NUMBER SENSE (NS)

Students understand the place value of whole numbers and decimals to two decimal place and how whole numbers and decimals relate to simple fractions.

2017	Standard
MA.4.NS.1	Read and write whole numbers up to 1,000,000.
MA.4.NS.2	Write numbers to a million in standard form, expanded form and word form.
MA.4.NS.3	Identify and write whole numbers up to 1,000,000, given a place-value model.
MA.4.NS.4	Round whole numbers up to 10,000 to the nearest ten, hundred, and thousand.
MA.4.NS.5	Order and compare whole numbers using symbols for "less than" (<), "equal to" (=), and "greater than" (>).
MA.4.NS.6	Identify positive and negative integers on a number line.
MA.4.NS.7	Rename and rewrite whole numbers as fractions.
MA.4.NS.8	Name and write mixed numbers, using objects or pictures.
MA.4.NS.9	Name and write mixed numbers as improper fractions, using objects or pictures.
MA.4.NS.10	Write tenths and hundredths in decimal and fraction notations.
MA.4.NS.11	Round two-place decimals to tenths or to the nearest whole number.
MA.4.NS.12	Arrange in numerical order and compare fractions with common and different denominator, using the symbols less than, greater than and equal to.

COMPUTATION (C)

Students solve problems involving addition, subtraction, multiplication and division of whole numbers and understand the relationship among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.

2017	Standard
MA.4.C.1	Understand and use standard algorithms for addition and subtraction.
MA.4.C.2	Represent as multiplication any situation involving repeated addition.
MA.4.C.3	Represent as division any situation involving the sharing of objects or the number of groups of shared objects.
MA.4.C.4	Demonstrate mastery of the multiplication tables for numbers between 0 and 12 .
MA.4.C.5	Use a standard algorithm to multiply numbers up to 100 by numbers up to 10, using relevant properties of the number system, with and without regrouping.
MA.4.C.6	Use a standard algorithm to divide numbers up to 100 by numbers up to 10, with and without a remainder, using relevant properties of the number system.
MA.4.C.7	Understand the special properties of 0 and 1 in multiplication and division.

COMPUTATION (C)

Students solve problems involving addition, subtraction, multiplication and division of whole numbers and understand the relationship among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.

2017	Standard
MA.4.C.8	Add and subtract simple fractions with like denominators, using objects or pictures.
MA.4.C.9	Add and subtract decimals (to hundredths), using objects or pictures.
MA.4.C.10	Use a standard algorithm to add and subtract decimals (to hundredths).
MA.4.C.11	Know and use strategies for estimating results of any whole-number computations.
MA.4.C.12	Use mental arithmetic to add or subtract numbers rounded to hundreds or thousands.

ALGEBRA AND FUNCTIONS (AF)

Students use and interpret variables, mathematical symbols and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication and division.

2017	Standard
MA.4.AF.1	Use letters, boxes, or other symbols to represent any number in simple expressions, equations, or inequalities (i.e., demonstrate an understanding and the use of the concept of a variable).
MA.4.AF.2	Use and interpret formulas to answer questions about quantities and their relationships.
MA.4.AF.3	Understand that multiplication and division are performed before addition and subtraction in expressions without parentheses.
MA.4.AF.4	Understand that an equation such as $y = 3x + 5$ is a rule for finding a second number when a first number is given.
MA.4.AF.5	Continue number patterns using multiplication and division.
MA.4.AF.6	Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve problems.
MA.4.AF.7	Relate problem situations to number sentences involving multiplication and division.
MA.4.AF.8	Plot and label whole numbers on a line up to 1000. Estimate positions on the number line.

GEOMETRY (G)

Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.

2017	Standard
MA.4.G.1	Identify, describe, and draw rays, right angles, acute angles, obtuse angles and straight angles using appropriate mathematical tools and technology.
MA.4.G.2	Identify, describe and draw parallel, perpendicular, and oblique lines using appropriate mathematical tools and technology.
MA.4.G.3	Identify, describe and draw polygons including: parallelograms, rhombuses, trapezoids, and triangles using appropriate mathematical tools and technology.
MA.4.G.4	Identify, describe and draw various triangles: equilateral, isoceles and scalene using appropriate mathematical tools and technology.
MA.4.G.5	Identify congruent quadrilaterals and give reasons for congruence using sides, angles, parallels and perpendiculars.
MA.4.G.6	Identify and draw lines of symmetry in polygons, using appropriate mathematical tools and technology
MA.4.G.7	Construct cubes and prisms and describe their attributes, using appropriate mathematical tools and technology

MEASUREMENT (M)

Students understand perimeter and area, as well as measuring volume, capacity, temperature, time and money.

2017	Standard
MA.4.M.1	Measure length to the nearest quarter-inch, eighth-inch, and millimeter.
MA.4.M.2	Subtract units of length that may require renaming of feet to inches or meters to centimeters.
MA.4.M.3	Know and use formulas for finding the perimeters of rectangles and squares in US standard and metric units
MA.4.M.4	Know and use formulas for finding the areas of rectangles and squares in US standard and metric units.
MA.4.M.5	Estimate and calculate the area of rectangular shapes by using appropriate units, such as square centimeter (cm^2) square meter (m^2), square inch (in^2), or square yard (yd^2).
MA.4.M.6	Understand that rectangles with the same area can have different perimeters and that rectangles with the same perimeter can have different areas.
MA.4.M.7	Find areas of shapes by dividing them into basic shapes such as rectangles and triangles.
MA.4.M.8	Use volume and capacity as different ways of measuring the space inside a shape in US standard and metric units
MA.4.M.9	Add time intervals involving hours and minutes.
MA.4.M.10	Determine the amount of change from a purchase.
MA.4.M.11	Determine the start time, elapsed time, and end times using hours and half hours.
MA.4.M.12	Measure and compare temperatures in Celsius and Fahrenheit

DATA ANALYSIS AND PROBABILITY (DP)

Students organize, represent and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.

2017	Standard
MA.4.DP.1	Represent data on a number line and in tables, including frequency tables.
MA.4.DP.2	Interpret data graphs to answer questions about a situation.
MA.4.DP.3	Summarize and display the results of probability experiments in a clear and organized way.