

Reporting Categories	Needs Support	Close	Ready	Exceeding
<b>Operations and Algebraic Thinking</b> Focus is on multiplication and division strategies and then solving problems involving the four operations.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>performs multiplication within 100 using repeated addition only.</li> <li>creates an expression to represent a verbal description of a mathematical situation.</li> <li>recognizes that repeated addition corresponds to multiplication.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>represents word problems using expressions and equations involving single-step multiplication and division with whole numbers within 100.</li> <li>performs division with no remainder within 100 using "fair-sharing" only.</li> <li>translates a contextual description into an expression or equation that may be used to answer questions in the context.</li> <li>recognizes that repeated subtraction corresponds to division.</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>extracts the relevant information to solve a multi-step contextual problem involving multiplication and division of numbers within 100.</li> <li>fluently multiplies and divides within 100.</li> <li>makes sense of a problem presented in a context and looks for entry points to a solution.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>recognizes a contextual situation that matches an expression or equation.</li> <li>represents contextual situation with equations or expressions involving operations with whole numbers within 100.</li> <li>explains the properties of operations, including closure for subsets of the set of whole numbers.</li> <li>explains and/or uses the relationship between multiplication and division to solve division problems within 100.</li> <li>selects the relevant information in a given contextual situation and explains the correspondence between expressions and equations and the context.</li> </ul>
<b>Number and Operations in Base Ten</b> Focus is on place-value arithmetic.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>uses place value understanding to round whole numbers to the nearest 10.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>uses place value understanding to round whole numbers to the nearest 100.</li> <li>uses a number line model to determine relative location of a number with respect to two benchmark numbers. Example: is 59 closer to 0 or 100?...closer to 50 or 60?</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>uses place value understanding to add and subtract multiples of 10 or 100 to whole numbers within 1,000.</li> <li>solves problems that involve using place value understanding to multiply one-digit numbers by multiples of 10.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>fluently adds or subtracts within 1,000.</li> </ul>
<b>Number and Operations—Fractions</b> Focus is on unit fractions and understanding fractions as numbers.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>recognizes a fraction model of a fraction written as <math>a/b</math>.</li> <li>recognizes that a number of objects that are in part of a group can be represented as a fraction of the total number of objects in the whole group.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>identifies a fraction that can be used to represent a ratio described in a context.</li> <li>plots a fraction <math>a/b</math> on a number line that has <math>b</math> divisions per unit.</li> <li>makes sense of quantities that are represented by fractions as part of a total number of objects.</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>writes a fraction to represent a ratio from a verbal description of a real-world situation.</li> <li>plots a fraction <math>a/b</math> on a number line that has other than <math>b</math> divisions per unit.</li> <li>decontextualizes rational quantities from a situation and considers the meaning of the parts of a fraction.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>solves multi-step problems involving parts of a whole quantity with fractions as solutions.</li> <li>compares two or more fractional values, including by using a number line to identify the position of each fraction.</li> <li>uses quantitative reasoning to conceptualize a fraction <math>a/b</math> as a parts of size <math>1/b</math>, with <math>a</math> and <math>b</math> both whole numbers.</li> </ul>
<b>Measurement and Data</b> Focus is on area with the aim of connecting it to addition and multiplication, and then looking at measurements and representing measurements in charts.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>recognizes that calculations of elapsed time require a different procedure than calculations with base ten numbers.</li> <li>performs direct measurements of time and length accurately, using standard units (seconds, minutes, hours, inches, feet, yards, centimeters, meters), within appropriate tolerances.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>uses appropriate types of units of measure for a given situation (e.g., yards and not kilograms for distance).</li> <li>finds the area or perimeter of a square or rectangle.</li> <li>measures times, lengths, or liquid volumes (milliliters, liters) and draws a picture or bar graph to organize the findings.</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>solves problems involving metric linear measures of polygons, including perimeters.</li> <li>recognizes area as a measurable attribute of rectangles and squares that is measured in square units.</li> <li>solves problems involving time.</li> <li>determines appropriate units and tools needed to perform several direct measurements of lengths, areas, or liquid volumes, and organizes the findings in a data table or plots with an appropriate degree of precision.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>solves word problems involving calculations of time and can identify and explain an error in an elapsed time calculation, including using an analog clock.</li> <li>is thoughtful about the units of measure they choose, clearly communicates their mathematical thinking, and presents results of measurement problems in a line plot with accurately scaled units on the axes.</li> <li>uses error analysis to critique the work of others.</li> </ul>
