



Math Teachers Press, Inc.

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SOUTH CAROLINA ACADEMIC STANDARDS FOR MATHEMATICS CORRELATED TO *MOVING WITH MATH EXTENSIONS GRADE 4*

		Student Book	Skill Builders
MATHEMATICAL PROCESSES			
4-1:	the student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representations.		
4-1.1	Analyze information to solve increasingly more sophisticated problems.	36	
4-1.2	Construct arguments that lead to conclusions about general mathematical properties and relationships.	12	
4-1.3	Explain and justify answers to problems on the basis of mathematical properties, structures, and relationships on mathematical properties, structures, and relationships.	11	
4-1.4	generate descriptions and mathematical statements about relationships between and among classes of object.	9	
4-1.5	Use correct, complete, and clearly written and oral mathematical language to pose questions, communicate ideas, and extend problem situations.	21	
4-1.6	Generalize connections between new mathematical ideas and related concepts and subjects that have been previously considered.	27	
4-1.7	Use flexibility in mathematical representations.	26	
4-1.8	Recognize the limitations of various forms of mathematical representations.		
NUMBER AND OPERATIONS			
4-2:	The student will demonstrate through the mathematical processes an understanding of decimal notation as an extension of the place-value system; the relationship between fractions and decimals; the multiplication of whole numbers; and accurate, efficient, and generalizable methods of dividing whole numbers, adding decimals, and subtracting decimals.		

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4-2.1	Recognize the period in the place-value structure of whole numbers: units, thousands, millions, and billions.	4	6-1
4-2.2	Apply divisibility rules for 2, 5, and 10.		
4-2.3	Apply an algorithm to multiply whole numbers fluently.	25-27, 32	20-1, 20-3, 21-1, 21-2, 22-1, 23-1
4-2.4	Explain the effect on the product when one of the factors is changed.	25	
4-2.5	Generate strategies to divide whole numbers by single-digit divisors.	40-43	25-2, 25-3, 26-1, 27-1, 28-1
4-2.6	Analyze the magnitude of digits through hundredths on the basis of their place value.		
4-2.7	Compare decimals through hundredths by using the terms <i>is less than</i> , <i>is greater than</i> , and <i>is equal to</i> and the symbols $<$, $>$, and $=$.		
4-2.8	Apply strategies and procedures to find equivalent forms of fractions.	48	32-1
4-2.9	Compare the relative size of fractions to the benchmarks 0, $\frac{1}{2}$, and 1.		
4-2.10	Identify common the fraction/decimal equivalents $\frac{1}{2} = .5$, $\frac{1}{4} = .25$, $\frac{3}{4} = .75$, $\frac{1}{3} \approx .33$, $\frac{2}{3} \approx .67$, multiples of $\frac{1}{10}$, and multiple of $\frac{1}{100}$.		
4-2.11	Represent improper fractions, mixed numbers, and decimals.		34-1
4-2.12	Generate strategies to add and subtract decimals through hundredths.		
ALGEBRA			
4-3:	The student will demonstrate through the mathematical processes an understanding of numeric and nonnumeric patterns, the representation of simple mathematical relationships, and the application of procedures to find the value of an unknown.		
4-3.1	Analyze numeric, nonnumeric, and repeating patterns involving all operations and decimal patterns through hundredths.	3, 8	6-1
4-3.2	Generalize a rule for numeric, nonnumeric, and repeating patterns involving all operations.		
4-3.3	Use a rule to complete a sequence or a table.		25-1

