

Common Core Standards	I Can Statements....	Math Unit/Skill
<p>4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret <math>35 = 5 \times 7</math> as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.</p>	<p>I can explain how a multiplication equation can be used to compare.</p>	<p><b><u>Unit 1 Multiplication and Division</u></b>  <b><u>Concepts</u></b>                      (8-9 Weeks)</p>
<p>4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.</p>	<p>I can determine that a digit represents ten times what it would be in the place to its right.</p>	<p>Place Value                      Factors                      Multiplication                      Division</p>
<p>4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meaning of the digits in each place, using <math>&gt;</math>, <math>&lt;</math>, and <math>=</math> symbols to record the results of comparisons.</p>	<p>I can read multi-digit whole numbers using numerals, number names, and expanded form.</p> <p>I can compare two multi-digit numbers using <math>\_\_</math>, <math>=</math>, and <math>\_\_</math>.</p>	
<p>4.OA.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.</p>	<p>I can find factor pairs for whole numbers 1-100.</p> <p>I can recognize a whole number as a multiple of each of its factors.</p> <p>I can decide whether a whole number (1-100) is a multiple of a given one-digit number.</p> <p>I can determine if a whole number (1-100) is prime or composite.</p>	
<p>4.NBT.5 Multiply a whole number of up to</p>	<p>I can multiply a four-digit whole number by a 1-digit whole number using strategies and</p>	

4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation using equations, rectangular arrays, and/or area models.</p> <p>4.NBT.6 Find whole-number equations and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.</p> <p>4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four</p>	<p>properties of operations.</p> <p>I can multiply two two-digit numbers using strategies and properties of operations.</p> <p>I can multiply.</p> <p>I can represent the calculation using an equation, rectangular array, and/or area models.</p> <p>I can explain the calculation using an equation, rectangular array, and/or area models.</p> <p>I can apply strategies to find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.</p> <p>I can represent the calculation using an equation, rectangular array, and/or area models.</p> <p>I can explain the calculation using an equation, rectangular array, and/or area models.</p> <p>I can multiply or divide to solve word problems that use multiplication to compare.</p> <p>I can solve multistep word problems using the four operations.</p> <p>I can interpret the meanings of remainders.</p>	
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4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p>I can represent problems using equations with a letter standing for the unknown quantity (variable).</p> <p>I can decide if my answer makes sense using mental math, estimation, and rounding.</p>	
<p>4.NF.1 Explain why a fraction <math>a/b</math> is equivalent to a fraction <math>(n \times a) / (n \times b)</math> by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.</p> <p>4.NF.2 Compare two fractions with different numerators and denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as <math>\frac{1}{2}</math>. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&lt;</math>, <math>=</math>, or <math>&gt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</p> <p>4.NF.3. Understand a fraction <math>a/b</math> either <math>&gt;1</math> as a sum of fractions <math>1/b</math>.  a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</p>	<p>I can explain why fractions are equivalent using fraction models.</p> <p>I can recognize and create equivalent fractions.</p> <p>I can compare two fractions with different numerators and denominators using <math>\_</math>, <math>\_</math>, and <math>=</math>.  I can show the comparison using a fraction model from the same whole.  I can prove my comparisons using a fraction model.</p> <p>I can add and subtract fractions.</p>	<p><b><u>Unit 2: Fractions, Equivalents, and Operations</u></b>  (6 weeks)</p> <p>Equivalent Fractions  Comparing Fractions  Adding Fractions  Subtracting Fractions  Mixed Numbers  Adding Mixed Numbers (like denominators)  Subtracting Mixed Numbers (like denominators)  Decomposing Fractions into Sums of Fractions  Multiply Fractions by Whole Numbers</p>

