

I 'CAN' Standards Mathematics

MATHEMATICS

Number Sense

- ❖ **First Grade:** I can count, read, and write numbers 0 to 100. I know how to use the symbols +, −, <, and >. I can show different ways to make a number. I can name pennies, nickels, dimes and quarters. I know that adding and subtracting are opposites, so I can solve problems. I can count by 2's, 5's and 10's to 100.
- ❖ **Second Grade:** I can count, read and write whole numbers up to 1,000 and know the place value of each digit. I can order and compare whole numbers to 1,000 using <, =, >. I know how to add and subtract 3-digit whole numbers. I know my multiples of 2's, 5's and 10's. I recognize fractions of a whole (e.g., one-fourth of a pie). I can solve problems using a combination of coins and bills.
- ❖ **Third Grade:** I can identify place value for each digit to 10,000. I can add and subtract two whole numbers between 0 and 10,000. I can solve problems using +, −, ×, ÷ with money amounts.
- ❖ **Fourth Grade:** I can read and write whole numbers in the millions. I can understand negative numbers (e.g., on a number line). I can solve division problems using whole numbers, positive decimals, and multi-digit divisors.
- ❖ **Fifth Grade:** I understand the relationship between decimals, fractions, and percents. I can order and compare whole numbers and decimals to two decimal places. I can round whole numbers to the nearest ten, hundred, thousand, ten thousand or hundred thousand. I can add, subtract, multiply and divide with decimals. I can use negative numbers to count, make a number line, and explain which are greater and less than. I can add with negative integers and subtract positive from negative integers. I can multiply a multi-digit number by a 2-digit number, divide a multi-digit number by a 1-digit number and check my work. I can add and subtract fractions and mixed numbers. I can write the answer in simplest form. I can factor small numbers. I know prime numbers through 50. I can write tenths and hundredths in decimal and fraction notations and know the fractions and decimals equivalents for halves and fourths.
- ❖ **Sixth Grade:** I can compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line. I can use proportions to solve problems (e.g., determine the value of N if $4/7 = N/21$, find the length of a side of a polygon similar to a known polygon). I can calculate percentages of quantities and solve problems like discounts at sales, interest earned, and tips. I can solve addition, subtraction, multiplication and division problems that use positive and negative integers and combinations of these operations. I can compare and order positive fractions and place them on a number line. I can compare and order positive decimals and place them on a number line. I can compare and order positive mixed numbers and place them on a number line. I can compare and order fractions, decimals, and mixed numbers and place them on a number line. I can add and subtract positive fractions. I can solve problems involving division and multiplication of positive fractions. I can solve percent problems involving tips, discounts and simple interest. I can solve addition, subtraction, multiplication and division problems with positive and negative integers (numbers).
- ❖ **Seventh Grade:** I can add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers. I can solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest. I can add and subtract fractions by using factoring to find common denominators. I can multiply, divide, and simplify rational numbers by using exponent rules. I can understand the meaning of the absolute value of a number; interpret it as the distance of the number from zero on a number line; and determine the absolute value of real numbers.

Algebra and Functions

❖ **First Grade:** I can write number sentences to solve word problems.

❖ **Second Grade:** I use math rules to solve mental math problems and to check my written work.

❖ **Third Grade:** I can write math expressions and equations using symbols to show how numbers relate to each other. I can solve problems involving a relationship between 2 things.

❖ **Fourth Grade:** I understand math expressions that use parentheses. I can use parentheses to show which operation to perform first when writing math expression.

❖ **Fifth Grade:** I can identify and graph ordered pairs in the four quadrants of the coordinate plane. I can use a letter to represent an unknown number, write and evaluate simple algebraic expressions in one variable by substitution. I can solve problems in linear functions with integer values, write the equation and graph the ordered pairs of integers on a grid.

❖ **Sixth Grade:** I can write and solve one-step linear equations in one variable. I can demonstrate an understanding that *rate* is a measure of one quantity per unit value of another quantity. I can use the order of operations to evaluate expressions and justify each step in the process. I can use the commutative and associative properties to evaluate expressions. I can use proportions to solve problems. I can solve problems using rates, average speed, distance and time.

❖ **Seventh Grade:** I can use the correct order of operations to evaluate algebraic expressions such as $3(2x + 5)^2$. I can simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used. I can solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context from which they came, and prove the reasonableness of the results. I can solve multistep problems involving rate, average speed, distance, and time or a direct variation.

Measurement and Geometry

❖ **First Grade:** I know addition and subtraction facts from 0 to 20.

❖ **Second Grade:** I can measure the length of an object by using a standard or nonstandard unit. I can tell time to the nearest quarter hour. I can identify, describe, and sort shapes and objects by looking at the number of faces, edges and vertices. (Circle, triangle, square, rectangle, sphere, pyramid, cube, cone, rectangular prism).

❖ **Third Grade:** I can estimate and accurately measure the length, liquid volume, and weight of objects. I can choose which measurement tools and units I need to use. I can identify, describe, classify, and find the perimeter of polygons.

❖ **Fourth Grade:** I can explain and use formula for the area of a triangle and of a parallelogram by comparing it with the formula for the area of a rectangle.

❖ **Fifth Grade:** I can measure, identify and draw angles, perpendicular and parallel lines, rectangles and triangles by using appropriate tools. I can use formulas to calculate the perimeters and areas of rectangles and use the formulas when the rectangle is part of a more complex figure. I understand the concept of volume and use correct units in measuring system to compute the volume (e.g., cm^3 , m^3). I know the sum of the angles of a triangle is 180° .

❖ **Sixth Grade:** I understand the concept of a constant such as π ; know the formulas for the circumference and area of a circle. I can use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle. I can find angle measures using complementary and supplementary properties. I can use the sum of a triangle to solve and find an unknown angle. I know the formula for the circumference of a circle. I can calculate the circumference and area of a circle.

❖ **Seventh Grade: I can** use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use the dimensional analysis to check the reasonableness of the answer. **I know** and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments. **I can** demonstrate an understanding of conditions that indicate two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures.

Statistics, Data Analysis and Probability

❖ **First Grade: I can** sort objects and data and **I can** describe how I sorted them into categories. **I can** use picture graphs, bar graphs, and tally charts to communicate the way I have sorted information (e.g. largest, smallest, most often, least often).

❖ **Second Grade: I can** ask and answer simple questions about what a graph or chart means. **I can** make graphs and charts from numbers I have collected. .

❖ **Third Grade: I can** record outcomes and keep track of outcomes. **I can** summarize an experiment on probability using a bar graph or line plot.

❖ **Fourth Grade: I can** list all possible outcomes for probability problems in an organized way. **I can** prepare survey questions, collect and represent data on a number line, and coordinate graphs, tables and charts.

❖ **Fifth Grade: I can** identify an ordered pair of data from a graph and understand the meaning of the data.

❖ **Sixth Grade: I can** identify ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population. **I can** represent all possible outcomes for more than one event in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome. **I can** represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100. **I know** that if P is the probability of an event, $1 - P$ is the probability of an event not occurring. **I understand** the concept of a constant such as π ; know the formulas for the circumference and area of a circle. **I can** use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle. **I can** represent probabilities as rations, proportions, and decimals between 0 and 1. **I can** represent probabilities as percentages between 0 and 100. **I can** find the probability of an event not occurring. **I can** analyze data displays and explain why the way in which the results are displayed may influence the conclusions reached.

❖ **Seventh Grade: I can** understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set.

My school is working on the following standards:

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