers.
	1.4 Subtracting Integers Find differences of integers.	· I can explain how subtracting integers is related to adding integers. · I can explain how to model subtraction of integers on a number line. · I can find differences of integers by reasoning about absolute values.
	1.5 Subtracting Rational Numbers Find differences of rational numbers and find distances between numbers on a number line.	· I can explain how to model subtraction of rational numbers on a number line. · I can find differences of rational numbers by reasoning about absolute values. · I can find distances between numbers on a number line.

	Learning Target	Success Criteria
Chapter 2: Multiplying and Dividing Rational Numbers		
Chapter Learning Target Understand multiplying and dividing rational numbers. **Chapter Success Criteria** • Explain the rules for multiplying integers. • Explain the rules for dividing integers. • Evaluate expressions involving rational numbers. • Solve real-life problems involving multiplication and division of rational numbers.	2.1 Multiplying Integers Find products of integers.	• I can explain the rules for multiplying integers. • I can find products of integers with the same sign. • I can find products of integers with different signs.
	2.2 Dividing Integers Find quotients of integers.	• I can explain the rules for dividing integers. • I can find quotients of integers with the same sign. • I can find quotients of integers with different signs.
	2.3 Converting Between Fractions and Decimals Convert between different forms of rational numbers.	• I can explain the difference between terminating and repeating decimals. • I can write fractions and mixed numbers as decimals. • I can write decimals as fractions and mixed numbers.
	2.4 Multiplying Rational Numbers Find products of rational numbers.	• I can explain the rules for multiplying rational numbers. • I can find products of rational numbers with the same sign. • I can find products of rational numbers with different signs.

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	Learning Target	Success Criteria
Chapter 2 continued		
2.5 Dividing Rational Numbers	Find quotients of rational numbers.	• I can explain the rules for dividing rational numbers. • I can find quotients of rational numbers with the same sign. • I can find quotients of rational numbers with different signs.

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	Learning Target	Success Criteria
Chapter 3: Expressions		
Chapter Learning Target Understand algebraic expressions. **Chapter Success Criteria** · Identify parts of an algebraic expression. · Write algebraic expressions. · Solve problems using algebraic expressions. · Interpret algebraic expressions in real-life problems.	3.1 Algebraic Expressions	Simplify algebraic expressions.	· I can identify terms and like terms of algebraic expressions. · I can combine like terms to simplify algebraic expressions. · I can write and simplify algebraic expressions to solve real-life problems.
	3.2 Adding and Subtracting Linear Expressions	Find sums and differences of linear expressions.	· I can explain the difference between linear and nonlinear expressions. · I can find opposites of terms that include variables. · I can apply properties of operations to add and subtract linear expressions.
	3.3 The Distributive Property	Apply the Distributive Property to generate equivalent expressions.	· I can explain how to apply the Distributive Property. · I can use the Distributive Property to simplify algebraic expressions.
	3.4 Factoring Expressions	Factor algebraic expressions.	· I can identify the greatest common factor of terms, including variable terms. · I can use the Distributive Property to factor algebraic expressions. · I can write a term as a product involving a given factor.

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		Learning Target	Success Criteria
Chapter 4: Equations and Inequalities			
Chapter Learning Target Understand equations and inequalities. **Chapter Success Criteria** · Identify key words and phrases to write equations and inequalities. · Write word sentences as equations and inequalities. · Solve equations and inequalities using properties. · Use equations and inequalities to model and solve real-life problems.	4.1 Solving Equations Using Addition or Subtraction	Write and solve equations using addition or subtraction.	· I can apply the Addition and Subtraction Properties of Equality to produce equivalent equations. · I can solve equations using addition or subtraction. · I can apply equations involving addition or subtraction to solve real-life problems.
	4.2 Solving Equations Using Multiplication or Division	Write and solve equations using multiplication or division.	· I can apply the Multiplication and Division Properties of Equality to produce equivalent equations. · I can solve equations using multiplication or division. · I can apply equations involving multiplication or division to solve real-life problems.
	4.3 Solving Two-Step Equations	Write and solve two-step equations.	· I can apply properties of equality to produce equivalent equations. · I can solve two-step equations using the basic operations. · I can apply two-step equations to solve real-life problems.
	4.4 Writing and Graphing Inequalities	Write inequalities and represent solutions of inequalities on number lines.	· I can write word sentences as inequalities. · I can determine whether a value is a solution of an inequality. · I can graph the solutions of inequalities.

