

Reporting Categories	Needs Support	Close	Ready	Exceeding
Ratios and Proportional Relationships Focus is on the concept of ratio and rate and the beginnings of developing proportional reasoning.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> uses a ratio of the form $a:b$ to describe relationships between quantities. makes sense of ratios in order to describe relationships. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> determines unit rates to solve problems. makes sense of a given problem to determine the unit rate. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> rewrites ratios representing rates in equivalent forms in order to understand a real-world problem, including converting rates to unit rates or converting the units of measure for a given rate. makes sense of a real-world problems using ratios and unit rates. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> solves problems involving percentages. determines a rate relationship in a real-world problem and uses it to compare rates and to solve rate problems. makes sense and determines a rate relationship to solve a problem.
The Number System Focus is on seeing the rational numbers as a coherent number system. Students increase their fluency with calculations.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> recognizes when a given number is a factor or multiple of another number. makes sense of problems in order to recognize a number as a factor or multiply by using knowledge of multiplication and division. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> adds, subtracts and multiplies multi-digit decimals in order to solve problems. determines absolute value when given a number line. graphs points in the third quadrant of the coordinate plane. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> divides multi-digit decimals as well as non-unit fractions in order to solve problems. recognizes common factors of numbers and uses them to determine when expressions are equivalent. explains how the properties of numbers extend to negative whole numbers. determines the absolute value of an integer. graphs points in all four quadrants of the coordinate plane. uses negative numbers to describe quantities. recognizes integers to represent real life situations. uses a number line to model positive and negative numbers and absolute value. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> compares absolute values of rational numbers. determines the common factors or multiples of two whole numbers. graphs points in all four quadrants of the coordinate plane and uses the relationship between points with the same first or second coordinate to draw conclusions. reasons abstractly using positive and negative numbers to solve a problem.
Expressions and Equations Focus is on understanding algebraic expressions as analogous to numeric expressions. Students continue to develop function ideas by analyzing pairs of independent and dependent variables.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> writes and evaluates numerical expressions involving whole number exponents. uses repeated reasoning to solve expressions using whole number exponents. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> identifies when two expressions are equivalent. makes sense of equivalent expressions. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> applies the distributive property to create equivalent expressions involving whole number coefficients. recognizes independent and dependent variables in an equation that represents a real-life situation. makes use of structure by using the distributive property to make equivalent expressions. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> represents linear relationships between two quantities with equations or inequalities, evaluates linear expressions, and solves problems involving one-variable linear equations of the form $x + p = q$. graphs the solution set to inequalities of the form $x > c$ or $x < c$ on a number line and determines if a given value is a solution of the inequality. uses the language of operations to describe the structure of expressions. describes the structure of expressions using operational language.
Geometry Focus is on composing and decomposing shapes, and working with shapes in 3 dimensions.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> finds the area of a right triangle when the lengths of the legs are given. makes sense of a problem involving right triangles when given the lengths of the legs by using the area formula. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> finds the volume of a right rectangular prism that is packed with unit cubes. models using unit cubes to find the volume of right rectangular prisms. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> solves real-world problems involving the area of triangles and quadrilaterals, including simple figures that are compositions of both. calculates surface area if given a net. reasons abstractly to decompose the given figure in order to find total area. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> determines the area of trapezoids by composition of rectangles and triangles in order to solve problems. determines the volume of rectangular prisms in order to solve problems. makes sense of a 3-dimensional figure in order to find the surface area of that figure.
Statistics and Probability Focus is on the concept of statistical variability and the notion that there is some order in the apparent chaos, seen through distributions. Students develop more ways of representing data.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> finds the range of a univariate data set. makes sense of a data set by finding the mean. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> recognizes histograms and box plots that represent distributions. makes sense of a model, such as histogram or box plot, that represents a set of data. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> determines the mean, median, and mode of a set of data. constructs histograms to represent distributions. creates a model of a histogram using a set of data. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> interprets and compares the mean and media of a univariate distribution. explains how additional data points would affect the center and spread of a distribution. analyzes and creates box plots to represent a univariate data set. represents and analyzes sets of data using various model representations.
Modeling Producing, interpreting, understanding, evaluating, and improving mathematical models.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> uses manipulatives to represent a problem or concept. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> uses manipulatives to interpret a problem or concept. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> evaluates a manipulative model to solve a problem or concept. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> uses a manipulative to improve a model of a problem or concept.