<b>Geometry</b> Focus is on 2-dimensional shapes.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>identifies rhombuses, rectangles, and squares as quadrilaterals.</li> <li>students sketch common quadrilaterals to represent and solve problems and justify solution pathways.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>identifies the fraction of a rectangle that is shaded.</li> <li>uses operational definitions to describe geometric relationships.</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>constructs and partitions a shape to represent a given fraction.</li> <li>uses appropriate vocabulary to describe attributes of 2- and 3- dimensional shapes.</li> <li>creates a symbolic representation of a fractional value.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>decomposes composite shapes into basic, easily defined shapes.</li> <li>recognizes that a symmetric shape can be partitioned into parts of the same shape and size.</li> </ul>
<b>Modeling</b> Producing, interpreting, understanding, evaluating, and improving mathematical models.	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>creates a model to represent a quantity.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>recognizes an equation that can be used to represent a problem presented in a real-world context.</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>creates an expression or equation to represent and solve a real-world problem.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>represents real-world problems with expressions, equations, or graphs and can create a context to represent a given equation.</li> </ul>
<b>Justification and Explanation</b> Giving reasons, explaining "Why?"	<i>A student performing at the Needs Support level:</i> <ul style="list-style-type: none"> <li>provides a partial explanation for grade level problems addressing number sense, measurement and geometric concepts.</li> <li>provides an example, computation, or one or more steps in a procedure.</li> <li>states a property, definition, or relationships between two or more objects.</li> <li>uses a single statement to draw a conclusion.</li> </ul>	<i>A student performing at the Close level:</i> <ul style="list-style-type: none"> <li>explains a pattern using words, numeric expressions, and operations.</li> <li>generates a sequence from a rule.</li> <li>draws and labels relevant visual representations.</li> <li>explains steps of a procedure.</li> <li>uses a pattern or sequence to support an argument.</li> </ul>	<i>A student performing at the Ready level:</i> <ul style="list-style-type: none"> <li>solves grade-level problems and provides a more complete explanation of their reasoning.</li> <li>draws conclusions using both specific and general evidentiary statements.</li> <li>provides general support for a claim in order to reach a conclusion.</li> <li>uses and cites conditional statements, specific aspects of created visual representations, and/or computations or procedures to clarify an argument or draw a conclusion.</li> <li>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.</li> <li>uses conditional statements.</li> <li>provides a counterexample.</li> </ul>	<i>A student performing at the Exceeding level:</i> <ul style="list-style-type: none"> <li>provides a coherent, logical argument or solution pathway by providing evidence to support claims.</li> <li>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, using more than one arithmetic model, applying relevant classification schemes, and/or verifying statements or claims used to draw a conclusion.</li> </ul>

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<p><b>Foundation</b> 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"> <li>• adds and subtracts within 20 in real-world situations.</li> <li>• skip-counts by 5s, 10s, 100s, and their multiples, starting at 0.</li> <li>• adds and subtracts within 100.</li> <li>• identifies the numerals in various place values.</li> </ul>	<p><i>A student performing at the Close level:</i></p> <ul style="list-style-type: none"> <li>• solves problems (precisely and using estimations) that address measurement and geometry concepts from the prior grades and provides partial explanations of their reasoning.</li> <li>• understands place value through hundreds using models.</li> <li>• skip-counts by 5s, 10s, 100s, and their multiples, starting at any multiple of 5.</li> <li>• measures and estimates lengths in standard units.</li> <li>• relates addition and subtraction to length.</li> <li>• recognizes and names a particular quadrilateral and explains in terms of the specific attributes of the quadrilateral.</li> </ul>	<p><i>A student performing at the Ready level:</i></p> <ul style="list-style-type: none"> <li>• uses base-ten number concepts from the previous grade to correctly solve problems and to provide more complete explanations to support their findings for problems addressing measurement and geometry from prior grades.</li> <li>• understands place value through hundreds.</li> <li>• skip-counts by 5s, 10s, 100s, and their multiples, starting at any number.</li> </ul>	<p><i>A student performing at the Exceeding level:</i></p> <ul style="list-style-type: none"> <li>• solves multi-step problems addressing number, operations, and algebraic thinking from the previous grade and gives complete explanations for those solutions and for problems addressing relationships between geometric figures.</li> <li>• uses place values concepts to solve real-world situations.</li> <li>• describes patterns of the numbers in a skip-count list and describes the relationship between skip-counting and multiplication or division.</li> </ul>
