Range Performance Level Descriptors

Grade 6 Math

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6.1.2.A Classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers.	• Classifies numbers as rational numbers, integers, or whole numbers using a visual representation when given a list of numbers in simplified form.	• Identifies the visual representation that represents the relationship among rational numbers, integers, and whole numbers. • Identifies the number that represents a specified subset of numbers when given a visual representation that shows the relationship among different subsets of numbers.	• Places numbers in a visual representation when given a list of numbers.	• Classifies numbers as rational numbers, integers, or whole numbers using a visual representation when given a list of numbers that includes numbers that are not in simplified form. • Identifies characteristics of each number classification.
6.1.2.B Identify a number, its opposite, and its absolute value.	• Identifies whole number and integer opposites when given a table of numbers and opposites with some values missing. • Determines the absolute value of a given negative integer.	• Determines the absolute value of a given positive integer. • Identifies the statement that describes the absolute value or opposite of a given rational number. • Identifies the statement that describes the absolute value or opposite of a given number plotted on a number line.	• Identifies the absolute value of a number represented on a number line. • Identifies whether two opposite values represented on a number line have an absolute value equal to a given value. • Makes calculations using absolute value.	• Determines the opposite and absolute value of a number that is represented on a number line. • Distinguishes between absolute value and opposite value when given multiple situations and numbers.

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6.1.2.C Locate, compare, and order integers and rational numbers using a number line.	• Identifies the integer that represents an unknown point on a number line. • Compares two integers by correctly placing them on a number line. • Orders integers from least to greatest when given a list of values and a number line.	• Locates the point on a number line where an integer should be placed. • Locates the point on a number line where a benchmark rational number should be placed.	• Locates the points on a number line where given rational numbers, including improper fractions and mixed numbers, should be placed.	• Identifies which integer represented on a number line is greater than a given rational number. • Orders integers and rational numbers on a number line when given a list of values.
6.1.2.D Order a set of rational numbers arising from mathematical and real-world contexts.	• Orders a list of numbers in ascending or descending order when given a list of integers and decimals to the thousandths place.	• Determines the greatest or least value from a list of rational numbers. • Orders a list of numbers in ascending or descending order when given a list of rational numbers in the same form. • Orders a list of numbers in ascending or descending order when given a list of fractions, decimals, and percents.	• Identifies the placement of rational numbers on a number line when the rational numbers are in the same form. • Compares two rational numbers using an inequality symbol. • Orders a list of numbers in ascending or descending order when given a list of negative numbers. • Determines whether a number is between two integers.	• Orders a list of numbers in ascending or descending order when given a list of rational numbers in any form. • Determines whether a number is between two rational numbers.

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6.1.2.E Extend representations for division to include fraction notation such as *a/b* represents the same number as $a \div b$ where $b \neq 0$.	• Writes a fraction and describes what each number represents. • Divides whole numbers using long division.	• Determines the expression not equivalent to a division expression when given a verbal description. • Identifies two expressions that are equivalent to a division expression when given a verbal description of the expression. • Writes division equations that could be used to solve real-world situations. • Identifies the expression that does or does not have the same value as the value represented by the division of two given whole numbers.	• Creates a fraction that represents a given division expression. • Identifies two expressions that represent a division problem presented in long division form.	• Applies the relationship between fractions and division to solve a real-world problem.
6.1.4.C Give examples of ratios as multiplicative comparisons of two quantities describing the same attribute.	• Determines a ratio that represents a real-world situation when given two numbers.	• Creates a visual model of an equivalent value from a real-world situation. • Determines a ratio that represents the relationship between values from a real-world context. • Determines the ratio that represents a visual model.	• Determines a ratio equivalent to a fraction as a multiplicative comparison of two quantities from real-world contexts. • Creates an equivalent ratio using a given ratio in a real-world situation or visual model.	• Determines the dimensions of a figure in the form of an equivalent ratio using a given ratio in context.

