



2023-2024 Jackson County Schools 6th Grade Mathematics Pacing Guide

1st Quarter

Proportional Reasoning

***Focus Standard 6.1 - Ratios** [Proficiency Scale](#)

Use appropriate notations $[a/b, a \text{ to } b, a:b]$ to represent a proportional relationship between quantities and use ratio language to describe the relationship between quantities.

***Focus Standard 6.2 - Unit Rate and Rate Language** [Proficiency Scale](#)

Use unit rates to represent and describe ratio relationships.

***Focus Standard 6.3 - Ratio and Rate Reasoning about Percents** [Proficiency Scale](#) / [Proficiency Scale \(Percents\)](#)

Use ratio and rate reasoning to solve mathematical and real-world problems (including but not limited to percent, measurement conversion, and equivalent ratios) using a variety of models, including tables of equivalent ratios, tape diagrams, double number lines, and equations.

Standard 6.4 - Fraction Division [Proficiency Scale](#)

Interpret and compute quotients of fractions using visual models and equations to represent problems.

Standard 6.5 - Multi-Digit Dividing

Fluently divide multi-digit whole numbers using a standard algorithm to solve real-world and mathematical problems.

***Focus Standard 6.15 - Algebraic Expressions** [Proficiency Scale \(a,c\)](#)

Write, read, and evaluate expressions in which letters represent numbers in real-world contexts.

Standard 6.15a - Interpret a variable as an unknown value for any number in a specified set, depending on the context.

Standard 6.15c - Identify parts of an expression using mathematical terms such as sum, term, product, factor, quotient, and coefficient.

2nd Quarter

Number Systems, Operations, Algebra & Functions

***Focus Standard 6.15 - Algebraic Expressions** [Proficiency Scale \(b,d\)](#)

Write, read, and evaluate expressions in which letters represent numbers in real-world contexts.

Standard 15b - Write expressions to represent verbal statements and real-world scenarios.

Standard 15d - Evaluate expressions (which may include absolute value and whole number exponents) with respect to order of operations.

***Focus Standard 6.10 - Rational Numbers on the Number Line** [Proficiency Scale](#)

Locate integers and other rational numbers on a horizontal or vertical line diagram.

Standard 6.10a - Define opposites as numbers located on opposite sides of 0 and the same distance from 0 on a number line.

Standard 6.10b - Use rational numbers in real-world and mathematical situations, explaining the meaning of 0 in each situation.

***Focus Standard 6.16 - Algebraic Expressions** [Proficiency Scale](#)

Generate equivalent algebraic expressions using the properties of operations, including inverse, identity, commutative, associative, and distributive.

***Focus Standard 6.19 - Solving One-Step Equations** [Proficiency Scale](#)

Write and solve an equation in the form of $x+p=q$ or $px=q$ for cases in which p , q , and x are all non-negative rational numbers to solve real-world and mathematical problems.

Standard 6.19a - Interpret the solution of an equation in the context of the problem.

Standard 6.18 - Evaluating Equations

Determine whether a value is a solution to an equation or inequality by using substitution to conclude whether a given value makes the equation or inequality true.

Standard 6.9 - Signed Numbers/ Opposites [Proficiency Scale](#)

Use signed numbers to describe quantities that have opposite directions or values and to represent quantities in real-world contexts.

3rd Quarter

Number Systems and Operations***Focus Standard 6.12 - Ordering Rational Numbers and Absolute Value**

Explain the meaning of absolute value and determine the absolute value of rational numbers in real-world contexts.

***Focus Standard 6.13 - Ordering Rational Numbers and Absolute Value** [Proficiency Scale\(12/13\)](#)

Explain the meaning of absolute value and determine the absolute value of rational numbers in real-world contexts

***Focus Standard 6.11 - Rational Numbers on the Coordinate Plane** [Proficiency Scale](#)

Find the position of pairs of integers and other rational numbers on the coordinate plane.

Standard 6.11a - Identify quadrant locations of ordered pairs on the coordinate plane based on the signs of the x and y coordinates.

***Focus Standard 6.11 - Reflections on a Coordinate Plane** [Proficiency Scale](#)

Standard 6.11b - Identify (a,b) and (a,-b) as reflections across the x-axis.

Standard 6.11c - Identify (a,b) and (-a,b) as reflections across the y-axis.

Standard 6.11d - Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane, including finding distances between points with the same first or second coordinate.

Standard 6.20 - Using Inequalities

Write and solve inequalities in the form of $x > c$, $x < c$, $x \geq c$, or $x \leq c$ to represent a constraint or condition in a real-world or mathematical problem.

Standard 6.20a - Interpret the solution of an inequality in the context of a problem.

Standard 6.20b - Represent the solutions of inequalities on a number line and explain that the solution set may contain infinitely many solutions.

***Focus Standard 6.21 - Independent and Dependent Variables** [Proficiency Scale](#)

Identify, represent, and analyze two quantities that change in relationship to one another in real-world or mathematical situations.

Standard 6.21a - Use tables, graphs, and equations to represent the relationship between independent and dependent variables.

Geometry and Measurement**Standard 6.25 - Graphing Polygons**

Graph polygons in the coordinate plane given coordinates of the vertices to solve real-world and mathematical problems.

Standard 6.25a - Determine missing vertices of a rectangle with the same x-coordinate or the same y-coordinate when graphed in the coordinate plane.

Standard 6.25b - Use coordinates to find the length of a side between points having the same x-coordinate or the same y-coordinate.

Standard 6.25c - Calculate perimeter and area of a polygon graphed in the coordinate plane (limiting to polygons in which consecutive vertices have the same x-coordinate or the same y-coordinate).

4th Quarter

Additional Standards (After Testing)**Standard 6.14 - Whole Number Exponents** [Proficiency Scale](#)

Write, evaluate, and compare expressions involving whole-number exponents.

Standard 6.17 - Equivalent Expressions [Proficiency Scale](#)

Determine whether two expressions are equivalent and justify the reasoning.

Standard 6.22 - Statistical Questions

Write examples and non-examples of statistical questions, explaining that a statistical question anticipates variability in the data related to the question.

Standard 6.23 - Measures of Center

Calculate, interpret, and compare measures of center (mean, median, mode) and variability (range and interquartile range) in real-world data sets.

Standard 6.23a - Determine which measure of center best represents a real-world data set.

Standard 6.23b - Interpret the measures of center and variability in the context of a problem.

Standard 6.24 - Representations of Data

Represent numerical data graphically, using dot plots, line plots, histograms, stem and leaf plots, and box plots.

Standard 6.24a - Analyze the graphical representation of data by describing the center, spread, shape (including approximately symmetric or skewed), and unusual features (including gaps, peaks, clusters, and extreme values).

Standard 6.24b - Use graphical representations of real-world data to describe the context from which they were collected.

Standard 6.26 - Area

Calculate the area of triangles, special quadrilaterals, and other polygons by composing and decomposing them into known shapes.

Standard 6.26a - Apply the techniques of composing and decomposing polygons to find area in the context of solving real-world and mathematical problems.

Standard 6.27 - Surface Area

Determine the surface area of three-dimensional figures by representing them with nets composed of rectangles and triangles to solve real-world and mathematical problems.

Standard 6.28 - Volume

Apply previous understanding of volume of right rectangular prisms to those with fractional edge lengths to solve real-world and mathematical problems.

Standard 6.28a - Use models (cubes or drawings) and the volume formulas ($V = lwh$ and $V = Bh$) to find and compare volumes of right rectangular prisms.