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| **Grade 4 Math Expectations** | | |
| **NUMBER SENSE AND OPERATIONS IN BASE TEN: NBT** | | |
| **4.NBT.A** | **Use place value understanding and properties of operations to perform multi-digit arithmetic with numbers up to one million.** | **Term:** |
| 4.NBT.A.1 | Round multi-digit whole numbers to any place. | 1 |
| 4.NBT.A.2 | Read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals and expanded form. | 1 |
| 4.NBT.A.3 | Compare two multi-digit numbers using the symbols >, = or <, and justify the solution. | 1 |
| 4.NBT.A.4 | Understand that in a multi-digit whole number, a digit represents 10 times what it would represent in the place to its right. | 2 |
| 4.NBT.A.5 | Demonstrate fluency with addition and subtraction of whole numbers. | 2 |
| 4.NBT.A.6 | Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, and justify the solution. | 2-3 |
| 4.NBT.A.7 | Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, and justify the solution. | 4-5 |
| **NUMBER SENSE AND OPERATIONS IN FRACTIONS: NF** | | |
| **4.NF.A** | **Extend understanding of fraction equivalence and ordering. (Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12 and 100.)** | **Term:** |
| 4.NF.A.1 | Explain and/or illustrate why two fractions are equivalent. | 5 |
| 4.NF.A.2 | Recognize and generate equivalent fractions. | 5 |
| 4.NF.A.3 | Compare two fractions using the symbols >, = or <, and justify the solution. | 6 |
| **4.NF.B** | **Extend understanding of operations on whole numbers to fraction operations.** | **Term:** |
| 4.NF.B.4 | Understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole. | 6 |
| 4.NF.B.5 | Decompose a fraction into a sum of fractions with the same denominator and record each decomposition with an equation and justification. | 6 |
| 4.NF.B.6 | Solve problems involving adding and subtracting fractions and mixed numbers with like denominators. | *6* |
| 4.NF.B.7 | Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. | 6-7 |
| 4.NF.B.8 | Solve problems involving multiplication of a fraction by a whole number. | 7 |
| **4.NF.C** | **Understand decimal notation for fractions, and compare decimal fractions. (Denominators of 10 or 100)** | **Term:** |
| 4.NF.C.9 | Use decimal notation for fractions with denominators of 10 or 100. | 7 |
| 4.NF.C.10 | Understand that fractions and decimals are equivalent representations of the same quantity. | 7 |
| 4.NF.C.11 | Read, write and identify decimals to the hundredths place using number names, base ten numerals and expanded form. | 7 |
| 4.NF.C.12 | Compare two decimals to the hundredths place using the symbols >, = or <, and justify the solution. | 7 |
| **RELATIONSHIPS AND ALGEBRAIC THINKING: RA** | | |
| **4.RA.A** | **Use the four operations with whole numbers to solve problems.** | **Term:** |
| 4.RA.A.1 | Multiply or divide to solve problems involving a multiplicative comparison. | *4-5* |
| 4.RA.A.2 | Solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer. | 4-5 |
| 4.RA.A.3 | Solve whole number division problems involving variables in which remainders need to be interpreted, and justify the solution. | 4-5 |
| **4.RA.B** | **Work with factors and multiples.** | **Term:** |
| 4.RA.B.4 | Recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number. | 5-6 |
| 4.RA.B.5 | Determine if a whole number within 100 is composite or prime, and find all factor pairs for whole numbers within 100. | 5-6 |
| **4.RA.C** | **Generate and analyze patterns.** | **Term:** |
| 4.RA.C.6 | Generate a number pattern that follows a given rule. | 1 |
| 4.RA.C.7 | Use words or mathematical symbols to express a rule for a given pattern. | 1 |
| **GEOMETRY AND MEASUREMENT: GM** | | |
| **4.GM.A** | **Classify 2-dimensional shapes by properties of their lines and angles.** | **Term:** |
| 4.GM.A.1 | Draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines. | 8 |
| 4.GM.A.2 | Classify two-dimensional shapes by their sides and/or angles. | 8 |
| 4.GM.A.3 | Construct lines of symmetry for a two-dimensional figure. | 8 |
| **4.GM.B** | **Understand the concepts of angle and measure angles.** | **Term:** |
| 4.GM.B.4 | Identify and estimate angles and their measure. | 8 |
| 4.GM.B.5 | Draw and measure angles in whole-number degrees using a protractor. | 8 |
| **4.GM.C** | **Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.** | **Term:** |
| 4.GM.C.6 | Know relative sizes of measurement units within one system of units.   1. Convert measurements in a larger unit in terms of a smaller unit. | 2- 8 |
| 4.GM.C.7 | Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money. | *2-8* |
| 4.GM.C.8 | Apply the area and perimeter formulas for rectangles to solve problems. | *2* |
| **DATA AND STATISTICS: DS** | | |
| **4.DS.A** | **Represent and analyze data.** | **Term:** |
| 4.DS.A.1 | Create a frequency table and/or line plot to display measurement data. | 5-6 |
| 4.DS.A.2 | Solve problems involving addition and subtraction by using information presented in a data display. | 5- 6 |
| 4.DS.A.3 | Analyze the data in a frequency table, line plot, bar graph or picture graph. | 5 - 6 |