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4-3.4	Translate among letters, symbols, and words to represent quantities in simple mathematical expressions or equations.		
4-3.5	Apply procedures to find the value of an unknown letter or symbol in a whole-number equation.		49-2
4-3.6	Illustrate situations that show change over time as either increasing, decreasing, or varying.		
	GEOMETRY		
4-4:	The student will demonstrate through the mathematical processes an understanding of the relationship between two- and three-dimensional shapes, the use of transformations to determine congruency, and the representation of location and movement within the first quadrant of a coordinate system.		
4-4.1	Analyze the quadrilaterals squares, rectangles, trapezoids, rhombuses, and parallelograms according to their properties.		
4-4.2	Analyze the relationship between three-dimensional geometric shapes in the form of cubes, rectangular prisms, and cylinders and their two-dimensional nets.		
4-4.3	Predict the results of multiple transformations of the same type – translation, reflection, or rotation – on a two-dimensional geometric shape.		
4-4.4	Represent the two-dimensional shapes trapezoids, rhombuses, and parallelograms and the three-dimensional shapes cubes, rectangular prisms, and cylinders.		40-1
4-4.5	Use transformation(s) to prove congruency.	54	
4-4.6	Represent points, lines, line segments, rays, angles, and polygons.	51, 52	35-1, 37-1
4-4.7	Represent with ordered pairs of whole numbers the location of points in the first quadrant of a coordinate grid.		
4-4.8	Illustrate possible paths from one point to another along vertical and horizontal grid lines in the first quadrant of the coordinate plane.		50-5
	MEASUREMENT		

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4-5:	The student will demonstrate through the mathematical processes an understanding of elapsed time; conversions within the U.S. Customary System; and accurate, efficient, and generalizable methods of determining area.		
4-5.1	Use appropriate tools to measure objects to the nearest unit: measuring length in quarter inches, centimeters, and millimeters; measuring liquid volume in cups, quarts, and liters; and measuring weight and mass in pounds, milligrams, and kilograms.	57-59	44-1, 45-1
4-5.2	Compare angle measures with referent angles of 45 degrees, 90 degrees, and 180 degrees to estimate angle measures.		
4-5.3	Use equivalencies to convert units of measure within the U.S. Customary System: converting length in inches, feet, yards, and miles; converting weight in ounces, pounds, and tons; converting liquid volume in cups, pints, quarts, and gallons; and converting time in years, months, weeks, days, hours, minutes, and seconds.	58	44-1
4-5.4	Analyze the perimeter of a polygon.	60, 61	46-1
4-5.5	Generate strategies to determine the area of rectangles and triangles.	62	46-2
4-5.6	Apply strategies and procedures to determine the amount of elapsed time in hours and minutes within a 12-hour period, either a.m. or p.m.	56	41-2
4-5.7	Use Celsius and Fahrenheit thermometers to determine temperature changes during time intervals.		
4-5.8	Recall equivalencies associated with liquid volume, time, weight and length: 8 liquid ounces = 1 cup, 2 cups = 1 pint, 2 pints = 1 quart, 4 quarts = 1 gallon; 365 days = 1 year, 52 weeks = 1 year; 16 ounces = 1 pound, 2,000 pounds = 1 ton; and 5,280 feet = 1 mile.	58	44-1
4-5.9	Exemplify situations in which highly accurate measurements are required.		
	DATA ANALYSIS AND PROBABILITY		
4-6:	The student will demonstrate through the mathematical processes an understanding of the impact of data-collection methods, the appropriate graph for categorical or numerical data, and the analysis of possible outcomes for a simple event.		
4-6.1	Compare how data-collection methods impact survey results.		

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4-6.2	Interpret data in tables, line graphs, bar graphs, and double bar graphs whose scale increments are greater than or equal to 1.	64	
4-6.3	Organize data in tables, line graphs, and bar graphs whose scale increments are greater than or equal to 1.	63	
4-6.4	Distinguish between categorical and numerical data.		
4-6.5	Match categorical and numerical data to appropriate graphs.		
4-6.6	Predict on the basis of data whether events are <i>likely</i> , <i>unlikely</i> , <i>certain</i> , <i>impossible</i> , or <i>equally likely</i> to occur.		50-4
4-6.7	Analyze possible outcomes for a simple event.	46 (T.G.)	50-4