	Learning Target	Success Criteria
Chapter 4 continued		
4.5 Solving Inequalities Using Addition or Subtraction	Write and solve inequalities using addition or subtraction.	• I can apply the Addition and Subtraction Properties of Inequality to produce equivalent inequalities. • I can solve inequalities using addition or subtraction. • I can apply inequalities involving addition or subtraction to solve real-life problems.
4.6 Solving Inequalities Using Multiplication or Division	Write and solve inequalities using multiplication or division.	• I can apply the Multiplication and Division Properties of Inequality to produce equivalent inequalities. • I can solve inequalities using multiplication or division. • I can apply inequalities involving multiplication or division to solve real-life problems.
4.7 Solving Two-Step Inequalities	Write and solve two-step inequalities.	• I can apply properties of inequality to generate equivalent inequalities. • I can solve two-step inequalities using the basic operations. • I can apply two-step inequalities to solve real-life problems.

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		Learning Target	Success Criteria
Chapter 5: Ratios and Proportions			
Chapter Learning Target Understand ratios and proportions. **Chapter Success Criteria** · Write and interpret ratios. · Describe ratio relationships and proportional relationships. · Represent equivalent ratios. · Model ratio relationships and proportional relationships to solve real-life problems.	5.1 Ratios and Ratio Tables	Understand ratios of rational numbers and use ratio tables to represent equivalent ratios.	· I can write and interpret ratios involving rational numbers. · I can use various operations to create tables of equivalent ratios. · I can use ratio tables to solve ratio problems.
	5.2 Rates and Unit Rates	Understand rates involving fractions and use unit rates to solve problems.	· I can find unit rates for rates involving fractions. · I can use unit rates to solve rate problems.
	5.3 Identifying Proportional Relationships	Determine whether two quantities are in a proportional relationship.	· I can determine whether ratios form a proportion. · I can explain how to determine whether quantities are proportional. · I can distinguish between proportional and nonproportional situations.
	5.4 Writing and Solving Proportions	Use proportions to solve ratio problems.	· I can solve proportions using various methods. · I can find a missing value that makes two ratios equivalent. · I can use proportions to represent and solve real-life problems.

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		Learning Target	Success Criteria
Chapter 5 continued			
	5.5 Graphs of Proportional Relationships	Represent proportional relationships using graphs and equations.	· I can determine whether quantities are proportional using a graph. · I can find the unit rate of a proportional relationship using a graph. · I can create equations to represent proportional relationships.
	5.6 Scale Drawings	Solve problems involving scale drawings.	· I can find an actual distance in a scale drawing. · I can explain the meaning of scale and scale factor. · I can use a scale drawing to find the actual lengths and areas of real-life objects.

	Learning Target	Success Criteria
Chapter 6: Percents		
Chapter Learning Target Understand fractions, decimals, and percents. **Chapter Success Criteria** · Rewrite fractions, decimals, and percents. · Compare and order fractions, decimals, and percents. · Use the percent proportion or percent equation to find a percent, a part, or a whole. · Apply percents to solve real-life problems.	6.1 Fractions, Decimals, and Percents	Rewrite fractions, decimals, and percents using different representations.	· I can write percents as decimals and decimals as percents. · I can write fractions as decimals and percents. · I can compare and order fractions, decimals, and percents.
	6.2 The Percent Proportion	Use the percent proportion to find missing quantities.	· I can write proportions to represent percent problems. · I can solve a proportion to find a percent, a part, or a whole.
	6.3 The Percent Equation	Use the percent equation to find missing quantities.	· I can write equations to represent percent problems. · I can use the percent equation to find a percent, a part, or a whole.
	6.4 Percents of Increase and Decrease	Find percents of change in quantities.	· I can explain the meaning of percent of change. · I can find the percent of increase or decrease in a quantity. · I can find the percent error of a quantity.
	6.5 Discounts and Markups	Solve percent problems involving discounts and markups.	· I can use percent models to solve problems involving discounts and markups. · I can write and solve equations to solve problems involving discounts and markups.
	6.6 Simple Interest	Understand and apply the simple interest formula.	· I can explain the meaning of simple interest. · I can use the simple interest formula to solve problems.