<p><b>Mathematical Practices</b> 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"> <li>• creates an expression to represent a verbal description of a mathematical situation.</li> <li>• recognizes that repeated addition corresponds to multiplication.</li> <li>• recognizes that a number of objects that are in part of a group can be represented as a fraction of the total number of objects in the whole group.</li> <li>• performs direct measurements of time and length accurately, using standard units (seconds, minutes, hours, inches, feet, yards, centimeters, meters), within appropriate tolerances.</li> <li>• sketches common quadrilaterals to represent and solve problems and justify solution pathways.</li> <li>• creates a model to represent a quantity.</li> <li>• provides a partial explanation for grade level problems addressing number sense, measurement and geometric concepts.</li> <li>• provides an example, computation, or one or more steps in a procedure.</li> <li>• states a property, definition, or relationships between two or more objects.</li> <li>• uses a single statement to draw a conclusion.</li> </ul>	<p><i>A student performing at the Close level:</i></p> <ul style="list-style-type: none"> <li>• translates a contextual description into an expression or equation that may be used to answer questions in context.</li> <li>• recognizes that repeated subtraction corresponds to division.</li> <li>• uses a number line model to determine relative location of a number with respect to two benchmark numbers. Example: is 59 closer to 0 or 100?...closer to 50 or 60?</li> <li>• makes sense of quantities that are represented by fractions as part of a total number of objects.</li> <li>• measures times, lengths, or liquid volumes (milliliters, liters) and draws a picture or bar graph to organize the findings.</li> <li>• uses operational definitions to describe geometric relationships.</li> <li>• recognizes a numeric equation that can be used to represent a problem presented in a real-world context.</li> <li>• explains a pattern using words, numeric expressions, and operations.</li> <li>• generates a sequence from a rule.</li> <li>• draws and labels relevant visual representations.</li> <li>• explains steps of a procedure.</li> <li>• uses a pattern or sequence to support an argument.</li> </ul>	<p><i>A student performing at the Ready level:</i></p> <ul style="list-style-type: none"> <li>• makes sense of a problem presented in a context and looks for entry points to a solution.</li> <li>• decontextualizes rational quantities from a situation and consider the meaning of the parts of a fraction.</li> <li>• determines the appropriate units and tools needed to perform several direct measurements of lengths, areas, or liquid volumes, and organizes the findings in a data table or plots with an appropriate degree of precision.</li> <li>• uses appropriate vocabulary to describe attributes of 2- and 3-dimensional shapes.</li> <li>• creates a symbolic representation of a fractional value.</li> <li>• creates an expression or equation to represent and solve a real-world problem.</li> <li>• solves grade-level problems and provides a more complete explanation of their reasoning.</li> <li>• draws conclusions using both specific and general evidentiary statements.</li> <li>• provides general support for a claim in order to reach a conclusion.</li> <li>• uses and cites conditional statements, specific aspects of created visual representations, and/or computations or procedures to clarify an argument or draw a conclusion.</li> <li>• 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.</li> <li>• uses conditional statements.</li> <li>• provides a counterexample.</li> </ul>	<p><i>A student performing at the Exceeding level:</i></p> <ul style="list-style-type: none"> <li>• selects the relevant information in a given contextual situation and explains the correspondence between expressions and equations and the context.</li> <li>• uses quantitative reasoning to conceptualize a fraction, <math>a/b</math>, as <math>a</math> parts of size <math>1/b</math>, with <math>a</math> and <math>b</math> both whole numbers.</li> <li>• is thoughtful about the units of measure they choose, clearly communicates their mathematical thinking, and presents results of measurement problems in a line plot with accurately scaled units on the axes.</li> <li>• decomposes composite shapes into basic, easily defined shapes.</li> <li>• recognizes that a symmetric shape can be partitioned into parts of the same shape and size.</li> <li>• represents real-world problems with expressions, equations, or graphs and can create a context to represent a given equation.</li> <li>• provides a coherent, logical argument or solution pathway by providing evidence to support claims.</li> <li>• 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, using more than one arithmetic model, applying relevant classification schemes, and/or verifying statements or claims used to draw a conclusion.</li> </ul>