4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using visual fraction model.</p> <p>c Add and subtract mixed numbers with like denominators e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p> <p>d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual models and equations to represent the problem.</p> <p>4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.</p> <p>a Understand a fraction <math>a/b</math> as a multiple of <math>1/b</math>.</p> <p>b Understand a multiple of <math>1/b</math>, and use this understanding to multiply a fraction by a whole number.</p> <p>c Solve word problem involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.</p>	<p>I can break apart a fraction into a sum of fractions with the same denominator in more than one way.</p> <p>I can record each sum of fractions using an equation.</p> <p>I can prove my equation using a fraction model.</p> <p>I can add and subtract mixed numbers with the same denominators.</p> <p>I can solve word problems using addition and subtraction of fractions with the same denominators.</p> <p>I can use a visual fraction model to show that fractions have multiples.</p> <p>I can use a fraction model to multiply a fraction by a whole number.</p> <p>I can use fraction models to solve word problems involving multiplication of a fraction by a whole number.</p>	
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4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.</p> <p>4.NF.6 Use decimal notation for fractions with denominators 10 or 100</p> <p>4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, <math>&lt;</math>, and justify the conclusions, e.g., by using a visual model</p>	<p>I can make equivalent fractions for tenths and hundredths.</p> <p>I can make an equivalent fraction for tenths and hundredths; therefore I can add fractions for tenths and hundredths.</p> <p>I can use decimal notation for fractions with denominators 10 or 100.</p> <p>I can compare two decimals to hundredths according to their size using <math>\_</math>, <math>\_</math>, or <math>=</math>.</p> <p>I can show the comparison when the two decimals are from the same whole.</p> <p>I can prove the results using a visual model.</p>	<p><b><u>UNIT 3: Decimals</u></b> (4-5 weeks)</p> <p>Converting Fractions to Decimals Comparing Decimals to Hundredths</p>
<p>4.MD.1 Know relative sizes of measurement units within one system of units including km, cm, m, cm; kg, g; lb., oz.; l, ml; hr., min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.</p> <p>4.MD.2 Use the four operations to solve</p>	<p>I can determine the relative sizes of measurement within one system of units.</p> <p>I can express measurements in a larger unit in terms of a smaller unit.</p> <p>I can record the measurement equivalents in a two-column table.</p> <p>I can use the four operations to solve word</p>	<p><b><u>Unit 4: Measurement</u></b> (2 Weeks)</p> <p>Converting Units of Measurement Word Problems Line Plots</p>

4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems simple fractions or decimals, and problems that require expressing measurements given a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p> <p>4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit (<math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{8}</math>). Solve problems involving addition and subtraction of fractions by using information presented in line plots.</p>	<p>problems including distance, time, volume, mass, and money.</p> <p>I can express measurements in a larger unit in terms of smaller units using simple fractions or decimals.</p> <p>I can represent measurement quantities using diagrams such as a number line diagram.</p> <p>I can make a line plot using fractional units.</p> <p>I can use the line plot information to solve problems by adding and subtracting fractions.</p>	
<p>4.OA.3 Solve multistep word problems posed with whole number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p>I can solve multistep word problems using the four operations.</p> <p>I can interpret the meanings of remainders.</p> <p>I can represent problems using equations with a letter standing for the unknown quantity (variable).</p> <p>I can decide if my answer makes sense using mental math, estimation, and rounding.</p>	<p><b><u>Unit 5: Computation Applications</u></b> (5-6 weeks)</p> <p>Multi-step Word Problems (+, -, /, x) Patterns Rounding Area/Perimeter of Rectangles</p>

4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>4.OA.5 Generate the number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.</p>	<p>I can create a number or shape pattern that follows a given rule. I can identify characteristics about the pattern that are not part of the rule.</p>	
<p>4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.</p>	<p>I can round multi-digit whole numbers to any place.</p>	
<p>4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p>	<p>I can fluently add and subtract multi-digit numbers.</p>	
<p>4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb., oz.; l, ml; hr., min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.</p>	<p>I can determine the relative sizes of measurement within one system of units.  I can express measurements in a larger unit in terms of a smaller unit.  I can record the measurement equivalents in a two-column table.</p>	
<p>4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit. Represent measurement quantities using diagrams such a number line diagrams that</p>	<p>I can use the four operations to solve problems including distance, time, volume, mass, and money.  I can express measurements in a larger unit in terms of smaller units using simple fractions or decimals.  I can represent measurement quantities</p>	

4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

<p>feature a measurement scale.</p> <p>4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.</p>	<p>using diagrams such as a number line diagram.</p> <p>I can use the area and perimeter formulas in real world and math problems.</p>	
<p>4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p> <p>4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.</p> <p>4.G.3 recognize a line of symmetry for a two- dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</p> <p>4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.          a An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the</p>	<p>I can draw geometric figures.</p> <p>I can use two-dimensional figures to identify geometric terms.</p> <p>I can classify two-dimensional figures based on parallel or perpendicular lines and angle size.</p> <p>I can recognize and identify right triangles.</p> <p>I can recognize a line of symmetry.</p> <p>I can identify a figure with a line of symmetry.</p> <p>I can draw a line of symmetry.</p> <p>I can show what a degree is within a circle.</p> <p>I can use degrees to measure angles.</p>	<p><b>Unit 6 Geometry</b>          (2-4 weeks)</p> <p>Types of Lines          Types of Angles          Classify 2D Figures          Symmetry          Measuring Angles          Sums of Angles = 180 Degrees</p>



4<sup>TH</sup> GRADE MATH COMMON CORE CURRICULUM

circle. An angle that turns through  $\frac{1}{360}$  of a circle is called a "one-degree angle," and can be used to measure angles.

b An angle that turns through  $n$  one-degree angles is said to have an angle measure of  $n$  degrees.

4.MD.6 Measure angles in whole number degrees using a protractor. Sketch angles of specified measure.

4.MD.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

I can read the degrees of an angle

I can use a protractor to construct and measure angles.

I can recognize the sum of the angle parts is equal to the whole angle.

I can solve addition and subtraction problems with unknown angles on a diagram.