Fourth Grade Math Skills

- Understand place value of whole numbers through 1,000,000 (Ex. Recognize that in the number 770, the 7 in the hundreds place is ten times the 7 in the tens place.)
- Read and write expanded, standard, and word forms through 1,000,000
- Compare numbers through 1,000,000 using <,> and = symbols
- Round numbers through 1,000,000.
- Estimate sums and differences of whole numbers through 1,000,000
- Add and subtract whole numbers through 1,000,000
- Estimate products of whole numbers
- Multiply a whole number of up to four digits by a one-digit whole number
- Multiply 2 two-digit numbers
  (example: 13 x 34)
- Represent verbal statements of multiplicative comparisons as multiplication equations (35=7x5 as 5 times as many as 7 and 7 times as many as 5)
- Multiply to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison. Example: Know that 3x4 can be used to represent that Student A has 4 objects and Student B has 3 times as many objects, and not just 3 more objects.
- Divide up to four-digit dividends by one-digit divisors with answers written as whole-numbers and remainders
- Divide to solve word problems
- Solve multi-step, whole number word problems using the four operations and write the algebraic sentence (a *5 = 20) to represent the unknown quantity. Answers are either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number.
- Generate a number pattern that follows a given rule.
  Example1: Given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms alternate between odd and even numbers.
- Find all factor pairs for a whole number in the interval 1 through 100.
- Determine whether a given whole number in the interval 1 through 100 is a multiple of a given one-digit number. (Ex. Is 23 a multiple of 5?) Recognize that a whole number is a multiple of each of its factors. (Ex. 12 is a multiple of 2 or 4 or 6)
- Determine composite and prime numbers through 100
- Use symbols (<,>, =,+,-,x,/) to make the sentence true. (Use only single digit divisors)
- Determine the missing elements of a function table (Limit to +,-, or x, and to whole numbers or money)
- Determine the rule for a function given a table. (Limit to +,-, or x, and to whole numbers)
- Recognize and generate equivalent fractions
- Compare two fractions with different numerators and denominators using symbols >,< or = and justify conclusions
- Add two fractions with respective denominators 10 and 100 (3/10 + 4/100 = 34/100)
- Add and subtract fractions with common denominators (Answers do not need to be simplified, and no improper fractions as final answers)
- Decompose a fraction or a mixed number into a sum of fractions with the same denominator (Ex. 3/8 = 1/8+2/8)

- Add and subtract mixed numbers with common denominators (No regrouping with subtraction, fractions do not need to be simplified, and no improper fractions as the final answer)
- Solve word problems involving addition and subtraction of fractions
- Multiply a whole number by a unit fraction (numerator is always 1)
- Multiply a whole number by a non-unit fraction (numerator other than 1)
- Solve word problems involving multiplication of a whole number by a fraction
- Use decimal notation for fractions with denominators 10 or100
- Compare two decimals to hundredths and justify conclusions
- Draw points, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines.
- Recognize right triangles as a category, and identify right triangles
- Identify right, acute, obtuse angles and perpendicular and parallel lines in 2 dimensional figures
- 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.
- Generate a shape pattern that follows a given rule. Example: Give the rule "increase the number of sides by 1" and starting with a triangle, observe that the tops of the shapes alternate between a side and a vertex.
- Identify and draw (up to 2) lines of symmetry in 2 dimensional figures.
- Measure and draw angles with a protractor
- Solve addition and subtraction problems to find unknown adjacent angles on a diagram (ex. A+B+C= 90 degrees or A+B=180 degrees) in real world and mathematical problems.
- Know relative sizes of measurement units within one system of units including standard units, metric units, and time **(Table of equivalencies will be provided)** (eg. 4 ft = 48 in)
- Make a line plot to display a data set of measurements in fractions of a unit (intervals of ½, ¼ or 1/8)
- Solve problems involving addition and subtraction of fractions by using information presented in line plots
- Identify time as the amount of minutes before or after an hour (quarter past 5 is the same as 5:15)
- Use 4 operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, money with fractions and decimals (Taught throughout the whole chapter 12)
- Translate information from one type of display to another (table, chart, bar graph, or pictograph)
- Apply the area and perimeter formulas for rectangles (formulas will be provided) in real-world and mathematical problems. (May include finding a missing side length.)

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