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	Learning Target	Success Criteria
Chapter 7: Probability		
Chapter Learning Target Understand probability. **Chapter Success Criteria** · Identify the possible outcomes of a situation. · Explain the meaning of experimental and theoretical probability. · Make predictions using probabilities. · Solve real-life problems using probability.	7.1 Probability Understand how the probability of an event indicates its likelihood.	· I can identify possible outcomes of an experiment. · I can use probability and relative frequency to describe the likelihood of an event. · I can use relative frequency to make predictions.
	7.2 Experimental and Theoretical Probability Develop probability models using experimental and theoretical probability.	· I can explain the meanings of experimental probability and theoretical probability. · I can find experimental and theoretical probabilities. · I can use probability to make predictions.
	7.3 Compound Events Find sample spaces and probabilities of compound events.	· I can find the sample space of two or more events. · I can find the total number of possible outcomes of two or more events. · I can find probabilities of compound events.
	7.4 Simulations Design and use simulations to find probabilities of compound events.	· I can design a simulation to model a real-life situation. · I can recognize favorable outcomes in a simulation. · I can use simulations to find experimental probabilities.

	Learning Target	Success Criteria
Chapter 8: Statistics		
Chapter Learning Target Understand statistics. **Chapter Success Criteria** · Determine the validity of a conclusion. · Explain variability in samples of a population. · Solve a problem using statistics. · Compare populations.	8.1 Samples and Populations	Understand how to use random samples to make conclusions about a population.	· I can explain why a sample is biased or unbiased. · I can explain why conclusions made from a biased sample may not be valid. · I can use an unbiased sample to make a conclusion about a population.
	8.2 Using Random Samples to Describe Populations	Understand variability in samples of a population.	· I can use multiple random samples to make conclusions about a population. · I can use multiple random samples to examine variation in estimates.
	8.3 Comparing Populations	Compare populations using measures of center and variation.	· I can find the measures of center and variation of a data set. · I can describe the visual overlap of two data distributions numerically. · I can determine whether there is a significant difference in the measures of center of two data sets.
	8.4 Using Random Samples to Compare Populations	Use random samples to compare populations.	· I can compare random samples using measures of center and variation. · I can recognize whether random samples are likely to be representative of a population. · I can compare populations using multiple random samples.

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	Learning Target	Success Criteria
Chapter 9: Geometric Shapes and Angles		
Chapter Learning Target Understand geometry. **Chapter Success Criteria** · Explain how to find the circumference of a circle. · Find the areas of circles and composite figures. · Solve problems involving angle measures. · Construct a polygon.	9.1 Circles and Circumference Find the circumference of a circle.	· I can explain the relationship between the diameter and circumference of a circle. · I can use a formula to find the circumference of a circle.
	9.2 Areas of Circles Find the area of a circle.	· I can estimate the area of a circle. · I can use a formula to find the area of a circle.
	9.3 Perimeters and Areas of Composite Figures Find perimeters and areas of composite figures.	· I can use a grid to estimate perimeters and areas. · I can identify the shapes that make up a composite figure. · I can find the perimeters and areas of shapes that make up composite figures.
	9.4 Constructing Polygons Construct a polygon with given measures.	· I can use technology to draw polygons. · I can determine whether given measures result in one triangle, many triangles, or no triangle. · I can draw polygons given angle measures or side lengths.
	9.5 Finding Unknown Angle Measures Use facts about angle relationships to find unknown angle measures.	· I can identify adjacent, complementary, supplementary, and vertical angles. · I can use equations to find unknown angle measures. · I can find unknown angle measures in real-life situations.

	Learning Target	Success Criteria
Chapter 10: Surface Area and Volume		
Chapter Learning Target Understand surface area and volume. **Chapter Success Criteria** • Describe the surface area and volume of different shapes. • Use formulas to find surface areas and volumes of solids. • Solve real-life problems involving surface area and volume. • Describe cross sections of solids.	10.1 Surface Areas of Prisms Find the surface area of a prism.	• I can use a formula to find the surface area of a prism. • I can find the lateral surface area of a prism.
	10.2 Surface Areas of Cylinders Find the surface area of a cylinder.	• I can use a formula to find the surface area of a cylinder. • I can find the lateral surface area of a cylinder.
	10.3 Surface Areas of Pyramids Find the surface area of a pyramid.	• I can use a net to find the surface area of a regular pyramid. • I can find the lateral surface area of a regular pyramid.
	10.4 Volumes of Prisms Find the volume of a prism.	• I can use a formula to find the volume of a prism. • I can use the formula for the volume of a prism to find a missing dimension.
	10.5 Volumes of Pyramids Find the volume of a pyramid.	• I can use a formula to find the volume of a pyramid. • I can use the volume of a pyramid to solve a real-life problem.
	10.6 Cross Sections of Three-Dimensional Figures Describe the cross sections of a solid.	• I can explain the meaning of a cross section. • I can describe cross sections of prisms and pyramids. • I can describe cross sections of cylinders and cones.

