

Jackson County Core Curriculum Collaborative (JC4)

6th Grade Math

| Standard | Learning Targets in Student Friendly Language |
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| 6.RP.1 | I can explain the concept of ratio and describe the relationship between two quantities using ratio language. |
| | I can describe the relationship between 2 quantities in a ratio using correct math vocabulary for example: for every 2 boys in 6th grade there are 3 girls. |
| | I can demonstrate how ratios compare two quantities; the quantities do not have to be the same unit of measure. |
| | I can recognize that ratios appear in a variety of different contexts; part-to-whole, part-to-part, and rates. |
| 6.RP.2 | I can describe a ratio relationship using rate language and can explain the concept of unit rate. |
| | I can use appropriate math language and symbols to describe unit rates that are the same like 2 to 3, 2:3 and 2/3. |
| | I can analyze the relationship between a ratio a:b and a unit rate a/b where b≠0. |
| | I can identify and calculate a unit rate from a given ratio relationship. |
| | I can solve real-world problems using the concept of a unit rate. |
| 6.RP.3 | I can explain the relationship between rate, ratio, and percent and use this relationship to solve real-world problems. |
| 6.RP.3.a | I can use proportional relationships to find missing information in tables of equivalent ratios. |
| | I can make tables of equivalent ratios. |
| | I can make tables and use them to graph relationships on a coordinate plane. |
| | I can use tables, tape diagrams, double number line diagrams and equations to solve problems about ratios and rates. |
| 6.RP.3.b | I can use unit rates, unit prices and constant speed to solve problems. |
| 6.RP.3.c | I can solve percent word problems to find the whole, given the part and percent. |
| | I can solve percent word problems to find the part, given the whole and percent. |
| | I can write a percent as a fraction out of 100. |
| | I can solve percent word problems by setting up a proportion. |
| 6.RP.3.d | I can use what I know about ratios to create a conversion factor when working with different units of measurement like pounds to ounces or miles to kilometers. |
| | I can convert measurement units using ratios and proportions. |
| | I can convert measurement units appropriately when multiplying quantities. |
| | I can convert measurement units appropriately when dividing quantities. |
| 6.NS.1 | I can solve word problems involving division of fractions by fractions. |
| | I can use visual fraction models to solve problems involving division of fractions. |
| | I can find the quotient of 2 fractions. |
| | I can solve word problems that require division of fractions using equations to represent the problem. |
| | I can create a story context to go with a problem that involves division of 2 fractions. |
| 6.NS.2 | I can fluently divide multi-digit numbers. |
| | I can fluently divide multi-digit numbers using the standard algorithm. |
| 6.NS.3 | I can fluently add, subtract, multiply, and divide multi-digit decimals. |
| | I can add multi-digit decimals using the standard algorithm. |
| | I can subtract multi-digit decimals using the standard algorithm. |
| | I can multiply multi-digit decimals using the standard algorithm. |
| | I can divide multi-digit decimals using the standard algorithm. |

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| 6.NS.4 | I can find the GCF and LCM of two numbers and can use the GCF along with the distributive property to express a sum of two numbers. |
| | I can compute the greatest common factor of two whole numbers less than or equal to 100. |
| | I can compute the greatest common factor of two whole numbers written as a sum. |
| | I can compute the least common multiple of two whole numbers less than or equal to 12. |
| | I can apply the distributive property to rewrite the sum with the GCF written outside parentheses and the two whole numbers with no common factor written inside the parentheses. |
| 6.NS.5 | I can explain the meaning of positive and negative numbers and can use them to represent quantities in real-world contexts. |
| | I can define positive and negative numbers in terms of direction and value. |
| | I can explain the meaning of 0 with positive and negative integers. |
| | I can describe real-world situations where positive and negative numbers are used. |
| 6.NS.6 | I can locate and plot positive and negative rational numbers on a number line (horizontal and vertical) and a coordinate plane. |
| 6.NS.6.a | I can locate opposite signed numbers on opposite sides of zero on a number line. |
| | I can define the opposite of the opposite of a number is the number itself. |
| | I can find the opposite of any given number including 0. |
| | I can describe positive and negative numbers with the same magnitude as having opposite value or direction on the number line. |
| 6.NS.6.b | I can determine the quadrant an ordered pair is in based on the sign of the integers in those pairs. |
| | I can recognize that when 2 points are a reflection across the x- or y- axis they will differ only by sign. |
| 6.NS.6.c | I can find integers and other rational numbers on a horizontal or vertical number line. |
| | I can place integers and other rational numbers on a horizontal or vertical number line. |
| | I can position pairs of integers and other rational numbers on a coordinate plane. |
| 6.NS.7 | I can explain the order and absolute value of rational numbers in real-world contexts. |
| 6.NS.7.a | I can compare rational numbers on a number line. |
| | I can plot two numbers on a number line to describe the relationship between them in terms of less than, greater than, or equal to. |
| | I can explain that a negative integer with a greater magnitude is farther to the left on a number line than a negative integer with a smaller magnitude. |
| | I can describe the relative position of two numbers on a number line when given an inequality. |
| 6.NS.7.b | I can explain how negative integers relate to one another in the real world. For example -3 degrees is warmer than -15 degrees. |
| | I can explain statements of order for rational numbers in real-world contexts. |
| | I can write statements of order for rational numbers in real-world contexts. |
| 6.NS.7.c | I can define the absolute value of a rational number as a distance from 0 on a number line. |
| | I can relate the absolute value of any number to the magnitude of that number. |
| | I can understand that in real-world contexts the absolute value of a negative number indicates the amount owed, the change in altitude, distance below sea level, loss of yardage, etc. |
| 6.NS.7.d | I can compare and contrast the absolute value of a rational number to ordering rational numbers. |
| | I can define a number less than a negative number as having a greater distance from zero. |
| 6.NS.8 | I can graph points in all four quadrants of a coordinate plane and find the distance between two points with the same x-values or y-values. |
| | I can graph points in all four quadrants. |
| | I can find the distance between 2 points on a coordinate plane by finding the absolute value of the difference between those 2 points. |
| | I can use graphing on a coordinate plane to solve real-world problems. |

