

Reporting Categories	Needs Support	Close	Ready	Exceeding
Ratios & Proportional Relationships Focus is on proportional relationships of quantities that vary together.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> recognizes that proportional relationships are relationships between two equal ratios. makes sense of problems to compare two quantities. uses calculators appropriately when comparing ratios. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> solves simple problems in context, given the equation of the proportional relationship that models the situation. makes sense of problems and perseveres in solving proportions accurately. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> solves multi-step problems in contexts that require creating an equation to model the situation, including those involving proportions, ratios, and percentages. uses the structure of ratios and proportions to calculate percentages. makes sense of problems and perseveres in solving multistep problems. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> uses proportional relationships to solve problems, including those involving rates, discounts, and finding percentages. makes sense of quantities and their relationships. gives results to the required level of precision. applies the structure of proportions to rates, percentages, and discounts.
The Number System Focus is on completing the rational number system by extending the basic operations, and using this system to solve problems.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> identifies even and odd integers. uses a number line to model negative and positive numbers. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> describes real-world situations that involve positive and negative rational quantities. makes sense of a math concept in the real world. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> recognizes the set of integers as the whole numbers and their opposites, and for which opposite quantities combine by addition to make 0. applies the properties of operations to problems involving all four operations with rational numbers. makes sense of all operations of numbers and perseveres in solving problems requiring the use of the operations. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> uses the properties of rational numbers to explain and defend their mathematical thinking. solves problems involving operations with rational numbers, including those requiring the use of algebraic formulas. gives results to the required level of precision. gives an explanation demonstrating a general understanding but not generalizing to other cases.
Expressions and Equations Focus is on understanding operations, keying in on operations that produce equivalent expressions. Students solve simple linear equations and inequalities.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> solves one-step algebraic equations posed with whole numbers. recognizes and uses the structure of algebraic equations to know that you can use inverse operations. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> solves one-step algebraic equations posed with fractions. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> solves multi-step algebraic equations posed with whole numbers, fractions, and decimals. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> applies the properties of addition, subtraction, and distribution to expand algebraic expressions with rational coefficients. uses equations and inequalities to represent and solve multi-step real-world problems, including rational numbers. reasons quantitatively by making sense of quantities and considering the units involved. Also decontextualizes by selecting an inequality that represents a situation symbolically. gives results to the required level of precision. Also identifies an inequality whose solution rounds down to the problem's solution. makes sense of quantities and relationships in problem situations and uses units to help solve a problem.
Geometry Focus is on scale drawings and applying proportional reasoning. Students explore relations in geometric shapes.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> selects, sketches, or draws freehand, geometric figures with given conditions. finds the area of a rectangle. identifies right prisms. accurately models geometric figures. understands the structure of the area of a rectangle formula. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> recognizes particular quadrilaterals from a description of their characteristics. knows the difference between area and perimeter/circumference. finds the volume of a rectangular prism. recognizes the structure of quadrilaterals. makes sense of characteristics of quadrilaterals, area, circumference, and perimeter. understands the structure of the volume formula. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> uses knowledge about supplementary, complementary, vertical, and adjacent angles to solve for an unknown angle in a figure. solves problems involving the area and circumference of a circle and area of parallelogram, trapezoids, and triangles. finds the surface area of a rectangular prism. uses formulas to model area, circumference, surface area, and volume. use calculators appropriately when translating between actual length on a scale diagram and the length that it represents. accurately rounds to an appropriate place value when working with measurements from scale diagrams. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> uses properties of interior angles for polygons to determine unknown angle measures. uses the characteristics of two-dimensional figures to solve problems. solves real-world and word problems involving the area and circumference of a circle, and area of irregular figures composed of rectangles in a scale drawing. finds the surface area and volume of any right prism. uses the properties of a rectangular prism to determine the length of a side, given its surface area. solves problems involving scale. shows a range of ability in explaining or arguing how to find surface area and volume of any right prism. uses the structure of composite geometric shapes to see that they are composed of several shapes.
Statistics and Probability Focus is on finding information through sampling, thinking about how sure they are of the conclusion. Probability is defined and used as a model.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> recognizes that the probability of a chance event is between 0 and 1, with larger numbers indicating greater likelihood. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> examines a frequency summary to determine the approximate probability of defined outcomes. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> uses a tree diagram to find the probability of compound events. understands the difference between experimental and theoretical probability. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> compares and contrasts probabilities from a frequency model with theoretical and experimental probability for the event. calculates probability for 2-step experiments with and without replacement/repetition of values. Example: rolling a die twice, drawing 2 cards at once. draws conclusions from random sampling about a population or two populations. uses probability models.