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6.1.4.D Give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients.	• Determines the unit rate when given two quantities from a real-world situation.	• Determines an equivalent rate when given two quantities from a real-world situation.	• Identifies the statement that represents a rate from a list of real-world situations.	• Determines equivalent rates using a given ratio and explains the relationship to division as it relates to a given real-world context.
6.1.4.E Represent ratios and percents with concrete models, fractions, and decimals.	• Identifies the equivalent decimal form of a ratio when given a concrete model. • Represents a percent as an equivalent fraction or decimal when given a percent in a real-world context.	• Identifies the equivalent fraction form of a ratio when given a concrete model or real-world situation. • Identifies the concrete model that represents a percent.	• Identifies the concrete model that represents a ratio from a real-world context. • Determines the percent that is represented by a concrete model.	• Creates a visual model when given a ratio, percent, fraction, or decimal.
6.1.4.F Represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers.	• Identifies the equivalent models for benchmark fractions and percents by using the given percent or fraction. • Identifies placement for benchmark fractions and percents using a strip diagram when the whole is given.	• Identifies placement for a percent using a number line. • Identifies placement for a benchmark fraction using a number line. • Identifies placement for multiples of benchmark fractions and percents using a strip diagram.	• Identifies the number line for which the plotted point represents a fraction or percent.	• Identifies benchmark fractions and percents on a number line by distinguishing between multiple points representing percents or fractions on a number line.

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6.1.4.G Generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money.	• Converts a percent into an equivalent decimal or fraction when given a percent from a real-world situation. • Converts a fraction with a denominator that is a factor of 100 into an equivalent decimal or percent.	• Determines the percent that represents a ratio when given a real-world situation. • Converts a fraction into an equivalent decimal when given a real-world situation.	• Converts a decimal or percent into an equivalent fraction where the denominator is a factor of 100 when given a real-world situation. • Determines the decimal that represents a ratio when given a real-world situation. • Converts a mixed number or improper fraction into an equivalent decimal when given a real-world situation.	• Determines the percent or equivalent fraction that represents a ratio when given a real-world situation. • Determines multiple equivalent forms of fractions, decimals, and percents when a given value is in one of the forms. • Calculates equivalent decimals and percents when a given fraction has a denominator that is not a factor of 100. • Determines the fraction equivalent to a decimal or percent when given a real-world situation.

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6.1.5.C Use equivalent fractions, decimals, and percents to show equal parts of the same whole.	• Determines an equivalent fraction for a decimal by using the place value of the decimal as the denominator of the fraction.	• Determines the fraction, decimal, and percent equivalents of a ratio when given the part and whole of the ratio from a real-world situation. • Converts fractions to equivalent percents using given information from a real-world situation. • Determines two values that are equivalent to a fraction using given information from a real-world situation.	• Determines the fraction, decimal, and percent equivalents of a percent when given a real-world situation. • Calculates the percent and decimal value when given a fraction in simplified form.	• Determines the fraction, decimal, and percent equivalents of a decimal or fraction when given a real-world situation.
6.1.7.A Generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization.	• Determines the value of a given expression by using the order of operations, where all terms of the expression are whole numbers. • Identifies the expression that is equivalent to a given expression that includes simplifying and finding the square of a number within the expression.	• Determines the value of a given expression by using the order of operations, where all terms of the expression are integers. • Determines the prime factorization of a composite number. • Identifies the expression equivalent to a given expression that includes exponents and grouping symbols.	• Creates an expression that is equivalent to a given expression. • Determines the value of a given expression by using the order of operations, where the expression contains grouping symbols and exponents. • Identifies the expression that is equivalent to a given number.	• Creates equivalent expressions using prime factorization of a given number. • Evaluates an expression by using the order of operations. • Determines whether an expression is written as a prime factorization.

