6th Grade Pacing Guide
Trimester 1

Chapter 1: Numerical Expressions and Factors
Standards:

The Number System
- 6.NS.2 I can use the standard algorithm to fluently divide multi-digit number
- 6.NS.4 I can find all factors of any given number, less than or equal to 100
- 6.NS.4 I can find the greatest common factor of any two numbers less than or equal to 100.
- 6.NS.4 I can create a list of all multiples for any number less than or equal to 12
- 6.NS.4 I can find the least common multiple of any two numbers, less than or equal to 12.
- 6.NS.4 I can use the distributive property to rewrite a simple addition problem when addends have a common factor

Expressions and Equations
- 6.EE.1 I can explain the meaning of a number raised to a power/exponent through repeated multiplication
- 6.EE.1 I can write and evaluate numerical expressions involving whole-number exponents
- 6.EE.2b I can recognize an expression as both a single value and as two or more terms on which an operation is performed
- 6.EE.2b I can use the correct mathematical language to identify parts of a verbal expression and an algebraic expression

1	2	3	4
Does Not Meet. The student demonstrates very little understanding of the grade level standard. The student does not show any significant ability to perform the skill.	Progressing. The student demonstrates incomplete understanding of the grade level standard. The student makes significant errors when performing the skill.	Meets expectations. The student demonstrates complete understanding of the grade level standard with very few errors in computation.	Exceeds expectations. The student demonstrates complete and detailed understanding of the grade level standard *and* exhibits some understanding of the next grade level standard.

Chapter 2: Fractions and Decimals
Standards:

The Number System
- 6.NS.1 I can use a visual model to represent the division of a fraction by a fraction
- 6.NS.1 I can divide fractions by fractions using an algorithm or mathematical reasoning
- 6.NS.1 I can use mathematical reasoning to justify the standard algorithm for fraction division
- 6.NS.1 I can solve real world problems involving the division of fractions
- 6.NS.1 I can interpret (explain) the quotient in the context of the problem
- 6.NS.1 I can create story contexts for the problems involving the division of a fraction by a fraction
- 6.NS.3 I can fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm

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Expressions and Equations
- 6.EE.1 I can explain the meaning of a number raised to a power/exponent through repeated multiplication
- 6.EE.1 I can write and evaluate numerical expressions involving whole-number exponents
- 6.EE.2a I can identify parts of an algebraic expression by using correct mathematical terms
- 6.EE.2a I can write an algebraic expression representing a sum, a product, a difference, and a quotient given a verbal expression

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Chapter 3: Algebraic Expressions and Properties
Standards:
The Number System
- 6.NS.4 I can find all factors of any given number, less than or equal to 100
- 6.NS.4 I can find the greatest common factor of any two numbers less than or equal to 100.
- 6.NS.4 I can create a list of all multiples for any number less than or equal to 12
- 6.NS.4 I can find the least common multiple of any two numbers, less than or equal to 12.
- 6.NS.4 I can use the distributive property to rewrite a simple addition problem when addends have a common factor

Expressions and Equations
- 6.EE.2a I can identify parts of an algebraic expression by using correct mathematical terms
- 6.EE.2a I can write an algebraic expression representing a sum, a product, a difference, and a quotient given a verbal expression
- 6.EE.2b I can recognize an expression as both a single value and as two or more terms on which an operation is performed
- 6.EE.2b I can use the correct mathematical language to identify parts of a verbal expression and an algebraic expression
- 6.EE.2c I can evaluate an algebraic expression for a given value
- 6.EE.2c I can substitute values in formulas to solve real-world problems
- 6.EE.2c I can apply the order of operations when evaluating arithmetic and algebraic expressions

- 6.EE.3 I can apply the associative and commutative properties of addition to generate equivalent expressions
- 6.EE.3 I can apply the additive property of 0 to generate equivalent expressions
- 6.EE.3 I can apply the existence of additive inverses to generate equivalent expressions
- 6.EE.3 I can apply the associative and commutative properties of multiplication to generate equivalent expressions
- 6.EE.3 I can apply the multiplicative identity property of 1 to generate equivalent expressions
- 6.EE.3 I can apply the existence of multiplicative inverses to generate equivalent expressions
- 6.EE.3 I can apply the distributive property of multiplication over addition to generate equivalent expressions
- 6.EE.4 I can identify and justify whether two expressions are equivalent

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Chapter 4: Area of Polygons
Standards:
Geometry
- 6.G.1 I can find the area of parallelograms, triangles, and trapezoids.
- 6.G.3 I can draw polygons in the coordinate plane and find the length of the sides of the polygons.