	Learning Target	Success Criteria
Chapter 11: Transformations		
Chapter Learning Target Understand transformations. **Chapter Success Criteria** • Identify a translation. • Describe a transformation. • Describe a sequence of rigid motions between two congruent figures. • Solve real-life problems involving transformations.	11.1 Translations	Translate figures in the coordinate plane.	• I can identify a translation. • I can find the coordinates of a translated figure. • I can use coordinates to translate a figure.
	11.2 Reflections	Reflect figures in the coordinate plane.	• I can identify a reflection. • I can find the coordinates of a figure reflected in an axis. • I can use coordinates to reflect a figure in the x- or y-axis.
	11.3 Rotations	Rotate figures in the coordinate plane.	• I can identify a rotation. • I can find the coordinates of a figure rotated about the origin. • I can use coordinates to rotate a figure about the origin.
	11.4 Congruent Figures	Understand the concept of congruent figures.	• I can identify congruent figures. • I can describe a sequence of rigid motions between two congruent figures.
	11.5 Dilations	Dilate figures in the coordinate plane.	• I can identify a dilation. • I can find the coordinates of a figure dilated with respect to the origin. • I can use coordinates to dilate a figure with respect to the origin.
	11.6 Similar Figures	Understand the concept of similar figures.	• I can identify similar figures. • I can describe a similarity transformation between two similar figures.

	Learning Target	Success Criteria
Chapter 11 continued		
11.7 Perimeters and Areas of Similar Figures	Find perimeters and areas of similar figures.	· I can use corresponding side lengths to compare perimeters of similar figures. · I can use corresponding side lengths to compare areas of similar figures. · I can use similar figures to solve real-life problems involving perimeter and area.

		Learning Target	Success Criteria
Chapter 12: Angles and Triangles			
Chapter Learning Target Understand angles. **Chapter Success Criteria** · Identify angle relationships. · Find angle measurements. · Compare angles. · Apply angle relationships to solve real-life problems.	12.1 Parallel Lines and Transversals	Find missing angle measures created by the intersections of lines.	· I can identify congruent angles when a transversal intersects parallel lines. · I can find angle measures when a transversal intersects parallel lines.
	12.2 Angles of Triangles	Understand properties of interior and exterior angles of triangles.	· I can use equations to find missing angle measures of triangles. · I can use interior and exterior angles of a triangle to solve real-life problems.
	12.3 Angles of Polygons	Find interior angle measures of polygons.	· I can explain how to find the sum of the interior angle measures of a polygon. · I can use an equation to find an interior angle measure of a polygon. · I can find the interior angle measures of a regular polygon.
	12.4 Using Similar Triangles	Use similar triangles to find missing measures.	· I can use angle measures to determine whether triangles are similar. · I can use similar triangles to solve real-life problems.

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	Learning Target	Success Criteria
Chapter 13: Graphing and Writing Linear Equations		
Chapter Learning Target Understand graphing linear equations. **Chapter Success Criteria** · Identify key features of a graph. · Explain the meaning of different forms of linear equations. · Interpret the slope and intercepts of a line. · Create graphs of linear equations.	13.1 Graphing Linear Equations Graph linear equations.	· I can create a table of values and write ordered pairs given a linear equation. · I can plot ordered pairs to create a graph of a linear equation. · I can use a graph of a linear equation to solve a real-life problem.
	13.2 Slope of a Line Find and interpret the slope of a line.	· I can explain the meaning of slope. · I can find the slope of a line. · I can interpret the slope of a line in a real-life problem.
	13.3 Graphing Proportional Relationships Graph proportional relationships.	· I can graph an equation that represents a proportional relationship. · I can write an equation that represents a proportional relationship. · I can use graphs to compare proportional relationships.
	13.4 Graphing Linear Equations in Slope-Intercept Form Graph linear equations in slope-intercept form.	· I can identify the slope and y-intercept of a line given an equation. · I can rewrite a linear equation in slope-intercept form. · I can use the slope and y-intercept to graph linear equations.