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"> sketches a diagram to represent a relationship. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> identifies the quantities that are related in an equation or a table. selects a model of a geometric shape that meets given criteria when the shape is constructed from triangles, rectangles, and circles. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> identifies an equation to represent a relationship between quantities. selects a model of a geometric shape that meets given criteria. uses a provided geometric diagram or model to identify an angle measure. explains at a developing level an algebraic definition of even numbers but is unable to explain the algebraic definition of odd numbers. uses a provided table to make sense of data and solve a problem. visualizes a rectangular prism in terms of all 6 sides to facilitate determining the surface area. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> uses a provided geometric diagram/model to visualize how to solve a problem. uses a provided table to make sense of data and to help determine whether a relationship is proportional. uses provided formulas to convert from Kelvin to Celsius to Fahrenheit. translates from a contextualized problem situation to an inequality. visualizes or draws a model of a rectangular prism to support finding the length of a side, given a rectangular prism's surface area. translates from a number line diagram to a numerical expression representing the distance between 2 points. explains at a general level the algebraic definitions of even and odd numbers.

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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, or numerical operations. generates a sequence from a given 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 statement as evidence. 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.
Foundation Integrate and continue to grow with topics from prior grades.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> understands the concepts of rate and ratio. determines the sign of a product or quotient of integers based on the number of negative signs. adds and subtracts fractions. recognize the difference between expressions and equations. identifies a scale factor. finds the area of a rectangle. recognizes the difference between a sample and a population. 	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> solves simple proportions. solves problems involving fractions. works with algebraic expressions and linear equations. solves problems involving scale factors. works with 2-dimensional shapes to solve problems involving area. describes characteristics of samples. 	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> understands and applies proportional relationships. understands and applies operations with rational numbers. understands and works with algebraic expressions and linear equations. solves problems that involve scale and informal geometric constructions. works with 3-dimensional shapes to solve problems involving surface area and volume. draws inferences about populations based on samples. calculates the appropriate angle measures to construct a circle graph. 	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> analyzes proportional relationships and applies them to solve multistep problems with context. applies and extends previous knowledge of operations with fractions to work with rational number operations. uses properties of operations to create equivalent numerical expressions. evaluates algebraic expressions or solves algebraic equations to solve problems with context. sketches geometric figures and describes the relationships between them. solves problems with context that involve angle measure, area, surface area, and volume. interprets a circle graph from a real-world context.
Mathematical Practices Collected PLDs that focus on mathematical practices.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> makes sense of problems to compare two quantities. uses calculators appropriately when comparing ratios. uses a number line to model negative and positive numbers. recognizes and uses the structure of algebraic equations to know that you can use inverse operations. accurately models geometric figures. understands the structure of the area of a rectangle formula. sketches a diagram to represent a relationship. explains a pattern using words, algebraic expressions, or numerical operations. generates a sequence from a given 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"> makes sense of problems and perseveres in solving proportions accurately. makes sense of a math concept in the real world. recognizes the structure of quadrilaterals. makes sense of characteristics of quadrilaterals, area, circumference, and perimeter. understands the structure of the volume formula. identifies the quantities that are related in an equation or a table. selects a model of a geometric shape that meets given criteria when the shape is constructed from triangles, rectangles, and circles. 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 statement as evidence. 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 the structure of ratios and proportions to calculate percentages. makes sense of problems and perseveres in solving multistep problems. makes sense of all operations of numbers and perseveres in solving problems requiring the use of the operations. uses formulas to model area, circumference, surface area, and volume. use calculators appropriately when translating between actual length on a scale diagram and the length that it represents. accurately rounds to an appropriate place value when working with measurements from scale diagrams. identifies an equation to represent a relationship between quantities. selects a model of a geometric shape that meets given criteria. uses a provided geometric diagram or model to identify an angle measure. explains at a developing level an algebraic definition of even numbers but is unable to explain the algebraic definition of odd numbers. uses a provided table to make sense of data and solve a problem. visualizes a rectangular prism in terms of all 6 sides to facilitate determining the surface area. 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"> makes sense of quantities and their relationships. gives results to the required level of precision. applies the structure of proportions to rates, percentages, and discounts. gives results to the required level of precision. gives an explanation demonstrating a general understanding but not generalizing to other cases. reasons quantitatively by making sense of quantities and considering the units involved. 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Also identifies an inequality whose solution rounds down to the problem’s solution. makes sense of quantities and relationships in problem situations and uses units to help solve a problem. shows a range of ability in explaining or arguing how to find surface area and volume of any right prism. uses the structure of compound geometric shapes to see that they are composed of several shapes. uses a provided geometric diagram/model to visualize how to solve a problem. uses a provided table to make sense of data and to help determine whether a relationship is proportional. uses provided formulas to convert from Kelvin to Celsius to Fahrenheit. translates from a contextualized problem situation to an inequality. visualizes or draws a model of a rectangular prism to support finding the length of a side, given a rectangular prism’s surface area. translates from a number line diagram to a numerical expression representing the distance between 2 points. explains at a general level the algebraic definitions of even and odd numbers. 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.