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Chapter 5: Ratios and Rates
Standards:
Ratios and Proportional Relationships
- 6.RP.1 I can define the term ratio and demonstrate my understanding by giving various examples. Ican write a ratio that describes a relationship between two quantities I can explain the relationship that a ratio represents.
- 6.RP.2 I can define the term unit rate. I can demonstrate my understanding of unit rate by giving
- various examples. I can recognize a ratio written as a unit rate. I can explain a unit rate. I can describe the ratio relationship represented by a unit rate. I can convert a given ratio to a unit rate.
- 6.RP.3a I can create a table of equivalent ratios and solve real-world problems involving proportional reasoning by using various diagrams. I can use the proportional relationship to find missing values in a table of equivalent ratios. I can compare ratios presented in various tables and plot corresponding values from an equivalent ratio table on a coordinate grid.
- 6.RP.3b I can solve real-world problems involving unit pricing and constant speed by using various diagrams.
- 6.RP.3c I can use visual representations (e.g., strip diagrams, percent bars, one-hundred grids) to model percents. I can write a percent as a rate per one-hundred.I can use proportional reasoning to find the percent of a given number. I can use proportional reasoning to find the whole when given both the part and the percent.
- 6.RP.3d I can explain that a conversion factor is a fraction equal to 1. I can convert measurement units using ratio reasoning. I can convert measurement units between Metric and English using ratio reasoning.

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Chapter 6: Integers and the Coordinate Plane
Standards:
The Number System
- 6.NS.5 I can give examples of how positive numbers are used to describe real world situations. I can give examples of how negative numbers are used to describe real world situations. I can recognize that positive signs represent opposite values and/or directions. I can recognize that negative signs represent opposite values and/or directions. I can explain that the number zero is the point at which direction or value will change.
- 6.NS.6a I can model rational numbers as a point on a number line. I can explain why every rational number can be represented by a point on a number line. I can plot a number and its opposite on a number line and recognize that they are equidistant from zero. I can find the opposite of any given number including zero.
- 6.NS.6b I can use the signs of the coordinates to determine the location of an ordered pair in the coordinate plane. I can understand the relationship between two ordered pairs differing only by signs as reflections across one or both axes.
- 6.NS.6c I can find a point on a number line. I can find a point on a coordinate plane. I can position a point from a number line. I can position a point from a coordinate plane
- 6.NS.7a I can describe the relative position of two numbers on a number line when given an inequality. I can describe the value of a number in relation to 0
- 6.NS.7b I can interpret a given inequality in terms of a real-world situation. I can write statements comparing rational numbers in real-world contexts.
- 6.NS.7c I can understand absolute value as the distance from zero. I can describe absolute value as the magnitude (size, enormity) of the number in a real-world situation.
- 6.NS.7d I can make a comparison statement referring to a real-world situation given a signed number. I can make a comparison statement referring to a real-world situation given the absolute value of a signed number.
- 6.NS.8 I can graph points in all four quadrants of the coordinate plane to solve real-world mathematical problems. I can use absolute values to find the distance between two points with the same x- coordinates. I can use absolute values to find the distance between two points with the same y- coordinates.

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Chapter 7: Equations and Inequalities

    Standards:

        Ratios and Proportional Relationships

- 6.RP.3a I can create a table of equivalent ratios and solve real-world problems involving proportional reasoning by using various diagrams. I can use the proportional relationship to find missing values in a table of equivalent ratios. I can compare ratios presented in various tables and plot corresponding values from an equivalent ratio table on a coordinate grid.

