

ADW GRADE 5 Math Standards, revised 2017

NUMBER SENSE (NS)

Students compute with whole numbers, decimals and fractions and understand the relationship among decimals, fractions and percents. They understand the relative magnitudes of numbers. They understand Prime and composite numbers.

2017	Standard
MA.5.NS.1	Convert between standard, expanded and word form for numbers up to millions and decimals to thousandths.
MA.5.NS.2	Round whole numbers and decimals to any place value.
MA.5.NS.3	Arrange in numerical order and compare whole numbers or decimals to two decimal places by using the symbols for less than (<), equals (=), and greater than (>).
MA.5.NS.4	Arrange in numerical order and compare positive and negative integers.
MA.5.NS.5	Interpret percents as a part of a hundred. Find decimal and percent equivalents for common fractions and explain why they represent the same value.
MA.5.NS.6	Explain different interpretations of fractions: as parts of a whole, parts of a set, and division of whole numbers by whole numbers.
MA.5.NS.7	Describe and identify prime and composite numbers.
MA.5.NS.8	Identify on a number line the relative position of simple positive fractions, positive mixed numbers, and positive decimals.
MA.5.NS.9	Add and subtract with money in decimal notation.

ADW GRADE 5 Math Standards, revised 2017**COMPUTATION (C)**

Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction and simple multiplication and division of fractions and decimals.

2017	Standard
MA.5.C.1	Solve problems involving multiplication and division of any whole numbers.
MA.5.C.2	Add, subtract, multiply, compare & order positive and negative integers (e.g. on a number line)
MA.5.C.3	Add and subtract fractions, including mixed numbers, with different denominators.
MA.5.C.4	Use models to show an understanding of multiplication and division of fractions.
MA.5.C.5	Multiply and divide fractions to solve problems.
MA.5.C.6	Add and subtract decimals with or without money and decimal notation, verifying the reasonableness of the results.
MA.5.C.7	Use estimation to decide whether answers are reasonable in addition, subtraction, multiplication, and division problems.
MA.5.C.8	Use mental arithmetic to add or subtract simple decimals.
MA.5.C.9	Multiply and divide decimals by a whole number.
MA.5.C.10	Use the order of operations to solve numerical equations and expressions

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ALGEBRA AND FUNCTIONS (AF)

Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.

2017	Standard
MA.5.AF.1	Use a variable to represent an unknown number.
MA.5.AF.2	Write simple algebraic expressions in one or two variables and evaluate them by substitution.
MA.5.AF.3	Use the distributive property in numerical equations and expressions.
MA.5.AF.4	Identify and graph ordered pairs of positive numbers using all four quadrants of the coordinate plane.
MA.5.AF.5	Find ordered pairs (positive numbers only) that fit a linear equation, graph the ordered pairs, and draw the line they determine.

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<p align="center">GEOMETRY (G)</p> <p align="center"><i>Students identify, describe and classify the properties of plane and solid geometric shapes and the relationships between them.</i></p>	
2017	Standard
MA.5.G.1	Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, triangles, and circles using appropriate mathematical tools and technology. (e.g., ruler, compass, protractor, media tools).
MA.5.G.2	Identify, describe, draw, and classify triangles as equilateral, isosceles, scalene, right, acute, obtuse, and equiangular, using appropriate mathematical tools and technology
MA.5.G.3	Identify congruent triangles and justify your decisions by referring to sides and angles.
MA.5.G.4	Identify, describe, draw, and classify polygons, such as pentagons and hexagons, using appropriate mathematical tools and technology
MA.5.G.5	Identify and draw the radius, diameter and central angle of a circle, using appropriate mathematical tools and technology and understand the relationship between the radius, diameter and central angles of a circle.
MA.5.G.6	Identify shapes that have reflectional and rotational symmetry.
MA.5.G.7	Understand that 90° , 180° , 270° , and 360° are associated with $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and full turns, respectively.
MA.5.G.8	Construct prisms and pyramids using appropriate mathematical tools and technology
MA.5.G.9	Given a picture of a three-dimensional object, build the object with blocks.

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<p align="center">MEASUREMENT (M)</p> <p align="center"><i>Students understand and compute the areas and volumes of simple objects as well as measuring weight, temperature, time and money.</i></p>	
2017	Standard
MA.5.M.1	Understand and apply the formulas to find the area of a triangle and parallelogram.
MA.5.M.2	Solve problems involving perimeters and areas of rectangles, triangles, parallelograms, and trapezoids, using appropriate units.
MA.5.M.3	Use formulas for the areas of rectangles and triangles to find the area of complex shapes by dividing them into basic shapes.
MA.5.M.4	Find the volume of rectangular solids using appropriate formula ($V=LWH$)
MA.5.M.5	Understand and use the smaller and larger units for measuring weight (ounce, gram, and ton) and their relationship to pounds and kilograms.
MA.5.M.6	Understand and use the smaller and larger US standard units for measuring length (mile, yard, foot, inch) and their relationship, converting smaller to larger and larger to smaller.
MA.5.M.7	Understand and use the smaller and larger metric standard units for measuring length (meter, centimeter, millimeter, decimeter) and their relationship, converting smaller to larger and larger to smaller.
MA.5.M.8	Understand and use the smaller and larger US standard units for measuring a quantity (gallon, quart, pint, cup) and their relationship, converting smaller to larger and larger to smaller.
MA.5.M.9	Compare temperatures in Celsius and Fahrenheit, knowing that the freezing point of water is 0°C and 32°F and that the boiling point is 100°C and 212°F .
MA.5.M.10	Determine the start, elapsed, and end times to the minute

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DATA ANALYSIS AND PROBABILITY (DP)

*Students collect, display, analyze, compare and interpret data sets.
They use the results of probability experiments to predict future events.*

2017	Standard
MA.5.DP.1	Explain which types of displays are appropriate for various sets of data.
MA.5.DP.2	Find the mean, median, mode, and range of a set of data and describe what each does, and does not, tell about the data set.
MA.5.DP.3	Understand that probability can take any value between 0 and 1, events that are not going to occur have probability 0, events certain to occur have probability 1, and more likely events have a higher probability than less likely events.
MA.5.DP.4	Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4, $\frac{3}{4}$).