



**Dover Area School District Curriculum K-U-D**  
**Third Grade Math**

Standards	Eligible Content	Know	Understand	Do
<p>CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic.</p>	<p>M03.A-T.1.1.1 Round two- and three-digit whole numbers to the nearest ten or hundred, respectively.            M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1,000) and/or subtract two- and three-digit numbers from three-digit whole numbers.            M03.A-T.1.1.3 Multiply one-digit whole numbers by two-digit multiples of 10 (from 10 through 90).            M03.A-T.1.1.4 Order a set of whole numbers from least to greatest or greatest to least (up through 9,999, and limit sets to no more than four numbers).</p>	<p>round digit ten hundred whole number sums order least greatest multiply</p>	<p>A digit's position in a number determine's its value allows us to accurately perform multi-digit operations.</p>	<p>Perform multi-digit arithmetic, Demonstrate fluency of addition and subtraction. Round whole numbers to the nearest ten or hundred. Order numbers from least to greatest and greatest to least.</p>
<p>CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers.</p>	<p>M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into y equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; and no simplification necessary). M03.A-F.1.1.2 Represent fractions on a number line (limit denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; and no simplification necessary). M03.A-F.1.1.3 Recognize and generate simple equivalent fractions (limit the denominators to 1, 2, 3, 4, 6, and 8 and limit numerators to whole numbers less than the denominator). Example 1: <math>1/2 = 2/4</math> Example 2: <math>4/6 = 2/3</math> M03.A-F.1.1.4 Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers (limit denominators to 1, 2, 3, 4, 6, and 8). Example 1: Express 3 in the form <math>3 = 3/1</math>. Example 2: Recognize that <math>6/1 = 6</math>. M03.A-F.1.1.5 Compare two fractions with the same denominator (limit denominators to 1, 2, 3, 4, 6, and 8), using the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and/or justify the conclusions.</p>	<p>whole set partition fraction numerator denominator number line equivalent fractions</p>	<p>Fractions represent equal parts of a whole.</p>	<p>Develop an understanding of fractions as numbers. Represent fractions on a number line. Represent and generate equivalent fractions, Compare fractions with the same numerator or same denominator.</p>



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<p>CC.2.2.3.A.1 Represent and solve problems involving multiplication and division.</p>	<p>M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including <math>10 \times 10</math>). Example 1: Interpret 35 as the total number of objects in 5 groups, each containing 7 objects. Example 2: Describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>. M03.B-O.1.1.2 Interpret and/or describe whole-number quotients of whole numbers (limit dividends through 50 and limit divisors and quotients through 10). Example 1: Interpret <math>48 \div 8</math> as the number of objects in each share when 48 objects are partitioned equally into 8 shares, or as a number of shares when 48 objects are partitioned into equal shares of 8 objects each. Example 2: Describe a context in which a number of shares or a number of groups can be expressed as <math>48 \div 8</math>. M03.B-O.1.2.1 Use multiplication (up to and including <math>10 \times 10</math>) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including <math>10 \times 10</math>) or division (limit dividends through 50 and limit divisors and quotients through 10) equation relating three whole numbers. Example: Determine the unknown number that makes an equation true.</p>	<p>factors products quotients divisors unknown number</p>	<p>Representations can be used to solve multiplication and division problems.</p>	<p>Represent and solve problems. Demonstrate an understanding of properties of multiplication. Demonstrate an understanding of the relationship between multiplication and division. Demonstrate fluency. Identify and explain patterns in arithmetic.</p>
<p>CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.</p> <p>CC.2.2.3.A.3 Demonstrate multiplication and division fluency</p>	<p>M03.B-O.2.1.1: Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2: Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.2.2.1: Interpret and/or model division as a multiplication equation with an unknown factor. Example: Find <math>32 \div 8</math> by solving <math>8 \times ? = 32</math>.</p>	<p>commulative property associative property division model unknown factor</p>	<p>Multiplication and division and the relationship between the two can help the learner to be an efficient problem solver.</p>	<p>Use multiplication properties Multiply numbers if a different order to arrive at the same product Use a missing factor to solve a related division fact.</p>



