

MCAS/DCCAS Mathematics Correlation Chart Grade 6

<i>MCAS Finish Line Mathematics Grade 6</i>	<i>MCAS Standard</i>	<i>DCCAS Standard</i>	<i>DCCAS Standard Description</i>
Unit 1: Number Sense			
Lesson 1: <i>Whole Number and Decimal Place Value</i>	6.N.2	5.NSO-N.1	Estimate, round, and manipulate very large (e.g., billions) and very small (e.g., thousandths) numbers; demonstrate an understanding of place value to billions and thousandths.
	6.N.3	5.NSO-N.2	Represent and compare very large (billions) and very small (thousandths) positive numbers in various forms, such as expanded notation without exponents [e.g., $9,724 = (9 \times 1,000) + (7 \times 100) + (2 \times 10) + 4$].
Lesson 2: <i>Fractions and Mixed Numbers</i>	6.N.4	5.NSO-F.8	Explain different interpretations of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, as division of whole numbers by whole numbers, and as locations on the number line.
Lesson 3: <i>Percents and Equivalent Forms</i>	6.N.5	6.NSO-N.5	Identify and determine common equivalent fractions, mixed numbers, decimals, and percentages.
Lesson 4: <i>Integers</i>	6.N.6 6.N.7	6.NSO-N.2	Compare and order positive and negative fractions, decimals, and mixed numbers, and place them on a number line.
Lesson 5: <i>Comparing and Ordering Numbers</i>	6.N.6 6.N.7	6.NSO-N.2	Compare and order positive and negative fractions, decimals, and mixed numbers, and place them on a number line.
Lesson 6: <i>Primes, Composites, and Divisibility</i>	6.N.8	6.NSO-N.6	Apply number theory concepts—including prime and composite numbers; prime factorization; greatest common factor; least common multiple; and divisibility rules for 2, 3, 4, 5, 6, 9, and 10—to the solution of problems.

Lesson 7: <i>Factors and Multiples</i>	6.N.8	6.NSO-N.6	Apply number theory concepts—including prime and composite numbers; prime factorization; greatest common factor; least common multiple; and divisibility rules for 2, 3, 4, 5, 6, 9, and 10—to the solution of problems.
Unit 2: Operations			
Lesson 1: <i>Operations with Decimals</i>	6.N.9	6.NSO-C.8	Select and use appropriate operations to solve problems involving addition, subtraction, multiplication, division, and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals, and percentages.
	6.N.13	6.NSO-C.10	Accurately and efficiently add, subtract, multiply, and divide (with multi-digit divisors) whole numbers and positive decimals.
Lesson 2: <i>Operations with Fractions</i>	6.N.9	6.NSO-C.8	Select and use appropriate operations to solve problems involving addition, subtraction, multiplication, division, and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals, and percentages.
	6.N.14	6.NSO-C.12	Accurately and efficiently add, subtract, multiply, and divide positive fractions (including mixed numbers) with like and unlike denominators. Simplify fractions.
Lesson 3: <i>Operations with Percents</i>	6.N.9	6.NSO-C.8	Select and use appropriate operations to solve problems involving addition, subtraction, multiplication, division, and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals, and percentages.
Lesson 4: <i>Adding and Subtracting Integers</i>	6.N.10 6.N.12 6.N.15	6.NSO-C.9	Know integer subtraction is the inverse of integer addition; use the number line to model addition and subtraction of integers, and add and subtract integers.

Lesson 5: <i>Order of Operations</i>	6.N.1	5.NSO-C.20	Demonstrate an understanding of and compute (positive integer) powers of 10 (e.g., 10^2); compute examples as repeated multiplication.
	6.N.11	6.NSO-C.17	Apply the Order of Operations for expressions involving addition, subtraction, multiplication, and division with grouping symbols.
Lesson 6: <i>Estimation</i>	6.N.16	6.NSO-E.18	Estimate results of computations with whole numbers and with positive fractions, mixed numbers, decimals, and percentages. Determine reasonableness of estimates.
Unit 3: Geometry, Part 1			
Lesson 1: <i>Points, Lines, and Planes</i>	6.G.3	5.G.3	Identify relationships among points, lines, and planes (e.g., intersecting, parallel, perpendicular).
Lesson 2: <i>Angles</i>	6.M.2	6.M.6	Identify, measure, describe, classify, and construct various angles, triangles, and quadrilaterals; measure the interior angles of various polygons.
Lesson 3: <i>Plane Figures</i>	6.G.1	5.G.1	Identify polygons based on their properties, including types of interior angles, perpendicular or parallel sides, and congruence of sides (e.g., squares, rectangles, rhombuses, parallelograms, and trapezoids; isosceles, equilateral, and right triangles).
Lesson 4: <i>Angles of Polygons</i>	6.M.7	6.M.9	Find the sum of the angles in simple polygons (up to eight sides) with and without measuring the angles.
Lesson 5: <i>Solid Figures</i>	6.G.2	5.G.2	Identify, describe, and compare special types of three-dimensional shapes (e.g., cubes, prisms, spheres, cones, and pyramids) based on their properties, such as edges and faces.
	6.G.9	6.G.1	Match three-dimensional objects and their two-dimensional representations (e.g., nets, projections, and perspective drawings).
Unit 4: Geometry, Part 2			