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6.1.7.B Distinguish between expressions and equations verbally, numerically, and algebraically.	• Translates a verbal description to an algebraic expression using the given values and variables.	• Distinguishes equations in a list that includes equations, expressions, and inequalities.	• Identifies whether a verbal description can be written as an equation.	• Identifies differences between expressions and equations verbally, numerically, and algebraically.
6.1.7.C Determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations.	• Creates expressions by using a given concrete model that includes representations of variables and integers.	• Creates equivalent expressions by using a concrete model that includes integers.	• Determines whether two given expressions are equivalent by generating an equivalent expression using algebraic expressions.	• Creates expressions equivalent to an algebraic representation by rewriting the expression. • Creates equivalent expressions by using a model that includes integers and exponents.
6.1.7.D Generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.	• Determines whether two algebraic expressions are equivalent to each other by rewriting the expressions.	• Determines whether two given algebraic expressions are equivalent by using the associative property or the commutative property. • Simplifies an algebraic expression using the distributive property, where all terms of the expression are whole numbers.	• Determines whether two given algebraic expressions are equivalent by using a combination of the associative, distributive, and commutative properties to rewrite the expressions, where all terms of the expressions are integers. • Simplifies an algebraic expression using the distributive property.	• Determines whether two given algebraic expressions are equivalent by using a combination of the associative, distributive, and commutative properties to rewrite the expressions, which contain rational numbers. • Determines whether two given algebraic expressions are equivalent by using the inverse property or the identity property.

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6.2.3.A Recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values.	• Creates equivalent multiplication expressions using rational numbers written in fraction form.	• Rewrites a division expression involving fractions as a multiplication expression by determining the reciprocal of the divisor, where both fractions are less than 1.	• Rewrites a division expression involving fractions as a multiplication expression by determining the reciprocal of the divisor, where the divisor is a fraction greater than 1.	• Rewrites a division expression involving fractions as a multiplication expression by determining the reciprocal of the divisor, where the divisor is a fraction with a numerator equal to 1.
6.2.3.B Determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one.	• Determines whether the product of a whole number and a unit fraction will result in a value less than or greater than the whole number.	• Identifies the fraction that, when multiplied by a given whole number, would produce a value less than the whole number. • Determines whether the product of a whole number and a fraction will result in a value less than or greater than the whole number.	• Identifies the fraction that, when multiplied by a given whole number, would produce a value greater than the whole number. • Determines whether the product of two fractions will result in a value less than or greater than a given rational number.	• Identifies the fraction that, when multiplied by another fraction, would produce a value greater than or less than a given whole number. • Identifies the statement that describes the product of two fractions.
6.2.3.C Represent integer operations with concrete models and connect the actions with the models to standardized algorithms.	• Identifies the expression that is represented by a concrete model.	• Identifies the expression that represents the addition or subtraction of two integers on a number line.	• Identifies the expression that represents the multiplication of two integers on a number line. • Creates an expression that is represented by a concrete model.	• Identifies the expression that represents the subtraction of two negative integers on a number line. • Creates an expression that is represented by an integer operation on a number line.

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6.2.3.D Add, subtract, multiply, and divide integers fluently.	• Adds, subtracts, multiplies, and divides to solve problems represented with whole numbers and a single operation.	• Adds, subtracts, multiplies, and divides to solve problems involving integers and single operations given mathematical contexts.	• Adds, subtracts, multiplies, and divides integers fluently in mathematical and real-world contexts, including problems with multiple operations.	• Solves multi-step problems with integers using all operations within real-world contexts.
6.2.3.E Multiply and divide positive rational numbers fluently.	• Determines the product of a decimal and a whole number given a real-world situation. • Determines the quotient of two decimals given a real-world situation.	• Determines the product of a fraction and whole number given a real-world situation. • Determines the product of a mixed number and a decimal given a real-world situation. • Determines the product of two decimals given a real-world situation.	• Determines the quotient of two fractions given a real-world situation. • Determines the product of two fractions given a real-world situation.	• Identifies a real-world situation resulting in a rational number. • Determines the product of two mixed numbers given a real-world situation. • Determines the quotient of two mixed numbers given a real-world situation.
6.2.4.A Compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships.	• Compares values produced from equations with additive and multiplicative relationships. • Determines an additive or multiplicative rule from a given data set. • Determines an additive or multiplicative relationship when given a real-world context.	• Determines additive or multiplicative relationships when given a table, a graph, or a symbolic or verbal description. • Identifies similarities and differences when verbally and graphically given problems with additive and multiplicative relationships.	• Compares a problem representing an additive relationship to a problem representing a multiplicative relationship verbally, numerically, graphically, and symbolically.	• Compares multiple problems involving additive and multiplicative relationships given in multiple forms, including verbal, algebraic, and visual. • Creates true statements about given equations that apply rules of additive and multiplicative relationships.