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| 6.EE.1 | I can write and evaluate numerical expressions involving whole number exponents. |
| | I can write numerical expressions with exponents. |
| | I can evaluate numerical expressions with exponents. |
| 6.EE.2 | I can read, write and evaluate algebraic expressions that contain both numbers and variables. |
| 6.EE.2.a | I can translate written phrases into algebraic expressions and algebraic expressions into written phrases. |
| 6.EE.2.b | I can match math vocabulary like sum, difference, product, quotient, term, factor and coefficient to the parts of an expression. |
| | I can identify the sum, difference, product or quotient of 2 numbers as both a single quantity and as an operation between 2 individual terms. |
| | I can identify parts of an expression using mathematical vocabulary. |
| 6.EE.2.c | I can simplify expressions after substituting specific values for variables. |
| | I can use formulas containing variables to solve real-world problems like distance, speed, area and perimeter. |
| | I can apply the order of operations when there are no parentheses for expressions that include whole number exponents. |
| 6.EE.3 | I can use the properties of operations to create equivalent expressions. |
| | I can apply properties of operations to rewrite expressions. |
| | I can explain why an expression that is rewritten is equivalent to the original expression. |
| | I can generate equivalent expressions using distributive, associative and commutative properties of addition and multiplication and by combining like terms. |
| 6.EE.4 | I can identify equivalent expressions. |
| | I can explain why two expressions are equivalent regardless of the number that is substituted for the variable. |
| | I can identify when two expressions are equivalent (one expression is the simplified version of the other one). |
| 6.EE.5 | I can reason about and solve one-variable equations and inequalities. |
| | I can solve an equation or inequality by determining for which values of a set make the equation or inequality true. |
| | I can determine if a given value for a variable is the solution to an inequality by substituting the value and simplifying to see if the inequality is true. |
| | I can determine if a given value for a variable is the solution to an equation by substituting the value and simplifying to see if the equation stays balanced or equal on both sides. |
| 6.EE.6 | I can explain what a variable represents and use them to write expressions and equations. |
| | I can define a variable as a representation of an unknown number or numbers in a set. |
| | I can write expressions and equations using variables to represent missing information in real-world problems. |
| 6.EE.7 | I can write equations and solve one-step equations involving positive numbers to represent real-world problems. |
| | I can write and solve one-step equations with nonnegative rational numbers from real-world problems. |
| | I can solve and write equations for real-world mathematical problems containing one unknown. |
| 6.EE.8 | I can write an inequality and identify solutions to represent a real-world problem. |
| | I can define inequalities as having infinitely many solutions. |
| | I can graph solutions to inequalities on number lines. |
| | I can write an inequality to represent a real-world condition or constraint. |
| 6.EE.9 | I can represent and analyze quantitative relationships between dependent and independent variables. |