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	Learning Target	Success Criteria
Chapter 13 continued		
13.5 Graphing Linear Equations in Standard Form	Graph linear equations in standard form.	• I can rewrite the standard form of a linear equation in slope-intercept form. • I can find intercepts of linear equations written in standard form. • I can use intercepts to graph linear equations.
13.6 Writing Equations in Slope-Intercept Form	Write equations of lines in slope-intercept form.	• I can find the slope and the y-intercept of a line. • I can use the slope and the y-intercept to write an equation of a line. • I can write equations in slope-intercept form to solve real-life problems.
13.7 Writing Equations in Point-Slope Form	Write equations of lines in point-slope form.	• I can use a point on a line and the slope to write an equation of the line. • I can use any two points to write an equation of a line. • I can write equations in point-slope form to solve real-life problems.

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		Learning Target	Success Criteria
Chapter 14: Exponents and Scientific Notation			
Chapter Learning Target Understand exponents and scientific notation. **Chapter Success Criteria** • Write products using exponents. • Describe the value of powers. • Evaluate expressions. • Compare quantities using scientific notation.	14.1 Exponents	Use exponents to write and evaluate expressions.	• I can write products using exponents. • I can evaluate expressions involving powers. • I can use exponents to solve real-life problems.
	14.2 Product of Powers Property	Generate equivalent expressions involving products of powers.	• I can find products of powers that have the same base. • I can find powers of powers. • I can find powers of products.
	14.3 Quotient of Powers Property	Generate equivalent expressions involving quotients of powers.	• I can find quotients of powers that have the same base. • I can simplify expressions using the Quotient of Powers Property. • I can solve real-life problems involving quotients of powers.
	14.4 Zero and Negative Exponents	Understand the concepts of zero and negative exponents.	• I can explain the meanings of zero and negative exponents. • I can evaluate numerical expressions involving zero and negative exponents. • I can simplify algebraic expressions involving zero and negative exponents.
	14.5 Estimating Quantities	Round numbers and write the results as the product of a single digit and a power of 10.	• I can round very large and very small numbers. • I can write a multiple of 10 as a power. • I can compare very large or very small quantities.

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	Learning Target	Success Criteria
Chapter 14 continued		
14.6 Scientific Notation	Understand the concept of scientific notation.	• I can convert between scientific notation and standard form. • I can choose appropriate units to represent quantities. • I can use scientific notation to solve real-life problems.
14.7 Operations in Scientific Notation	Perform operations with numbers written in scientific notation.	• I can explain how to add and subtract numbers in scientific notation. • I can explain how to multiply and divide numbers in scientific notation. • I can use operations in scientific notation to solve real-life problems.

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	Learning Target	Success Criteria
Chapter 15: Real Numbers and the Pythagorean Theorem		
Chapter Learning Target Understand square roots. **Chapter Success Criteria** · Describe a square root. · Find the square root(s) of a number. · Approximate the value of the square root of a number. · Explain the Pythagorean Theorem.	15.1 Finding Square Roots Understand the concept of a square root of a number.	· I can find square roots of numbers. · I can evaluate expressions involving square roots. · I can use square roots to solve equations.
	15.2 The Pythagorean Theorem Understand the Pythagorean Theorem.	· I can explain the Pythagorean Theorem. · I can use the Pythagorean Theorem to find unknown side lengths of triangles. · I can use the Pythagorean Theorem to find distances between points in a coordinate plane.
	15.3 Finding Cube Roots Understand the concept of a cube root of a number.	· I can find cube roots of numbers. · I can evaluate expressions involving cube roots. · I can use cube roots to solve equations.
	15.4 Rational Numbers Convert between different forms of rational numbers.	· I can explain the meaning of rational numbers. · I can write fractions and mixed numbers as decimals. · I can write repeating decimals as fractions or mixed numbers.
	15.5 Irrational Numbers Understand the concept of irrational numbers.	· I can classify real numbers as rational or irrational. · I can approximate irrational numbers. · I can solve real-life problems involving irrational numbers.

		Learning Target	Success Criteria
Chapter 15 continued			
	15.6 The Converse of the Pythagorean Theorem	Understand the converse of the Pythagorean Theorem.	• I can explain the converse of the Pythagorean Theorem. • I can identify right triangles given three side lengths. • I can identify right triangles in a coordinate plane.