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6.2.4.B Apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates.	• Calculates the unit rate when given problems involving whole numbers. • Determines the solution given ratios in a real-world context.	• Calculates the unit rate when given problems involving decimals. • Determines a quantity using a given ratio and total in a real-world context.	• Calculates a possible range of values as a prediction within a real-world context based on unit rates. • Solves problems involving ratios and rates within real-world contexts.	• Applies unit rates and ratios to solve multi-step problems within real-world contexts.
6.2.5.A Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions.	• Identifies the table of *x*- and *y*-values that represents a given unit rate from a real-world situation.	• Determines the missing value in a table when given a rate from a real-world situation. • Identifies the table of *x*-values and *y*-values that represents a given rate from a real-world situation. • Determines ratios that are equivalent to a given rate from a real-world situation.	• Identifies the proportion that could be used to find an unknown value when given a value from a table or graph. • Represents problems involving ratios and rates using scale factors, tables, graphs, and proportions. • Determines the ratio or rate that represents the relationship between the *x*-values and *y*-values in a table or graph.	• Determines the rate or scale factor when given information from a real-world situation.
6.2.5.B Solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models.	• Determines the part when given a percent and the whole in a real-world situation, including problems with concrete and pictorial models.	• Determines the whole when given the percent and a part in a real-world situation. • Determines the whole when given a part and the percent in a real-world context, including problems with concrete and pictorial models.	• Determines the percent when given a part and the whole in a real-world situation, including problems with concrete and pictorial models.	• Solves multi-step problems given any combination of whole, part, and percent in a real-world context, including problems with concrete and pictorial models.

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6.2.6.A Identify independent and dependent quantities from tables and graphs.	• Identifies *x*-values and *y*-values in a table. • Identifies the *x*-axis and *y*-axis on a graph.	• Identifies *x*-values and *y*-values on a graph.	• Completes the statement that describes both the independent and dependent quantities from a real-world situation when given a table or graph. • Identifies the list of values that represents the dependent quantity from a real-world situation given a table or points plotted on a graph. • Identifies the statement that describes both the independent and dependent quantities from a real-world situation when given a table or graph.	• Writes a statement that describes the independent and dependent quantities.
6.2.6.B Write an equation that represents the relationship between independent and dependent quantities from a table.	• Identifies the equation that represents the relationship shown in a table when the given relationship involves addition.	• Identifies the equation that represents the relationship shown in a table when the given relationship involves multiplication by a whole number. • Identifies the equation that represents the relationship shown in a table when the given relationship involves subtraction.	• Identifies the equation that represents the relationship shown in a table when the given relationship involves multiplication by a rational number.	• Writes an equation for the relationship shown in a table. • Identifies the equation that represents the relationship shown in the table when the given relationship involves addition and multiplication.

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6.2.6.C Represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$.	• Represents a situation as a table when the relationship is additive, and the constant is an integer.	• Represents a situation as a table, graph, or equation when the relationship is multiplicative. • Represents a situation as a table or graph when the relationship is additive, and the constant is a rational number. • Identifies the statement that describes a multiplicative relationship when given an equation in the form $y = kx$.	• Represents a situation as an equation when the relationship is additive. • Identifies the statement that describes an additive relationship when given an equation in the form $y = x + b$.	• Writes an equation in the form $y = kx$ or $y = x + b$ when given a graph or a verbal description. • Graphs an equation in the form $y = kx$ or $y = x + b$ when given the equation or a verbal description.
6.2.9.A Write one-variable, one-step equations and inequalities to represent constraints or conditions within problems.	• Writes a one-variable, one-step equation when given a verbal description, where the relationship is additive, and the constant is a whole number.	• Writes a one-variable, one-step equation or inequality when given a verbal description, where the relationship is additive, and the constant is a whole number. • Writes a one-variable, one-step equation when given a verbal description, where the relationship is multiplicative, and the coefficient is a whole number.	• Writes a one-variable, one-step equation or inequality when given a verbal description, where the relationship is additive, and the constant is a rational number. • Writes a one-variable, one-step equation or inequality when given a verbal description, where the relationship is multiplicative, and the coefficient is a whole number.	• Represents constraints within a problem using equations and inequalities when given a verbal description. • Writes a one-variable, one-step equation or inequality when given a verbal description, where the relationship is multiplicative, and the coefficient is a rational number.