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| | I can define an independent variable as one that is changed intentionally as part of the question. |
| | I can define a dependent variable as one that increases or decreases in response to the change in the independent variable. |
| | I can write equations that represent direct relationships that include dependent and independent variables. |
| | I can use graphs and tables to analyze the relationship between dependent and independent variables, understanding that the dependent variable changes as a result of changes in the value of the independent variable. |
| | I can list and graph ordered pairs and write the equation to represent the dependent / independent relationship. |
| | I can write an equation to represent two variables, one dependent and one independent. |
| 6.G.1 | I can find the area of polygons by composing or decomposing them into basic shapes. |
| | I can find the area of triangles including right triangles by composing and decomposing triangles and rectangles. |
| | I can find the area of special quadrilaterals and polygons by composing and decomposing triangles and rectangles. |
| | I can apply the techniques of composing and/or decomposing to find the area of triangles, special quadrilaterals and polygons to solve mathematical and real-world problems. |
| | I can develop and justify formulas for triangles and parallelograms. |
| | I can apply techniques of finding the area of polygons to solve real-world problems. |
| 6.G.2 | I can find the volume of a rectangular prism using unit cubes and formulas. |
| | I can calculate the volume of a right rectangular prism with fractional side lengths. |
| | I can compare finding the volume of a right rectangular prism by packing it with unit cubes to finding the volume by multiplying the side lengths. |
| | I can apply volume formulas for right rectangular prisms to solve real-world and mathematical problems involving rectangular prisms with fractional edge lengths. |
| | I can compare finding the volume of a right rectangular prism by packing it with unit cubes to finding the volume by multiplying the side lengths. |
| 6.G.3 | I can draw polygons in the coordinate plane and use the coordinates to find the length of the sides. |
| | I can graph polygons in the coordinate plane given the vertices. |
| | I can calculate the length of a side of a polygon graphed in the coordinate plane where the vertices have the same x-value or same y-value. |
| | I can use graphing on a coordinate plane to solve real-world problems involving area of polygons including regular polygons, triangles, and quadrilaterals. |
| 6.G.4 | I can find the surface area of three-dimensional shapes using nets. |
| | I can calculate the surface area of a 3-dimensional figure by using nets made up of rectangles and triangles. |
| | I can solve real-world problems involving surface area of 3-dimensional figures. |
| 6.SP.1 | I can identify statistical questions and explain how data answers statistical questions. |
| | I can contrast statistical and non-statistical questions. |
| | I can differentiate between a non-statistical question and a statistical question as one that should have a variety of possible answers. |
| | I can identify statistical questions. |
| 6.SP.2 | I can describe a statistical data set using center, spread, and shape. |
| | I can understand that a set of data collected to answer a statistical question can be described by its center, spread and overall shape. |
| | I can describe a set of data by its spread and overall shape, e.g. by identifying data clusters, peaks, gaps and symmetry. |

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| | I can describe a set of data by its center, e.g., mean and median. |
| 6.SP.3 | I can compare a measure of center with a measure of variation. |
| | I can describe measures of central tendency for a data set, e.g., mean, median, mode. |
| | I can describe measures of variances for a data set, e.g., range, interquartile range, mean absolute deviation. |
| | I can explain how the measures of central tendency for a data set summarizes the data with a single number. |
| | I can explain how the measures of variation for a data set describes how its values vary with a single number. |
| 6.SP.4 | I can communicate numerical data on a number line (dot plots, histograms, and box plots). |
| | I can define and calculate the different components of data displays: maximum, minimum, quartiles, interquartile range, median, and intervals. |
| | I can identify the components of dot plots, histograms, and box plots. |
| | I can find the median, quartile and interquartile range of a set of data. |
| | I can display numerical data in a variety of ways including number lines, dot plots, histograms and box plots. |
| 6.SP.5 | I can summarize numerical data sets and analyze the relationship between measures of center and the data distribution. |
| 6.SP.5.a | I can summarize data by reporting number of observations. |
| 6.SP.5.b | I can summarize data by describing how the individual data points are measured and the units of measurement. |
| 6.SP.5.c | I can calculate the measures of center of a data set including mean, median, mode, range, and interquartile range. |
| | I can describe the overall pattern of a data set. |
| | I can identify outliers in a data set and describe the impact on the overall impact of outliers on the quantitative measures particularly the mean. |
| | I can choose the appropriate measure of central tendency to represent the data. |
| 6.SP.5.d | I can compare and contrast the measures of center to the data distribution in the context of the data collection. |
| | I can compare and contrast the measures of variability to the data distribution in the context of the data collection. |
| Key: | |
| Yellow Highlight = Critical Area | |
| Blue Font Color = Long Term Learning Goal | |
| Black Font Color = Short Term (possibly daily) learning target WITHOUT condition and criteria. | |