Unit	Lesson	Lesson Objectives
Proportional Relationships		
	Unit Rates	
		Use a given unit rate and proportional reasoning to complete a table.
		Use a given unit rate and proportional reasoning to solve problems.
		Use appropriate language to describe ratios and unit rates.
	Finding a Constant of Proportionality	
		Find the constant of proportionality from verbal descriptions, tables, graphs, and diagrams.
	Applications of Unit Rates	
		Apply unit rates to solve for an unknown in real-world problems.
		Determine a unit rate from a real-world context.
		Use unit rates to make comparisons.
	Graphing Proportional Relationships	
		Graph a proportional relationship from tables and verbal descriptions.
		Identify the meanings of points on the graph of a proportional relationship and determine the characteristics of the graph of a proportional relationship.
	Identifying Proportional Relationships	
		Analyze data in tables and graphs to determine if the given relationships are proportional.
	Equations of Proportional Relationships	
		Identify the constant of proportionality from an equation.
		Translate between tables, graphs, and equations to represent proportional relationships.
		Write an equation to represent a proportional relationship.
	Cross Products	
		Describe why using cross products is a valid method for solving proportions.
		Use cross products to solve for an unknown quantity in a proportion problem.
		Use cross products to solve real-world proportion problems.
	Scale Factor	
		Use a given scale factor to find an unknown length on a reduction or enlargement.
		Use a given scale factor to find an unknown length on an original.
	Solving Scale Problems Using Proportions	
		Use proportional relationships to solve problems involving scale drawings.
	Scale Drawings and Area	
		Compute areas of figures from scale drawings.
	Changing a Scale	
		Solve problems involving reproducing a scale drawing using a different scale.
Percents		
	Introduction to Percents	
		Create diagrams to solve for a percent in real-world problems.
		Find the percent of a number using the fraction or decimal equivalent form of a percent to write an expression from a diagram.
		Identify an equivalent percent, fraction, or decimal represented in multiple forms.

Unit	Lesson	Lesson Objectives
	Finding a Percent of a Number	
		Find the percent of a number when the percent is more than 100.
		Solve problems by finding the percent of a number, including amounts of gratuity and tax, by using diagrams and expressions.
	Finding a Total Amount	
		Find the total amount, including discounts, understanding that it is a process of subtracting from the original amount.
		Solve for the total amount in gratuity, tax, or commission problems by using diagrams and expressions, understanding that it is a process of adding to the original amount.
	Markups and Markdowns	
		Solve real-world problems involving a markup or markdown relating each as adding or subtracting from the original.
	Finding an Original Amount	
		Find the original amount in real-world percent problems involving gratuity, tax, commission, markup, discount, or markdown using diagrams and expressions.
	Simple Interest	
		Apply the simple interest formula in the context of a word problem.
		Calculate simple interest, principal, time, and total using the simple interest formula.
	Percent Increase and Decrease	
		Find the percent change by using the ratio of the change in quantity to the original amount.
		Use percent increase and decrease to solve real-world problems.
	Performance Task: Trendy Teens	
Operations with Integers		
	Integers and the Number Line	
		Describe real-world situations that can be represented by integers, including where opposite quantities combine to make 0.
		Find the absolute value of an integer.
		Represent and compare integers on vertical and horizontal number lines.
	Using Properties of Operations	
		Apply the associative and commutative properties of operations to simplify expressions.
		Apply the distributive property to rewrite and evaluate expressions.
	Adding Integers	
		Apply properties of operations to add integers.
		Describe real-world contexts for adding integers.
		Use visual representations to add integers.
	Subtracting Integers	
		Describe real-world contexts for subtracting integers.
		Use additive inverse and properties of operations to subtract integers.
		Use visual representations to subtract integers.
	Multiplying Integers	
		Apply properties of operations and rules of signed numbers to multiply integers.
		Describe real-world contexts for multiplying integers.
		Use visual representations to multiply integers.