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6.2.9.B Represent solutions for one-variable, one-step equations and inequalities on number lines.	• Represents the solution to a one-variable, one-step equation on a number line when given the equation.	• Represents the solution to a one-variable, one-step equation on a number line when given a verbal description of the equation.	• Represents the solution set to a one-variable, one-step inequality on a number line when given the inequality.	• Represents the solution set to a one-variable, one-step inequality on a number line when given a verbal description of the inequality.
6.2.9.C Write corresponding real-world problems given one-variable, one-step equations or inequalities.	• Identifies a symbol when given an inequality. • Identifies the statement that describes a one-variable, one-step equation involving multiplication or division when given the equation.	• Identifies the equation that matches a one-variable, one-step verbal description involving addition, subtraction, multiplication, or division. • Identifies the inequality that matches a one-variable, one-step verbal description involving multiplication or division. • Identifies the inequality that matches a one-variable, one-step verbal description involving "greater than" or "less than." • Identifies the statement that describes a one-variable, one-step equation involving addition or subtraction when given the equation.	• Writes a real-world problem involving "greater than or equal to" or "less than or equal to." • Completes a verbal description of a real-world problem from a one-variable, one-step equation or inequality involving any operation.	• Identifies the statement that describes a one-variable, one-step inequality involving multiplication or division when given the inequality. • Writes a real-world problem from a one-variable, one-step equation or inequality involving any operation.

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6.2.10.A Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts.	• Solves a one-variable, one-step equation involving integers when given a visual model or verbal description.	• Solves a one-variable, one-step equation involving rational numbers when given a visual model or verbal description.	• Solves a one-variable, one-step inequality involving positive integers when given a visual model or verbal description.	• Solves a one-variable, one-step inequality involving negative integers and rational numbers when given a visual model or verbal description.
6.2.10.B Determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.	• Identifies the one-variable, one-step equation that is satisfied by a given integer.	• Identifies the one-variable, one-step inequality that is satisfied by a given integer.	• Identifies the one-variable, one-step equation or inequality that is satisfied by a given decimal.	• Identifies the one-variable, one-step equation or inequality that is satisfied by a given rational number.
6.3.4.H Convert units within a measurement system, including the use of proportions and unit rates.	• Converts from one unit to another unit in the metric system, where the new value is the product of 10 and the original value. • Converts from one unit to another within the metric system using whole numbers.	• Converts between units involving decimals within the standard unit system.	• Evaluates multi-step conversions within a single measurement system.	• Justifies and solves for the appropriate conversion size within a real-world context.
6.3.8.A Extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle.	• Identifies characteristics of triangles, including the number of sides and the sum of the angles.	• Calculates missing angle measurements of a triangle.	• Compares the side lengths of a triangle when given a combination of angle measures and side lengths, using previous knowledge of triangle properties. • Determines whether a triangle can be formed when given a combination of angle measures and side lengths by applying previous knowledge of triangle properties.	• Justifies why a triangle cannot be made given certain combinations of side lengths.

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6.3.8.B Model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes.	• Decomposes parallelograms and trapezoids by identifying the triangle and rectangle components. • Identifies the correct name of parallelograms, trapezoids, and triangles.	• Determines whether the area of a shaded parallelogram figure is equivalent to a given expression that includes rational numbers and more than one variable.	• Connects the formulas for finding the area of parallelograms, trapezoids, and triangles to models by considering the decomposition of the shape.	• Identifies decomposed shapes represented by formulas for finding area, including problems with parallelograms, trapezoids, and triangles.
6.3.8.C Write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.	• Determines the equation for finding the area of a parallelogram when given the shape.	• Determines the equation that represents the area of a trapezoid when given the dimensions in context.	• Determines the equation that represents the volume of a given right rectangular prism with rational measurements.	• Determines the one-variable equation that represents a prism's volume when given the height. • Determines the one-variable equation that represents a prism's volume when given the area of the base. • Determines the one-variable equation that represents the area of a prism's base when given the volume.

