

NAME _____

DATE _____

Fifth Grade Math Skills & Concepts Student Report

Explanation of Color Coding

Pink: Just beginning to utilize this skill or concept

Green: Developing an understanding of this skill or concept

Yellow: Proficient with this skill or concept

EARLY FIFTH GRADE	LATE FIFTH GRADE	BEYOND FIFTH GRADE
Numbers & Numeration		
Identifies odd and even numbers. Determines whether one number is a factor of another number.	Explains prime and composite numbers, finds factors and multiples, and determines divisibility of numbers.	Uses knowledge of prime and composite numbers to simplify computational work with fractions.
Models, reads, writes, orders, and compares common fractions (e.g., $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$) and models and recognizes equivalent forms of common fractions and decimals to hundredths (e.g., $\frac{3}{4} = 0.75$).	Demonstrates meanings for fractions in different contexts (area, set, number line) and recognizes relationships between different forms such as mixed numbers, improper fractions, decimals, and percents.	Compares, orders, and identifies equivalence between fractions with unlike denominators, decimals, and percents.
Basic Facts		
Knows and fluently uses multiplication facts through 10×10 and is developing efficient strategies for determining division facts.	Knows and fluently uses multiplication and division facts through 12×12 .	Applies multiplication and division facts to problems and mental computations of larger numbers.
Computation		
Adds and subtracts up to 4-digit numbers with and without regrouping using efficient paper/pencil and mental strategies.	Uses addition, column addition, and subtraction with multi-digit numbers (5 or more digits) efficiently, making judicious use of mental strategies, estimation, rounding, and calculators.	Selects and applies appropriate strategies (mental computation, estimation, rounding, calculators, paper/pencil) to solve multi-digit addition and subtraction problems.
Multiplies and divides 2- and 3-digit numbers by 1-digit numbers using a variety of concrete, visual, and paper/pencil methods.	Multiplies 2-digit by 2-digit numbers and divides 3-digit by 1- and 2-digit numbers with and without remainders using a variety of efficient mental and paper/pencil strategies.	Selects and applies appropriate strategies to solve multiplication and division problems with 2- or 3-digit numbers. Efficiently multiplies 3- and 4-digit by 3-digit numbers and divides 3- and 4-digit by 2-digit numbers with remainders using a variety of strategies.
Represents, calculates, and explains addition and subtraction of fractions with like denominators.	Represents, calculates, and explains addition and subtraction of common fractions (e.g., denominators of 2, 4, and 8) and of decimals through hundredths.	Adds and subtracts fractions using the least common multiple and the greatest common factor; adds and subtracts decimals through thousandths; models multiplication and division of fractions and decimals.
Algebraic Thinking		
Describes, extends, represents, and make generalizations about patterns and functions using words, tables, graphs, or equations.	Describes, extends, represents, and makes generalizations about patterns and functions using words, tables, graphs, or simple algebraic expressions (e.g., $n + 2$).	Uses words, tables, graphs, and/or algebraic expressions to represent and analyze situations that involve constant or varying rates of change.
Locates and names points on the first quadrant of a coordinate grid.	Represents whole number data on the first quadrant of a coordinate grid; describes paths and finds the distance between points along the horizontal and vertical lines of a coordinate system.	Understands that a graph can be used to show how the values for the variables in an equation are related.
Represents an unknown quantity with a letter or symbol; solves equations that include addition, subtraction, and basic multiplication (e.g., $3 \times 0 = 24$).	Solves equations that include multiplication and division of missing values (e.g., $144 \div 0 = 12$); uses order of operations to solve problems.	Solves equations for missing values; writes single-variable equations to represent a variety of situations.

Fifth Grade Math Skills & Concepts Student Report (cont.)

EARLY FIFTH GRADE	LATE FIFTH GRADE	BEYOND FIFTH GRADE
Data Analysis		
Reads, interprets, and constructs a variety of graphic displays, including properly labeled tables, bar graphs, line plots, and pictographs.	Reads, interprets, and constructs a variety of labeled graphic displays including circle graphs and line graphs.	Is aware of the strengths and limitations of various graphic displays. Is able to select and use the type of display best suited to the data.
Finds the mode, median, and range of a data set.	Finds the mode, median, mean, and range of a data set.	Uses the mode, median, mean, and/or range to compare 2 sets of related data.
Geometry		
Identifies right, acute, and obtuse angles in isolation and in geometric figures.	Measures and constructs angles up to 180° using a protractor. Draws conclusions about the measures of corresponding sides and angles in two congruent or similar triangles or quadrilaterals.	Draws conclusions about the measures of corresponding sides and angles of all polygons.
Identifies, describes, and creates line and rotational symmetry in 2-dimensional shapes and designs.	Identifies and describes line and rotational symmetry in 2- and 3-dimensional shapes and designs. Draws congruent figures that demonstrate transformations (flips, turns, or slides).	Recognizes or draws a transformation (flip, turn, or slide) of a shape in the first quadrant of a coordinate grid.
Describes, compares, and analyzes 2- and 3-dimensional shapes both singly and in relation to one another. Uses a variety of geometric terms (e.g., face, edge, point, vertex, congruent, etc.).	Uses properties of triangles and quadrilaterals to determine the lengths of their sides, perimeters, and angle measures.	Describes and draws 2- and 3-dimensional figures using a variety of geometric properties. Explores relationships between similar and congruent figures.
Measurement		
Makes realistic estimates and measurements using most common units of measure (inch, foot, yard; cup, quart, gallon; ounce, pound; centimeter, meter; milliliter, liter; gram, kilogram) and selects the unit and tool most appropriate for a given situation.	Selects and accurately uses appropriate units and tools for measuring length, weight, and capacity in both metric and U.S. customary systems. Converts within a system of measurement (e.g., centimeter to meters) and uses benchmarks to approximate measurements.	Selects and accurately uses appropriate units and tools for measuring length, perimeter, weight, and capacity in both metric and U.S. customary systems. Recognizes approximate equivalents between metric and U.S. measures.
Develops strategies for finding the perimeter and area of rectangles, right triangles, and parallelograms.	Develops strategies for finding the surface area and volume of rectangular prisms.	Develops and uses formulas for determining the perimeter and area of rectangles and related triangles, parallelograms, and other polygons, as well as the surface area and volume of rectangular prisms.
Probability		
Expresses the outcomes of probability experiments verbally and numerically using both whole numbers and fractions (e.g., 3 out of 4 or $\frac{3}{4}$).	Determines all the possible outcomes of a situation in an organized manner and expresses the probability of each numerically.	Expresses the outcomes of probability experiments using percent, fractions, and decimals (e.g., 3 out of 4 = $\frac{3}{4}$ or 75%).
Compares predicted probability with the actual results.	Recognizes the difference between the experimental probability and the theoretical probability of a particular outcome.	Compares experimental probability to the theoretical probability of a particular outcome.