Unit	Lesson	Lesson Objectives
	Dividing Integers	
		Apply properties of operations and rules of signed numbers to divide integers.
		Describe real-world contexts for dividing integers.
		Use visual representations to divide integers.
	Operations with Integers	
		Solve integer problems involving a variety of operations while applying the properties of operations.
Operations with Rational Numbers		
	Rational Numbers	
		Describe real-world situations that can be represented by rational numbers, including where opposite quantities combine to make 0.
		Represent positive and negative rational numbers on vertical and horizontal number lines.
		Write a rational number as a decimal that eventually terminates or repeats.
	Adding and Subtracting Decimals	
		Apply properties of operations to add and subtract decimals.
		Describe real-world contexts for adding and subtracting decimals.
		Estimate sums and differences of decimals.
		Use visual representations to add and subtract decimals.
	Multiplying Decimals	
		Apply properties of operations to multiply decimals.
		Describe real-world contexts for multiplying decimals.
		Estimate products of decimals.
		Use the rules of signed numbers to multiply decimals.
	Dividing Decimals	
		Apply properties of operations to divide decimals.
		Describe real-world contexts for dividing decimals.
		Estimate quotients of decimals.
		Use the rules of signed numbers to divide decimals.
	Adding and Subtracting Fractions	
		Describe real-world contexts for adding and subtracting fractions.
		Estimate sums and differences of fractions.
		Use visual representations to add and subtract fractions.
	Multiplying Fractions	
		Apply properties of operations to multiply fractions.
		Describe real-world contexts for multiplying fractions.
		Estimate products of fractions.
		Use the rules of signed numbers and visuals to multiply fractions.
	Dividing Fractions	
		Apply properties of operations to divide fractions.
		Describe real-world contexts for dividing fractions.
		Estimate quotients of fractions.
		Use the rules of signed numbers to divide fractions.

Unit	Lesson	Lesson Objectives
	Solving Problems Involving Rational Numbers	
		Solve real-world and mathematical problems involving addition, subtraction, multiplication, and division with rational numbers.
	Performance Task: Track and Field Day	
Probability		
	Understanding Probability	
		Describe the probability of an event as a number between 0 and 1, which represents the likelihood of the event.
		Identify an event with a given probability as impossible, unlikely, likely, or certain.
		Use the fact that the sum of the probabilities of all possible outcomes is 1 to find the probabilities of complementary events.
	Theoretical Probability	
		Express the theoretical probabilities of given outcomes of an experiment as a ratio.
		Use a given sample space to calculate the theoretical probabilities of events.
		Use theoretical probability to make predictions.
	Experimental Probability	
		Find the experimental probability of an event, expressing it as a ratio.
		Use experimental probability to make predictions.
	Experimental vs. Theoretical Probability	
		Compare experimental results to theoretical probabilities and make conjectures about the results.
		Explain possible sources of discrepancy between the theoretical and experimental probability of an event.
	Compound Events and Sample Space	
		Determine outcomes in a sample space that represents a given compound event.
		Identify the sample space for an experiment involving compound events.
	Probability of Compound Events	
		Find probabilities of dependent compound events using organized lists, tables, or tree diagrams.
		Find probabilities of independent compound events using organized lists, tables, or tree diagrams.
	Simulations to Estimate Probabilities	
		Design a simulation to experimentally determine the probability of compound events.
		Use a simulation to generate frequencies for compound events; e.g., use a coin to simulate the gender of a baby and find the experimental probability of having exactly 1 boy in a family of three children.
Sampling and Comparing Populations		
	Populations and Sampling	
		Determine when sampling is an appropriate and helpful measure of a population and when it is not.
		Explain that statistics can be used to gain information about a population by examining a sample of the population.
	Sampling Methods	
		Compare a random sample to a biased sample in a variety of real-world contexts to determine validity.
		Identify and explain the process for choosing a random sample.
	Inferences and Predictions	
		Examine sample size and the effect on a prediction using the results of a simulation.
		Make an inference about the whole population based on a sample by using proportional reasoning.
	Multiple Samples	
		Compare samples generated from simulations to draw an inference about a population.
		Use a simulation to generate multiple samples of the same size.