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6.3.8.D Determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.	• Calculates the area of basic shapes, including rectangles, parallelograms, trapezoids, and triangles that have whole number measurements. • Finds the volume of a right rectangular prism, where the dimensions are whole numbers.	• Compares the areas of two examples of the same shape (rectangles, parallelograms, trapezoids, or triangles), given dimensions as whole numbers. • Finds the missing measurement of a rectangle or parallelogram given the area, where the dimensions are whole numbers.	• Compares the areas of two different shapes (rectangles, parallelograms, trapezoids, or triangles), given rational measurements. • Identifies shapes (rectangles, parallelograms, trapezoids, or triangles) that have the same area with given rational measurements. • Identifies right rectangular prisms that have the same volume when given rational measurements. • Measures the dimensions of the base of a right rectangular prism to determine its volume. • Measures the dimensions of a triangle to determine its area.	• Determines solutions for multi-step problems involving the area of figures made up of rectangles, parallelograms, trapezoids, and triangles. • Determines solutions for multi-step problems involving the volume of right rectangular prisms.

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6.3.11.A Graph points in all four quadrants using ordered pairs of rational numbers.	• Plots points in the same quadrant on a coordinate plane. • Identifies the ordered pair that represents a point shown on a coordinate grid, where the values of the ordered pair are whole numbers.	• Locates points on the coordinate plane in all four quadrants. • Identifies the point shown on a coordinate grid that is represented by a given ordered pair. • Identifies an ordered pair that represents a point in a specified location on a coordinate grid (e.g., inside two overlapping shapes), where the values in the ordered pair are whole numbers.	• Determines whether an ordered pair represents a point in a specified coordinate grid location (e.g., inside two overlapping shapes), where the values in the ordered pair are rational numbers.	• Determines the location of a missing vertex in a geometric shape whose vertices are plotted in all four quadrants on a coordinate grid. • Identifies the ordered pair that represents the location of a point whose location is described verbally in relation to another point.
6.4.12.A Represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots.	• Creates dot plots of given numeric data. • Identifies a histogram that represents a given data set. • Summarizes data sets with given dot plots.	• Creates a histogram that represents a given data set.	• Creates graphical representations of given numeric data, including dot plots, stem-and-leaf plots, histograms, and box plots. • Models the same data set with multiple graphical representations.	• Justifies the best graphical representation of a given numeric data set.

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6.4.12.B Use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution.	• Identifies values on given graphs and dot plots. • Describes clusters of data in a given graphical representation.	• Analyzes the distribution on a given histogram or dot plot by describing the center, spread, and shape of the data.	• Analyzes distributions by describing the center, spread, and shape of data presented in various graphical representations. • Describes and differentiates between mean and median when data are presented in a dot plot. Describes peak and median when data are presented in a histogram.	• Analyzes multiple sets of data using the center, spread, and shape of the data distributions when given graphical representations of data sets. • Identifies conclusions for a graphical representation using the center, spread, and shape of the given data distribution in a real-world context.
6.4.12.C Summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution.	• Calculates the median, mode, and range of numeric data given in order from least to greatest.	• Calculates the median and mode of numeric data given in random order. • Calculates the range of numeric data given in random order.	• Identifies and defines mode in context from a data set represented by a dot plot. • Calculates the mean, median, range, and IQR of numeric data sets given in random order. • Analyzes measures of center (mean and median) and measures of variability (range and IQR) to describe the center, spread, and shape of distribution of data sets given in random order.	• Identifies the interquartile range from a box plot. • Orders data from a dot plot and finds the median of the data set. • Calculates measures of center and variability of data sets given in graphical representations. • Compares and contrasts measures of center and variability in two numeric data sets given in random order.

