Grade 4 MATH Common Core Pacing Guide

Target Standard (chapters from book)	"I Can" statements	Vocabulary	Time Frame
Chapter 1: **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. **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 meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place.	*I can 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. *I can read and write larger whole numbers using numerals, words and in expanded form. *I can compare two larger numbers by using what I know about the values in each place. symbols to show the comparison. *I can compare two larger numbers and use the symbols >, = and < to show the comparison. *I can round larger whole numbers to any place.	-digit -place value -expanded form -period -standard form -word form -is equal to -is greater than -is less than -number line	**Trimester 1**
Chapter 2: **4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place **4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **4.OA.3** 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 round larger whole numbers to any place. *I can add and subtract larger numbers * I can use what I know about addition, subtraction, multiplication and division to solve multistep word problems involving whole numbers. * I can represent word problems by using equations with a letter standing for the unknown number. * I can determine how reasonable my answers to word problems are by using estimation, mental math and rounding.	-Commutative Property of Addition -Associative Property of Addition -Identity Property of Addition -unknown -minuend -subtrahend -equation -variable	**Trimester 1**

4.OA.5 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.	* I can create a number or shape pattern that follows a given rule. * I can notice and point out different features of a pattern once it is created by a rule.		
Chapter 3: 4.NBT.5 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.	* I can multiply a whole number up to four digits by a one-digit whole number.	-dividend -divisor -fact family -factor -quotient -product -repeated subtraction -Commutative Property of Multiplication -Identity Property of Multiplication -Zero Property of Multiplication -Associative Property of Multiplication -decompose -multiple	**Trimester 1**
4.NBT.6 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.	*I can find whole-number quotients and remainders with up to four-digit dividends and one digit divisors.		
4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ 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 understand that multiplication equations can be seen as comparisons of groups (e.g., $24 = 4 \times 6$ can be thought of as 4 groups of 6 or 6 groups of 4).		
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.	*I can multiply or divide to solve word problems by using drawings or writing equations and solving for a missing number.		
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.	* I can find all factor pairs for a whole number from 1 to 100. * I can recognize a whole number as a multiple of each of its factors. * I can determine whether a whole number from 1 to 100 is a multiple of a given one-digit number.		

		-partial products -regroup	**Trimester 1**
Chapter 4: **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. **4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place. 4.NBT.5 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.	* I can 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. *I can round larger whole numbers to any place. *I can multiply a whole number up to four digits by a one-digit whole number. *I can illustrate and explain how to multiply larger numbers by using equations, arrays or models.		

Assessments	Resources
• Weekly fluency quizzes • Pretests- "Am I Ready?" • Common Core Quick Checks • Math Talks • Mid-Chapter Review- "Check My Progress" • Chapter Assessments	• My Math (student, teacher, and online editions) • Front Row • Math Games/Centers

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Chapter 5: **4.NBT.5** 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. **4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place. **4.OA.3** 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 multiply two two-digit numbers. * I can illustrate and explain how to multiply larger numbers by using equations, arrays or models. *I can round larger whole numbers to any place. * I can use what I know about addition, subtraction, multiplication and division to solve multistep word problems involving whole numbers. *I can represent word problems by using equations with a letter standing for the unknown number. *I can determine how reasonable my answers to word problems are by using estimation, mental math and rounding.	-operation	**Trimester 2**
Chapter 6: **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. **4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place.	* I can 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. *I can round larger whole numbers to any place	-compatible numbers -remainder -partial quotients	**Trimester 2**

4.NBT.6 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.	* I can find whole-number quotients and remainders with up to four-digit dividends and one digit divisors. * I can illustrate and explain how to divide larger numbers by using equations, arrays or models.		
4.OA.3 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 use what I know about addition, subtraction, multiplication and division to solve multistep word problems involving whole numbers. * I can represent word problems by using equations with a letter standing for the unknown number. * I can determine how reasonable my answers to word problems are by using estimation, mental math and rounding.		
Chapter 7: 4.OA.5 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. 4.OA.3 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 create a number or shape pattern that follows a given rule. *I can notice and point out different features of a pattern once it is created by a rule. * I can use what I know about addition, subtraction, multiplication and division to solve multistep word problems involving whole numbers. * I can represent word problems by using equations with a letter standing for the unknown number. * I can determine how reasonable my answers to word problems are by using estimation, mental math and rounding	-pattern -nonnumeric patterns -numeric patterns -rule -term -sequence	**Trimester 2**
Chapter 8: 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	* I can find all factor pairs for a whole number from 1 to 100. * I can recognize a whole number as a multiple of each of its factors.	-factor pairs -prime number -composite number -numerator -denominator -equivalent fractions -simplest form	**Trimester 2**

