Common Core Math Standards
Grade 4

Common Core Standards	Converted/Unpacked Standards	
Standards Code: OA=Operations and Algebraic Thinking, NBT=Number and Operations in Base 10, MD=Measurements and Data, G=Geometry, NF=Number and Operations-Fractions, RP=Rations and Proportional Relationships, NS= Number System, EE=Expressions and Equations, SP=Statistics and Probability, A=Algebra.		
CC.4.OA.1 Use the four operations with whole numbers to solve problems. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 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.	I can interpret a multiplication equation as a comparison. (CCSS: 4.OA.1) I can write a multiplication equation in several ways. (CCSS: 4.OA.1)	
CC.4.OA.2 Use the four operations with whole numbers to solve problems. 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.	I can use different opertations to solve word problems involving multiplicative comparison. (CCSS: 4.OA.2) I can determine when to add, subtract, mulitply or divide in word problems. (CCSS: 4.OA.2) I can solve a word problem using different problem solving strategies. (CCSS: 4.OA.2)	
CC.4.OA.3 Use the four operations with whole numbers to solve problems. Solve multistep word problems posed with whole numbers and having 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.	I can chose the correct operation to preform at each step of a multistep word problem. (CCSS: 4.OA.3) I can interpret remainders in word problems.(CCSS: 4.OA.3) I can write equations using a variable to represent the unknown. I can use estimation, rounding or mental math strategies to check my answer. (CCSS: 4.OA.3)	
CC.4.OA.4 Gain familiarity with factors and multiples. 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.	I can define and determine if a number is prime or composite.(CCSS: 4.OA.4) I can define factors and mulitplies.(CCSS: 4.OA.4) I can list all of the factor pairs for any whole number from 1-100.(CCSS: 4.OA.4) I can determine mulitiples of a given whole number from 1-100. (CCSS: 4.OA.4)	
CC.4.OA.5 Generate and analyze patterns. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	I can complete a number or shape pattern. (CCSS: 4.OA.5) I can create a number or shape pattern that follows a given rule. (CCSS: 4.OA.5) I can explain how different patterns are created. (CCSS: 4.OA.5) I can analyze a pattern to detemine parts not stated in the rule. (CCSS: 4.OA.5) I can complete input/output tables.(CCSS: 4.OA.5) I can find the unkown in simple equations. (CCSS: 4.OA.5)	

Common Core Standards	**Converted/Unpacked Standards**	
CC.4.NBT.1 Generalize place value understanding for multi-digit whole numbers. 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. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division. (Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.)	I can explain the value of each digit in a multi-digit whole number as ten times more than the digit to the right. (CCSS: 4.NBT.1)	
CC.4.NBT.2 Generalize place value understanding for multi-digit whole numbers. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. (Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.)	I can read and write a mulit-digit number in standard, word and expanded form up to a millions. (CCSS: 4.NBT.2) I can compare two multi-digit numbers up to a million and identify whether they are less than (<), greater than (>) or equal (=) to another number. (CCSS: 4.NBT.2)	
CC.4.NBT.3 Generalize place value understanding for multi-digit whole numbers. Use place value understanding to round multi-digit whole numbers to any place. (Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.)	I can round numbers, up to one million, to any given place value. (CCSS: 4.NBT.3)	
CC.4.NBT.4 Use place value understanding and properties of operations to perform multi-digit arithmetic. Fluently add and subtract multi-digit whole numbers using the standard algorithm. (Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000. A range of algorithms may be used.)	I can add and subtract numbers up to a million. (CCSS: 4.NBT.4)	
CC.4.NBT.5 Use place value understanding and properties of operations to perform multi-digit arithmetic. Multiply a whole number of up to 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 by using equations, rectangular arrays, and/or area models. (Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000. A range of algorithms may be used.)	I can multiply a 4 digit by one digit number, and a 2 digit by 2 digit number without a calculator.(CCSS: 4.NBT.5) I can use words, drawings and equations to explain multiplication with arrays and model areas.(CCSS: 4.NBT.5)	
CC.4.NBT.6 Use place value understanding and properties of operations to perform multi-digit arithmetic. Find whole-number quotients 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. (Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000. A range of algorithms may be used.)	I can divide a 4 digit number by a 1 digit number. I can explain my chosen strategy for solving the problem. (CCSS: 4.NBT.6) I can use an array to explain a division problem. (CCSS: 4.NBT.6)	

Common Core Standards	**Converted/Unpacked Standards**	
CC.4.NF.1 Extend understanding of fraction equivalence and ordering. Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) 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. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can explain why fractions are equivalent using models.(CC.4.NF.1) I can recognize and identify equivalent fractions with unlike denominators. (CC.4.NF.1)	
CC.4.NF.2 Extend understanding of fraction equivalence and ordering. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can recognize and record fraction comparisons using less than (<), greater than (>) and equal to (=). (CCSS.4.NF.2) I can compare two fractions with different numerators and denominators.(CCSS.4.NF.2) I can make comparisons based on the parts of the same whole. (CCSS.4.NF.2) I can compare two fractions by finding their common denominators. (CCSS.4.NF.2)	
CC.4.NF.3 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Understand a fraction a/b with a > 1 as a sum of fractions 1/b. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can add unit fractions (1/b) to get a fraction great than one.(CCSS.4.NF.3) I can use fraction models to add and subtract fractions. (CCSS.4.NF.3)	
CC.4.NF.3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	I can add unit fractions (1/b) to get a fraction great than one.(CCSS.4.NF.3) I can use fraction models to add and subtract fractions. (CCSS.4.NF.3)	
CC.4.NF.3b 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 a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.	I can add and subtract fractions with like denominators. (CCSS: 4.NF.3b) I can record decomposition in an equation. (CCSS: 4.NF.3b)	
CC.4.NF.3c 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.	I can add and subtract mixed numbers with like denominators. (CCSS: 4.NF.3c) Using faction models I can show mixed numbers with equivalent fractions, and improper fractions with mixed numbers. (CCSS: 4.NF.3c)	
CC.4.NF.3d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	I can solve word problems involving addition and subtraction of fractions using drawings, pictures and equations. (CCSS: 4.NF.3d)	