        Expressions and Equations

- 6.EE.5 I can explain that solving an equation or inequality leads to finding the value or values of the variable that will make a true mathematical statement. I can substitute a given value into an algebraic equation or inequality to determine whether it is part of the solution set

- 6.EE.6 I can use a variable to write an algebraic expression that represents a real-world situation when a specific number is unknown. I can explain and give examples of how a variable can represent a single unknown number or can represent any number in a specified set. I can use a variable to write an expression that represents a consistent relationship in a particular pattern

- 6.EE.7 I can write equations that represent real-world problems. I can solve real-world problems using equations in the form of $x + p = q$ where p and q are given numbers. I can solve real-world problems using equations in the form of $px = q$ where p and q are given numbers.

- 6.EE.8 I can write a simple inequality to represent the constraints or condition of numerical values in a real-world or mathematical problem. I can explain what the solution set of an inequality represents. I can show the solution set of an inequality by graphing it on a number line.

- 6.EE.9 I can create a table of two variables that represents a real-world situation in which one quantity will change in relation to the other. I can explain the difference between the independent variable and the dependent variable. I can determine the independent and dependent variable in a relationship. I can write an algebraic equation that represents the relationship between the two variables. I can create a graph by plotting the dependent variable on the x-axis and the independent variable on the y-axis of a coordinate plane. I can analyze the relationship between the dependent and independent variables by comparing the table, graph, and equation

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Chapter 8: Surface Area and Volume
Standards:
Geometry

- 6.G.2 I can find the volume of a right rectangular prism by reasoning about the number of unit cubes it takes to cover the first layer of the prism and the number of layers needed to fill the entire prism. I can generalize finding the volume of a right rectangular prism to the equation V=lwh or V=Bh. I can solve real-world problems that involve finding the volume of right rectangular prisms

- 6.G.4 I can match a net to the correct three-dimensional figure.I can draw a net for a given three- dimensional figure. I can use a net to find the surface area of a given three-dimensional figure.I can solve real-world problems that involve finding the surface area of a three-dimensional figure.

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Chapter 9: Statistical Measure
Standards:
Statistics and Probability

- 6.SP.1 I can explain what makes a good statistical question. I can develop a question that can be used to collect statistical information.
- 6.SP.2 I can explain that there are three ways that the distribution of a set of data can be described: by its center, spread, and overall shape. I can describe the center of a set of statistical data. I can describe the spread of a set of statistical data. I can describe the overall shape of the set of data.
- 6.SP.3 I can define a measure of center as a single value that summarizes a data set. I can define a measure of variation by how its values vary with a single number
- 6.SP.4 I can organize and display data as a line plot or dot plot. I can organize and display data in a histogram. I can organize and display data in a box plot. I can determine the upper and lower extremes, median, and upper and lower quartiles of a set of data and use this information to display the data in a box plot
- 6.SP.5c I can determine the mean of the collected data. I can determine the median of the collected data. I can determine the measures of variance using range of collected data. I can determine the measures of variance using interquartile range of collected data. I can determine the measures of variance using mean absolute deviation of collected data. I can describe overall patterns in the data and how they relate to the context of the problem. I can describe any deviations for the overall pattern and how they relate to the context of the problem.

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Chapter 10: Data Displays
Standards:
Statistics and Probability

- 6.SP.2 I can explain that there are three ways that the distribution of a set of data can be described: by its center, spread, and overall shape. I can describe the center of a set of statistical data. I can describe the spread of a set of statistical data. I can describe the overall shape of the set of data.
- 6.SP.4 I can organize and display data as a line plot or dot plot. I can organize and display data in a histogram. I can organize and display data in a box plot. I can determine the upper and lower extremes, median, and upper and lower quartiles of a set of data and use this information to display the data in a box plot
- 6.SP.5c I can determine the mean of the collected data. I can determine the median of the collected data. I can determine the measures of variance using range of collected data. I can determine the measures of variance using interquartile range of collected data. I can determine the measures of variance using mean absolute deviation of collected data. I can describe overall patterns in the data and how they relate to the context of the problem. I can describe any deviations for the overall pattern and how they relate to the context of the problem.

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