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CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic	<p>M03.B-O.3.1.1 Solve two-step word problems using the four operations (expressions are not explicitly stated). Limit to problems with whole numbers and having whole-number answers.</p> <p>M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers.</p> <p>M03.B-O.3.1.3 Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole-number answers. M03.B-O.3.1.4 Solve two-step equations using order of operations (equation is explicitly stated with no grouping symbols).</p> <p>M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of operations. Example 1: Observe that 4 times a number is always even. Example 2: Explain why 6 times a number can be decomposed into three equal addends.</p> <p>M03.B-O.3.1.6 Create or match a story to a given combination of symbols (+, −, ×, ÷, &lt;, &gt;, and =) and numbers.</p> <p>M03.B-O.3.1.7 Identify the missing symbol (+, −, ×, ÷, &lt;, &gt;, and =) that makes a number sentence true.</p>	<p>two-step word problem</p> <p>operation</p> <p>equation</p> <p>symbol</p> <p>unknown quantity</p> <p>assess reasonableness</p> <p>order of operations</p> <p>arithmatic patterns</p> <p>decompose</p> <p>addends</p> <p>even</p> <p>odd</p>	<p>Solve problems using the four operations and solve patterns to solve real-world problems.</p>	<p>Solve basic facts. Write number models</p> <p>Ability to assess whether an answer is reasonable.</p> <p>Counting by 2s, 5s,10s. fact families</p>
<p>CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes.</p> <p>CC.2.3.3.A.2 Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.</p>	<p>M03.C-G.1.1.1: Explain that shapes in different categories may share attributes and that the shared attributes can define a larger category. Example 1: A rhombus and a rectangle are both quadrilaterals since they both have exactly four sides. Example 2: A triangle and a pentagon are both polygons since they are both multi-sided plane figures.</p> <p>M03.C-G.1.1.2: Recognize rhombi, rectangles, and squares as examples of quadrilaterals and/or draw examples of quadrilaterals that do not belong to any of these subcategories.</p> <p>M03.C-G.1.1.3: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. Example 1: Partition a shape into 4 parts with equal areas. Example 2: Describe the area of each of 8 equal parts as 1/8 of the area of the shape.</p>	<p>attributes</p> <p>rhombi</p> <p>rectangle</p> <p>square</p> <p>quadrilateral</p> <p>area</p> <p>unit fraction</p>	<p>Use attributes of shapes to identify, compare, and classify.</p>	<p>Partition two-dimensional shapes into equal parts. Express the area of a partition as a unit fraction of the whole.</p>
CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass or length	<p>M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects using standard units (cups [c], pints [pt], quarts [qt], gallons [gal], ounces [oz.], and pounds [lb]) and metric units (liters [l], grams [g], and kilograms [kg]).</p> <p>M03.D-M.1.2.2 Add, subtract, multiply, and divide to solve onestep word problems involving masses or liquid volumes that are given in the same units. M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.</p>	<p>liquid volume</p> <p>mass</p> <p>cups, pints, quarts, gallons, ounces, liters, grams, kilograms</p> <p>inch, quarter inch</p> <p>estimation</p>	<p>What operation(s) and unit of measure should be used to solve measurement problems</p>	<p>Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.</p>
CC.2.4.3.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals.	<p>M03.D-M.1.1.1 Tell, show, and/or write time (analog) to the nearest minute. M03.D-M.1.1.2 Calculate elapsed time to the minute in a given situation (total elapsed time limited to 60 minutes or less).</p>	<p>elapsed time</p> <p>minute</p> <p>hour</p>	<p>Calculate time in order to solve time interval problems.</p>	<p>Tell time (analog). Show and/or write time (analog). Show, and/or write time (analog). Calculate elapsed time to the minute for a given situation.</p>



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CC.2.4.3.A.3 Solve problems and make change involving money using a combination of coins and bills	M03.D-M.1.3.1 Compare total values of combinations of coins (penny, nickel, dime, and quarter) and/or dollar bills less than \$5.00. M03.D-M.1.3.2 Make change for an amount up to \$5.00 with no more than \$2.00 change given (penny, nickel, dime, quarter, and dollar). M03.D-M.1.3.3 Round amounts of money to the nearest dollar.	compare value penny nickel dime quarter change coins bills round	The value of each coin and using that understanding to make change	Solve problems and make change using coins/bills.
CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.	M03.D-M.2.1.1: Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories (scales limited to 1, 2, 5, and 10). M03.D-M.2.1.2: Solve one- and two-step problems using information to interpret data presented in scaled pictographs and scaled bar graphs (scales limited to 1, 2, 5, and 10). Example 1: (One-step) “Which category is the largest?” Example 2: (Two-step) “How many more are in category A than in category B?” M03.D-M.2.1.3: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Display the data by making a line plot, where the horizontal scale is marked in appropriate units—whole numbers, halves, or quarters. M03.D-M.2.1.4: Translate information from one type of display to another. Limit to pictographs, tally charts, bar graphs, and tables. Example: Convert a tally chart to a bar graph.	scaled pictograph scaled bar graph line plot horizontal scale	Use various graphs to create and interpret data.	Represent and interpret data using various displays.
CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition.	M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in., square ft, and non-standard square units). M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	unit square area multiply products whole number measure	Measure to determine the area of a rectangle to apply in real-world settings	Represent and interpret data using various displays. Determine the area of a rectangle as it relates to multiplication and addition.
CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.	M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.	perimeter polygons lengths area unit	Find perimeter/area to apply to real-world settings	Solve real world problems involving area and perimeter including finding perimeters with unknown side lengths.