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6.4.12.D Summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph, and use these summaries to describe the data distribution.	• Calculates the mode of data sets given in numeric and graphical representations. • Creates bar graphs from given numeric data sets. • Represents the relative frequency of categorical data from a data set shown in a two-way frequency table.	• Summarizes the meaning of relative frequency from data given on a percent bar graph.	• Creates a relative frequency table or percent bar graph when given numeric data. • Describes the distribution of data sets given in either numeric or graphical representations.	• Analyzes data over multiple categories presented in numeric and graphical representations within a real-world context.
6.4.13.A Interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots.	• Identifies data points and summarizes data represented in a given dot plot or histogram. • Interprets values within context represented in a dot plot or histogram.	• Interprets data and makes conclusions when given data in a dot plot, histogram, or stem-and-leaf plot.	• Interprets data and makes conclusions when given data in a dot plot, histogram, stem-and-leaf plot, or box plot.	• Interprets data, forms conclusions, and determines whether conclusions correctly describe the data in a dot plot, stem-and-leaf plot, histogram, or box plot.
6.4.13.B Distinguish between situations that yield data with and without variability.	• Identifies which situations would produce data when given a list of possible scenarios.	• Determines whether multiple situations yield data with variability given descriptions that do not include numeric values.	• Determines which situations will yield data with and without variability when given data sets or a list of general scenarios.	• Determines which quantity within the same situation yields data with variability within a specified range.

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6.4.14.A Compare the features and costs of a checking account and a debit card offered by different local financial institutions.	• Defines checking account and debit card and determines possible costs associated with checking accounts.	• Identifies similarities in fees charged for checking accounts and debit cards at different banking institutions.	• Compares fees and features associated with checking accounts and debit cards for two banking institutions and makes generalization statements about the fees. • Makes conclusions about two banking institutions and their fees using information presented in a table.	• Compares fees for two banking institutions over a designated period using information given in a table. • Makes informed decisions about banking options based on the lowest fees and best features provided by a financial institution.
6.4.14.B Distinguish between debit cards and credit cards.	• Identifies different payment methods from a list of financially related items.	• Identifies true statements related to credit cards and debit cards separately.	• Determines whether given statements describe characteristics of debit or credit cards.	• Calculates the total amount to be repaid on credit cards if payments are missed, by calculating late fee percents.
6.4.14.C Balance a check register that includes deposits, withdrawals, and transfers.	• Determines a missing balance value in a table of transactions from a check register that includes balances, deposits, and withdrawals.	• Determines missing values for a specific date in a table of transactions from a check register that includes check numbers, deposits, withdrawals, and balances.	• Determines the starting or ending balance for a checking account when given a table of transactions from a check register with missing values.	• Determines the account balance after multiple transactions using a table of transactions from a check register with missing values.
6.4.14.E Describe the information in a credit report and how long it is retained.	• Identifies personal information found in a credit report. • Identifies whether money owed to different entities will be included on a consumer's credit report.	• Identifies information that appears on a consumer's credit report.	• Describes the impact that scenarios will have on a consumer's credit report. • Identifies how long a certain type of information will remain on a consumer's credit report.	• Identifies information that is not included on a credit report.

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6.4.14.F Describe the value of credit reports to borrowers and to lenders.	• Identifies characteristics of banks and describes what services banks offer. • Explains the difference between borrowers and lenders.	• Identifies reasons why a lender would want to view a consumer's credit report.	• Identifies reasons why consumers should check their credit reports.	• Identifies scenarios that do not represent a reason for consumers to check their credit reports.
6.4.14.G Explain various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study.	• Compares and contrasts attributes of scholarships compared to student loans when given the context of paying for college.	• Distinguishes a method of financial assistance based on a description within a given scenario.	• Identifies whether different methods of college tuition funding need to be repaid and charge interest. • Defines different types of financial assistance used to pay for college.	• Describes different types of financial assistance based on multiple features of each method. • Identifies methods that cannot be used to pay for college.
6.4.14.H Compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income.	• Calculates annual salary when given a monthly salary. • Identifies occupations that require a high-school diploma or post-secondary schooling.	• Compares annual salaries between two people with different occupations or levels of education over a period, when given monthly salaries.	• Calculates the difference in earnings over a given period for more than two different occupations given their salaries.	• Compares the earnings of people in different professions using the median annual salaries over a period.