		Learning Target	Success Criteria
Chapter 16: Volume and Similar Solids			
Chapter Learning Target Understand volume. **Chapter Success Criteria** • Explain how to find the volumes of cylinders, cones, and spheres. • Use formulas to find volumes of solids. • Find missing dimensions of solids. • Find surface areas and volumes of similar solids.	16.1 Volumes of Cylinders	Find the volume of a cylinder.	• I can use a formula to find the volume of a cylinder. • I can use the formula for the volume of a cylinder to find a missing dimension.
	16.2 Volumes of Cones	Find the volume of a cone.	• I can use a formula to find the volume of a cone. • I can use the formula for the volume of a cone to find a missing dimension.
	16.3 Volumes of Spheres	Find the volume of a sphere.	• I can use a formula to find the volume of a sphere. • I can use the formula for the volume of a sphere to find the radius. • I can find volumes of composite solids.
	16.4 Surface Areas and Volumes of Similar Solids	Find the surface areas and volumes of similar solids.	• I can use corresponding dimensions to determine whether solids are similar. • I can use corresponding dimensions to find missing measures in similar solids. • I can use linear measures to find surface areas and volumes of similar solids.

		Learning Target	Success Criteria
Additional Topics			
	Topic 1 Solving Multi-Step Equations	Write and solve multi-step equations.	• I can apply properties to produce equivalent equations. • I can solve multi-step equations. • I can use multi-step equations to model and solve real-life problems.
	Topic 2 Solving Equations with Variables on Both Sides	Write and solve equations with variables on both sides.	• I can explain how to solve an equation with variables on both sides. • I can determine whether an equation has one solution, no solution, or infinitely many solutions. • I can use equations with variables in both sides to model and solve real-life problems.
	Topic 3 Rewriting Equations and Formulas	Solve literal equations for given variables and convert temperatures.	• I can use properties of equality to rewrite literal equations. • I can use a formula to convert temperatures.

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Chapter	Learning Target	Success Criteria
Chapter 1: Solving Linear Equations	Understand solving linear equations.	· I can describe how to solve simple equations. · I can solve multi-step equations. · I can solve absolute value equations. · I can rewrite equations and formulas.
Chapter 2: Solving Linear Inequalities	Understand solving linear inequalities.	· I can graph inequalities. · I can solve one-step inequalities. · I can solve multi-step inequalities. · I can solve compound and absolute value inequalities.
Chapter 3: Graphing Linear Functions	Understand graphing linear functions.	· I can determine whether relations are functions. · I can identify linear functions. · I can graph linear equations. · I can describe transformations of graphs of linear functions.
Chapter 4: Writing Linear Functions	Understand writing linear functions.	· I can identify and write different forms of linear equations. · I can interpret scatter plots and identify the correlation between data sets. · I can analyze lines of fit. · I can write a function that represents an arithmetic sequence to solve real-life problems.
Chapter 5: Solving Systems of Linear Equations	Understand solving systems of linear equations.	· I can define a system of linear equations. · I can describe different methods for solving systems of linear equations. · I can solve systems of linear equations. · I can solve systems of linear inequalities.

Chapter	Learning Target	Success Criteria
Chapter 6: Exponential Functions and Sequences	Understand exponential functions and sequences.	· I can identify and use properties of exponents. · I can model exponential functions. · I can solve exponential equations. · I can write an explicit and a recursive rule for a geometric sequence.
Chapter 7: Polynomial Equations and Factoring	Understand polynomial equations and factoring.	· I can classify polynomials by degree and number of terms. · I can add, subtract, and multiply polynomials. · I can solve polynomial equations. · I can factor polynomials and use factoring to solve real-life problems.
Chapter 8: Graphing Quadratic Functions	Understand graphing quadratic functions.	· I can identify characteristics of quadratic functions. · I can describe how to graph quadratic functions in different forms. · I can use intercept form to find zeros of functions. · I can choose an appropriate function to model data.
Chapter 9: Solving Quadratic Equations	Understand solving quadratic equations.	· I can simplify expressions using properties of radicals. · I can describe different methods for solving quadratic equations. · I can solve quadratics equations. · I can solve systems of nonlinear equations graphically and algebraically.
Chapter 10: Radical Functions and Equations	Understand radical functions and equations.	· I can identify the domain and range of radical functions. · I can graph square root and cube root functions. · I can solve radical equations. · I can find inverses of relations and functions.
Chapter 11: Data Analysis and Displays	Understand data.	· I can interpret data displays. · I can describe the shapes of data distributions. · I can represent data in different ways. · I can analyze data.

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