Justification and Explanation Giving reasons, explaining “Why?”	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> explains a pattern using words, algebraic expressions, number operations. generates a sequence from a rule. identifies an error in reasoning. uses two or more specific statements to draw a conclusion. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> uses conditional statements. draws and labels relevant visual representations. explains steps of a procedure. provides a counterexample. uses a pattern or sequence to draw a conclusion. draws conclusions using both a specific and general evidentiary statement. provides general support for a claim in order to reach a conclusion. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> uses and cites conditional statements, specific aspects of created visual representations, and/or computations or procedures to clarify an argument or draw a conclusion. justifies and defends conclusions by explaining errors in reasoning or calculations, providing counterexamples, applying relevant classification schemes, and/or verifying statements or claims used to draw a conclusion. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> provides a coherent, logical argument or solution pathway by providing evidence to support claims. provides thorough justification and defends conclusions by using multiple, connected statements and incorporating justification techniques such as explaining errors in reasoning or calculations, providing counterexamples, applying relevant classification schemes, and/or verifying statements or claims used to draw a conclusion.

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<p>Foundation Integrate and continue to grow with topics from prior grades.</p>	<p><i>A student performing at the Needs Support level:</i></p> <ul style="list-style-type: none"> • multiplies whole numbers using a model. • adds and subtracts fractions and mixed numbers with like denominators. • multiplies fractions with whole numbers • understands the properties of geometric figures by using sides and angles. • finds areas of rectangles. • graphs ordered pairs in the first quadrant of the coordinate plane. 	<p><i>A student performing at the Close level:</i></p> <ul style="list-style-type: none"> • multiplies multi-digit whole numbers fluently. • adds and subtracts fractions and mixed number with unlike denominators. • multiplies and divides fractions by whole numbers. 	<p><i>A student performing at the Ready level:</i></p> <ul style="list-style-type: none"> • multiplies fractions and/or mixed numbers with unlike denominators. • classifies geometric figures by their properties. • writes and evaluates simple expressions without variables. 	<p><i>A student performing at the Exceeding level:</i></p> <ul style="list-style-type: none"> • adds, subtracts, and multiplies fractions and/or mixed numbers with unlike denominators in multi-step problems. • explains classifications of geometric figures by using sides and angles. • writes and evaluates complex expressions without variables.
<p>Mathematical Practices Collected PLDs that focus on mathematical practices.</p>	<p><i>A student performing at the Needs Support level:</i></p> <ul style="list-style-type: none"> • makes sense of ratios in order to describe relationships. • makes sense of problems in order to recognize a number as a factor or multiply by using knowledge of multiplication and division. • uses repeated reasoning to solve expressions using whole number exponents. • makes sense of a problem involving right triangles when given the lengths of the legs by using the area formula. • makes sense of a data set by finding the mean. • uses manipulatives to represent a problem or concept. • explains a pattern using words, algebraic expressions, number operations. • generates a sequence from a rule. • identifies an error in reasoning. • uses two or more specific statements to draw a conclusion. 	<p><i>A student performing at the Close level:</i></p> <ul style="list-style-type: none"> • makes sense of a given problem to determine the unit rate. • makes sense of equivalent expressions. • models using unit cubes to find the volume of rectangular prisms. • makes sense of a model, such as histogram or box plot, that represents a set of data. • uses manipulatives to interpret a problem or concept. • uses conditional statements. • draws and labels relevant visual representations. • explains steps of a procedure. • provides a counterexample. • uses a pattern or sequence to draw a conclusion. • draws conclusions using both a specific and general evidentiary statement. • provides general support for a claim in order to reach a conclusion. 	<p><i>A student performing at the Ready level:</i></p> <ul style="list-style-type: none"> • makes sense of a real-world problems using ratios and unit rates. • uses a number line to model positive and negative numbers and absolute value. • makes use of structure by using the distributive property to make equivalent expressions. • reasons abstractly to decompose the given figure in order to find total area. • creates a model of a histogram using a set of data. • evaluates a manipulative model to solve a problem or concept. • uses and cites conditional statements, specific aspects of created visual representations, and/or computations or procedures to clarify an argument or draw a conclusion. • justifies and defends conclusions by explaining errors in reasoning or calculations, providing counterexamples, applying relevant classification schemes, and/or verifying statements or claims used to draw a conclusion. 	<p><i>A student performing at the Exceeding level:</i></p> <ul style="list-style-type: none"> • makes sense and determines a rate relationship to solve a problem. • reasons abstractly using positive and negative numbers to solve a problem. • describes the structure of expressions using operational language. • makes sense of a figure in order to find the surface area of that figure. • represents and analyzes sets of data using various model representations. • uses a manipulative to improve a model of a problem or concept. • provides a coherent, logical argument or solution pathway by providing evidence to support claims. • provides thorough justification and defends conclusions by using multiple, connected statements and incorporating justification techniques such as explaining errors in reasoning or calculations, providing counterexamples, applying relevant classification schemes, and/or verifying statements or claims used to draw a conclusion.