Unit	Lesson	Lesson Objectives
	Variation in Predictions and Estimates	
		Analyze the results of multiple samples by comparing the means of samples and populations.
		Describe variations in estimates or predictions of multiple samples.
	Analyzing Dot Plots	
		Analyze two dot plots with similar variation by comparing the measures of center.
		Informally compare shapes of two different data distributions with similar variations.
	Comparing Measures of Center and Variability	
		Analyze two numerical data distributions with similar variation by calculating and comparing the measures of center to the measure of variability.
		Compare the measures of center of two sets of data using a multiple of the measure of variability, expressed as a ratio.
		Draw an informal comparative inference about two sets of data.
	Comparing Box Plots	
		Compare two data sets by comparing the difference in the measures of center and the measures of variability.
		Compare two data sets with different numbers of data points by comparing two box plots.
		Draw an informal comparative inference about two sets of data.
Expressions		
	Writing Expressions	
		Translate algebraic expressions into words.
		Translate words into algebraic expressions.
	Writing and Evaluating Expressions	
		Evaluate expressions for real-world situations.
		Write expressions to represent real-world situations.
	Using Properties to Simplify Expressions	
		Simplify expressions using properties of operations and combining like terms.
	Adding and Subtracting Expressions	
		Add algebraic expressions and use them to model real-world scenarios.
		Subtract algebraic expressions and use them to model real-world scenarios.
	Expanding Expressions	
		Identify equivalent expressions.
		Use the distributive property to expand and simplify algebraic expressions.
	Factoring Expressions	
		Find the greatest common factor of an algebraic expression.
		Rewrite algebraic expressions by factoring.
Equations		
	Writing Equations	
		Write equations from words.
		Write equations to represent real-world situations.
	Addition and Subtraction Equations	
		Solve one-step addition and subtraction equations in the real world and interpret the results.
		Solve one-step addition and subtraction equations.

Unit	Lesson	Lesson Objectives
	Multiplication and Division Equations	
		Solve one-step multiplication and division equations.
		Write and solve one-step multiplication and division equations in the real world and interpret the results.
	Solving Two-Step Equations	
		Solve two-step equations in the real world and interpret the results.
		Solve two-step equations.
	Solving Multi-Step Equations	
		Solve multi-step equations in the real world and interpret the results.
		Solve multi-step equations.
	Equations in the Real World	
		Write and solve equations to represent real-world situations.
	Performance Task: Technology Trends	
Inequalities		
	Writing Inequalities	
		Write inequalities from words, and vice-versa.
		Write inequalities to represent real-world situations.
	Graphing Inequalities	
		Graph an inequality.
		Write an inequality from a graph.
	Addition and Subtraction Inequalities	
		Solve one-step addition and subtraction inequalities in the real world and interpret the results.
		Solve one-step addition and subtraction inequalities.
	Multiplication and Division Inequalities	
		Solve one-step multiplication and division inequalities in the real world and interpret the results.
		Solve one-step multiplication and division inequalities.
	Solving Two-Step Inequalities	
		Solve two-step inequalities in the real world and interpret the results.
		Solve two-step inequalities.
Two-Dimensional Geometry		
	Angle Relationships	
		Identify supplementary, complementary, vertical, and adjacent angles.
		Use special relationships between angle pairs to find an unknown angle measure.
	Finding Unknown Angle Measures	
		Use angle relationships to find unknown measures in a figure.
	Constructing Triangles	
		Construct triangles from given parameters.
		Identify whether given parameters create a unique triangle, more than one triangle, or no triangle.
	Constructing Geometric Figures	
		Construct geometric figures from triangles.
		Describe the characteristics of polygons.

Unit	Lesson	Lesson Objectives
	Circumference	
		Solve problems involving the circumference of a circle.
	Area of Polygons	
		Solve problems involving areas of triangles and quadrilaterals.
	Area of a Circle	
		Describe the relationship between the circumference and area of a circle.
		Solve problems involving the area of a circle.
Three-Dimensional Geometry		
	Cross Sections	
		Describe the figure that results from slicing a three-dimensional figure.
	Surface Area of Prisms	
		Calculate surface areas of rectangular and triangular prisms.
	Surface Area of Pyramids	
		Calculate surface area of rectangular and square pyramids.
	Surface Area of Composite Figures	
		Calculate surface areas of composite figures.
	Volume of Prisms	
		Calculate volumes of rectangular and triangular prisms.
	Volume of Pyramids	
		Calculate volumes of rectangular and square pyramids.
	Volume of Composite Figures	
		Calculate volumes of composite figures.
	Volume and Surface Area Problems	
		Solve problems involving surface areas and volumes of prisms and composite figures.