whole number in the range 1-100 is prime or composite.	*I can determine whether a whole number from 1 to 100 is a multiple of a given one-digit number. *I can determine whether a given whole number up to 100 is a prime or composite number	-greatest common factor -least common multiple -benchmark fractions -mixed number -improper fraction	
4.NF.1 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.	* I can explain (and show models for) why multiplying a numerator and a denominator by the same number does not change the value of a fraction. * I can recognize and generate equivalent fractions based on my knowledge of numerators and denominators.		
4.NF.2 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.	* I can compare two fractions with different numerators and different denominators by creating common denominators or numerators or by comparing them to a benchmark fraction like one-half. * I can recognize that comparisons of fractions are valid only when the two fractions refer to the same whole. * I can compare fractions using the symbols >, = and justify the comparison by using models.		
4.NF.3 Understand a fraction *a/b* with *a* > 1 as a sum of fractions 1/*b*.	* I can understand a fraction a/b, with a > 1, as a sum of fractions 1/b.		
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.	* I can decompose a fraction into a sum of fractions with the same denominator in more than one way and justify my work using models.		
Chapter 9: **4.NF.3a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	* I can understand addition and subtraction of fractions as joining and separating parts referring to the same whole.		**Trimester 2**

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.	*I can decompose a fraction into a sum of fractions with the same denominator in more than one way and justify my work using models.		
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 that refer to the same whole and that have like denominators.		
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.		
4.NF.4a Understand a fraction *a/b* as a multiple of 1/*b.*	* I can understand a fraction a/b as a multiple of 1/b (e.g., I know that 5/4 is the product of 5 x (1/4).)		
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	* I can understand a multiple of a/b as a multiple of 1/b and use that knowledge to multiply a fraction by a whole number (e.g., n x (a/b) = (n x a)/b).		

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Chapter 10: **4.NF.6** Use decimal notation for fractions with denominators 10 or 100. **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. **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 >, =, or <, and justify the conclusions, e.g., by using a visual model.	* I can use decimals to show fractions with denominators of 10 and 100. * I can show a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100 in order to add the two fractions. * I can compare two decimals to hundredths by reasoning about their size and realizing that the comparison is only true if the two decimals refer to the same whole. * I can compare decimals using the symbols >, = and justify the comparison by using models.	-decimal -tenth -hundredth	**Trimester 3**
Chapter 11: **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. **4.MD.4** 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.	* I can show that I know the relative size of measurement units within one system of units (including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec). * I can show the measurements in a larger unit in terms of smaller units and record these in a table. *I can make a line plot to show a data set of measurements involving fractions. * I can solve problems involving addition and subtraction of fractions by using information shown in line plots.	-customary system -foot -yard -convert -mile -capacity -cup -fluid ounce -gallon -pint -quart -ounce -pound -ton	**Trimester 3**

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 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 (+, -, x, ÷) to solve word problems involving measurement. * I can solve measurement problems involving simple fractions and decimals. * I can solve problems that ask me to express measurements given in a larger unit in terms of a smaller unit. * I can show measurement quantities using diagrams that involve a measurement scale (e.g., a number line).	-weight -seconds -line plot	
Chapter 12: **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. **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 in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	* I can show that I know the relative size of measurement units within one system of units (including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec). * I can show the measurements in a larger unit in terms of smaller units and record these in a table. * I can use the four operations (+, -, x, ÷) to solve word problems involving measurement. * I can solve measurement problems involving simple fractions and decimals. * I can solve problems that ask me to express measurements given in a larger unit in terms of a smaller unit. * I can show measurement quantities using diagrams that involve a measurement scale (e.g., a number line).	-centimeter -kilometer -meter -metric systems -millimeter -liter -milliliter -gram -kilogram -mass	**Trimester 3**
Chapter 13: **4.MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	* I can use what I know about area and perimeter to solve real world problems involving rectangles	-perimeter -unit square -square unit -area	**Trimester 3**

		-point	**Trimester 3**
Chapter 14:		-line	
4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	* I can identify and draw points, lines, line segments, rays, angles and perpendicular & parallel lines	-ray -endpoint -line segment	
4.MD.5a 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.	* I can understand that angles are measured with reference to a 360°circle, with its center at the common endpoint of the rays.	-parallel -intersecting -perpendicular -angle -degree -one-degree angle -right angle -acute angle	
4.MD.5b An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	* I can understand that an angle that turns through n one-degree angles is said to have an angle measurement of n degrees.	-obtuse angle -right triangle -acute triangle -obtuse triangle	
4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	* I can use a protractor to measure and sketch angles in whole-number degrees.	-parallelogram -rectangle -rhombus	
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 solve real-world and mathematical addition and subtraction problems to find unknown angles.	-square -trapezoid -line symmetry -line of symmetry	
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.	* I can classify two-dimensional shapes based on what I know about their geometrical attributes. * I can recognize and identify right triangles		
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.	* I can recognize, identify and draw lines of symmetry.		

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