Common Core Standards	**Converted/Unpacked Standards**	
CC.4.NF.4 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can show multiplication of fractions by fractions or whole numbers using models. (CCSS: 4.NF.4)	
CC.4.NF.4a Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).	I can show multiplication of fractions by fractions or whole numbers using models. (CCSS: 4.NF.4a) I can express a fraction a/b as a multiple of 1/b. (CCSS: 4.NF.4a)	
CC.4.NF.4b Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)	I can multiple a fraction by a whole number. (CCSS: 4.NF.4b)	
CC.4.NF.4c Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?	I can use fraction models and equations to represent a problem.(CCSS: 4.NF.4c) I can solve word problems involving multiplication of a fraction by a whole number. (CCSS: 4.NF.4c)	
CC.4.NF.5 Understand decimal notation for fractions, and compare decimal fractions. 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. For example, express 3/10 as 30/100 and add 3/10 + 4/100 = 34/100. (Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.) (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can rename and recognize a fraction with denominator 10 as a fraction with a denominator of 100.(CCSS: 4.NF.5) I can add two fractions with denominators 10 and 100. (CCSS: 4.NF.5)	
CC.4.NF.6 Understand decimal notation for fractions, and compare decimal fractions. Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100 ; describe a length as 0.62 meters; locate 0.62 on a number line diagram. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can recognize, read and write decimals through the 100ths. (CCSS: 4.NF.6) I can explain how decimals and fractions relate. (CCSS: 4.NF.6) I can identify the 10ths and 100ths place of a decimal, and show placement of a decimal on a number line. (CCSS: 4.NF.6)	

Common Core Standards	**Converted/Unpacked Standards**	
CC.4.NF.7 Understand decimal notation for fractions, and compare decimal fractions. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons comparisons are valid only when two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	I can compare two decimals to hundredths by reasoning about their size. (CCSS: 4.NF.7) I can prove my conclusion with models or by using less than (<), greater than(>) and equal to (=) symbols. (CCSS: 4.NF.7)	
CC.4.MD.1 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. 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. For example: Know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ….	I can explain and compare the size of different units of measurement (km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec). (CCSS: 4.MD.1) I can convert larger units of measurement within the same system to smaller units and record conversions in a two-column table. (CCSS: 4.MD.1)	
CC.4.MD.2 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. 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 in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	I can use the four operations to solve measurement 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 in terms of a smaller unit. (CCSS: 4.MD.2) I can use models to represent measurement quantities. (CCSS: 4.MD.2)	
CC.4.MD.3 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	I can apply the area and perimeter formulas for rectangles in real world and mathematical problems.(CCSS: 4.MD.3) I can solve area and perimeter problems in which there is an unknown factor.(CCSS: 4.MD.3)	
CC.4.MD.4 Represent and interpret data. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	I can create a line plot to display a data set of measurements given in fractions of a unit. (CCSS: 4.MD.4) I can analyze and interpret a line plot to solve problems involving addition and subtraction of fractions. (CCSS: 4.MD.4)	

Common Core Standards	**Converted/Unpacked Standards**	
CC.4.MD.5 Geometric measurement: understand concepts of angle and measure angles. 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 circle. An angle that turns through 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.	I can recognize that a circle has 360 degrees and I can explain that an angle is a fraction of the circle. (CCSS: 4.MD.5) I can describe angles as geometric shapes that are formed wherever two rays share a common endpoint, and explain concepts of angle measurement. (CCSS: 4.MD.5)	
CC.4.MD.6 Geometric measurement: understand concepts of angle and measure angles. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	I can measure and identify angles in whole-number degrees using a protractor.(CCSS: 4.MD.6) I can sketch angles of specified measure. (CCSS: 4.MD.6)	
CC.4.MD.7 Geometric measurement: understand concepts of angle and measure angles. 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 recognize that an angle can be divided into smaller angles. (CCSS: 4.MD.7) I can use addition and subtraction to solve for the missing angle measurements on a diagram. (CCSS: 4.MD.7)	
CC.4.G.1 Draw and identify lines and angles, and classify shapes by properties of their lines and angles. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	a. I can draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. (CCSS: 4.G.1) b. I can look for, identify and draw; points, line segments, angles, and perpendicular and parallel lines in two-dimensional figures. (CCSS: 4.G.1)	
CC.4.G.2 Draw and identify lines and angles, and classify shapes by properties of their lines and angles. 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.	I can identify; points, line segments, angles, and perpendicular and parallel lines in two-dimensional figures. (CCSS: 4.G.2) I can classify triangles as right angles or not. (CCSS: 4.G.2)	
CC.4.G.3 Draw and identify lines and angles, and classify shapes by properties of their lines and angles. 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.	I can recognize lines of symmetry for a two-dimensional figure.(CCSS: 4.G.3) I can create a line of symmetry by folding and matching parts of a model.(CCSS: 4.G.3) I can draw lines of symmetry for a two-dimensional figure. (CCSS: 4.G.3)	

Standards for Mathematical Practice	**1. Make sense of problems and persevere in solving them.** **2. Reason abstractly and quantitatively.** **3. Construct viable arguments and critique the reasoning of others.** **4. Model with mathematics.** **5. Use appropriate tools strategically.** **6. Attend to precision.** **7. Look for and make use of structure.** **8. Look for and express regularity in repeated reasoning.**	