Lesson 1: <i>Coordinate Geometry</i>	6.G.4	6.G.4	Graph points and identify coordinates of points on the Cartesian coordinate plane in all four quadrants.
	6.G.5	6.G.5	Find the distance between two points on horizontal or vertical number lines.
Lesson 2: <i>Transformations</i>	6.G.6	6.G.3	Determine if two shapes are congruent by motions or series of motions (e.g., translations, rotations, and reflections); predict the results of transformations on unmarked planes and draw the transformed figure (e.g., predict how tessellations transform under translation, reflection, and rotation).
Lesson 3: <i>Congruence</i>	6.G.8	6.G.3	Determine if two shapes are congruent by motions or series of motions (e.g., translations, rotations, and reflections); predict the results of transformations on unmarked planes and draw the transformed figure (e.g., predict how tessellations transform under translation, reflection, and rotation).
Lesson 4: <i>Symmetry</i>	6.G.7	5.G.4	Identify and describe types of symmetry, including line and rotational.
Unit 5: Patterns, Relations, and Algebra			
Lesson 1: <i>Algebraic Expressions</i>	6.P.2	5.PRA.2	Replace variables with given values, evaluate, and simplify.
	6.P.4	5.PRA.4	Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols (e.g., input-output tables).
Lesson 2: <i>Patterns</i>	6.P.1	5.PRA.1	Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions (e.g., ABCCCC...; 1, 5, 9, 13, ...; 3, 9, 27, ...).
Lesson 3: <i>Equations</i>	6.P.3	6.PRA.1	Use the properties of equality to solve problems using letter name variables.

	6.P.4	5.PRA.4	Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols (e.g., input-output tables).
	6.P.5	6.PRA.2	Write and solve one-step linear equations and check the answers.
Lesson 4: <i>Functions</i>	6.P.4	5.PRA.4	Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols (e.g., input-output tables).
Lesson 5: <i>Graphing Relationships</i>	6.P.6	6.PRA.9	Produce and interpret graphs that represent the relationship between two variables (x and y) in everyday situations.
	6.P.7	6.PRA.3	Identify and describe relationships between two variables with a constant rate of change (e.g., perimeter-side relationship for a square, distance-time graphs, and conversions such as feet to inches). Contrast these with relationships where the rate of change is not constant.
Unit 6: Measurement			
Lesson 1: <i>Customary Units of Measurement</i>	6.M.3	6.M.4	Solve problems involving proportional relationships and units of measurement (e.g., same system unit conversions, scale models, maps, and speed).
Lesson 2: <i>Metric Units of Measurement</i>	6.M.3	6.M.4	Solve problems involving proportional relationships and units of measurement (e.g., same system unit conversions, scale models, maps, and speed).
Lesson 3: <i>Rates and Scale Drawings</i>	6.M.3	6.M.4	Solve problems involving proportional relationships and units of measurement (e.g., same system unit conversions, scale models, maps, and speed).
Lesson 4: <i>Perimeter and Circumference</i>	6.M.1	6.M.3	Develop strategies to find the area and perimeter of complex shapes (e.g., subdividing them into basic shapes such as quadrilaterals, triangles, circles).

	6.M.5	6.M.7	Understand the concept of the constant π ; know the formulas for the circumference and area of a circle. Use the concepts to solve problems.
Lesson 5: <i>Area</i>	6.M.4	6.M.2	Find areas of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area.
	6.M.5	6.M.7	Understand the concept of the constant π ; know the formulas for the circumference and area of a circle. Use the concepts to solve problems.
Lesson 6: <i>Surface Area and Volume</i>	6.M.6	6.M.5	Understand the concept of volume; use the appropriate units in common measuring systems (e.g., cubic inch, cubic centimeter, cubic meter, cubic yard) to compute the volume of rectangular solids, including rectangular prisms.
		6.M.8	Know and use the formulas for the volumes and surface areas of cubes and rectangular prisms, given the lengths of their sides.
Unit 7: Data Analysis, Statistics, and Probability			
Lesson 1: <i>Minimum, Maximum, and Range</i>	6.D.1	6.DASP.1	Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum, and range.
Lesson 2: <i>Mean, Median, and Mode</i>	6.D.1	6.DASP.1	Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum, and range.
Lesson 3: <i>Line Plots</i>	6.D.2	5.DASP.2	Construct, draw conclusions, and make predictions from various representations of data sets, including tables, line graphs, line plots, circle graphs, and bar graphs (where symbols or scales represent multiple units).
Lesson 4: <i>Stem-and-Leaf Plots</i>	6.D.2	6.DASP.3	Construct, label, and interpret stem-and-leaf plots.
Lesson 5: <i>Circle Graphs</i>	6.D.2	6.DASP.2	Construct circle graphs using ratios, proportions, and percentages.

Lesson 6: <i>Probability</i>	6.D.4	6.DASP.6	Compute probabilities of events from simple experiments with equally likely outcomes (e.g., tossing dice, flipping coins, spinning spinners) by listing all possibilities and finding the fraction that meets given conditions. Analyze the outcomes.
		6.DASP.7	Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event; know that 0 probability means an event will not occur and that a probability of 1 means an event will occur.
Lesson 7: <i>Compound Events</i>	6.D.3	6.DASP.4	Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials.