



Math Teachers Press, Inc.

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SOUTH CAROLINA ACADEMIC STANDARDS FOR MATHEMATICS CORRELATED TO *MOVING WITH MATH EXTENSIONS GRADE 7*

		Student Book	Skill Builders
MATHEMATICAL PROCESSES			
7-1:	The student will understand and utilize the mathematical processes of problem solving, reasoning, and proof, communication, connections, and representations.		
7-1.1	Generate and solve complex abstract problems that involve modeling physical, social, or mathematical phenomena.	15	
7-1.2	Evaluate conjectures and pose follow-up questions to prove or disprove conjectures.		
7-1.3	Use inductive and deductive reasoning to formulate mathematical arguments.		
7-1.4	Understand equivalent symbolic expressions as distinct symbolic forms that represent the same relationship.	24	
7-1.5	Generalize mathematical statements based on inductive and deductive reasoning.	5	
7-1.6	Use correct and clearly written or spoken words, variables, and notation to communicate about significant mathematical tasks.	21, 22	
7-1.7	Generalize connections among a variety of representational forms and real-world situations.	79	
7-1.8	Use standard and nonstandard representations to convey and support mathematical relationships.	11	
NUMBER AND OPERATIONS			

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7-2:	The student will demonstrate through the mathematical processes an understanding of the representation of rational numbers, percentages, and square roots of perfect squares; the application of ratios, rates, and proportions to solve problems; accurate, efficient, and generalizable methods for operations with integers; the multiplication and division of fractions and decimals; and the inverse relationship between squaring and finding the square roots of perfect squares.		
7-2.1	Understand fractional percentages and percentages greater than one hundred.		
7-2.2	Represent the location of rational numbers and square roots of perfect squares on a number line.	23	
7-2.3	Compare rational numbers, percentages, and square roots of perfect squares by using the symbols \leq , \geq , $<$, $>$, and $=$.	25	
7-2.4	Understand the meaning of absolute value.		
7-2.5	Apply ratios, rates, and proportions to discounts, taxes, tips, interest, unit costs, and similar shapes.	53	
7-2.6	Translate between standard form and exponential form.	6	
7-2.7	Translate between standard form and scientific notation.		
7-2.8	Generate strategies to add, subtract, multiply, and divide integers.		
7-2.9	Apply an algorithm to multiply and divide fractions and decimals.	30, 33, 41, 43	
7-2.10	Understand the inverse relationship between squaring and finding the square roots of perfect squares.		
	ALGEBRA		
7-3:	The student will demonstrate through the mathematical processes an understanding of proportional relationships.		
7-3.1	Analyze geometric patterns and pattern relationships.		
7-3.2	Analyze tables and graphs to describe the rate of change between and among quantities.		47-2
7-3.3	Understand slope as a constant rate of change.		
7-3.4	Use inverse operations to solve two-step equations and two-step inequalities.		

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7-3.5	Represent on a number line the solution of a two-step inequality.		
7-3.6	Represent proportional relationships with graphs, tables, and equations.	50, 51	
7-3.7	Classify relationships as either directly proportional, inversely proportional, or nonproportional.		
GEOMETRY			
7-4:	The student will demonstrate through the mathematical processes an understanding of proportional reasoning, tessellations, the use of geometric properties to make deductive arguments. The results of the intersection of geometric shapes in a plane, and the relationships among angles formed when a transversal intersects two parallel lines.		
7-4.1	Analyze geometric properties and the relationships among the properties of triangles, congruence, similarity, and transformations to make deductive arguments.	58, 60	32-1
7-4.2	Explain the results of the intersection of two or more geometric shapes in a plane.		
7-4.3	Illustrate the cross section of a solid.		
7-4.4	Translate between two- and three-dimensional representations of compound figures.		
7-4.5	Analyze the congruent and supplementary relationships – specifically, alternate interior, alternate exterior, corresponding, and adjacent – of the angles formed by parallel lines and a transversal.		33-1
7-4.6	Compare the areas of similar shapes and the areas of congruent shapes.		
7-4.7	Explain the proportional relationship among attributes of similar shapes.		
7-4.8	Apply proportional reasoning to find missing attributes of similar shapes.		
7-4.9	Create tessellations with transformations.		
7-4.10	Explain the relationship of the angle measurements among shapes that tessellate.		
MEASUREMENT			
7-5:	The student will demonstrate through the mathematical processes an understanding of how to use ratio and proportion to solve problems involving scale factors and rates and how to use one-step unit analysis to convert between and within the U.S. Customary System and the metric system.		

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7-5.1	Use ratio and proportion to solve problems involving scale factors and rates.	49	46-2
7-5.2	Apply strategies and formulas to determine the surface area and volume of the three-dimensional shapes prism, pyramid, and cylinder.	76	41-1
7-5.3	Generate strategies to determine the perimeters and areas of trapezoids.		
7-5.4	Recall equivalencies associated with length, mass and weight, and liquid volume: 1 square yard = 9 square feet, 1 cubic meter = 1 million cubic centimeters, 1 kilometer = 5/8 mile, 1 inch = 2.54 centimeters; 2.2 kilograms = 1 pound; and 1.06 quarts = 1 liter.	67, 68	35-1
7-5.5	Use one-step unit analysis to convert between and within the U.S. Customary System and the metric system.		
	DATA ANALYSIS AND PROBABILITY		
7-6:	The student will demonstrate through the mathematical processes an understanding of the relationships between two populations or samples.		
7-6.1	Predict the characteristics of two populations based on the analysis of sample data.		
7-6.2	Organize data in box plots or circle graphs as appropriate.		
7-6.3	Apply procedures to calculate the interquartile range.		
7-6.4	Interpret the interquartile range for data.		
7-6.5	Apply procedures to calculate the probability of mutually exclusive simple or compound events.		47-1
7-6.6	Interpret the probability of mutually exclusive simple or compound events.		
7-6.7	Differentiate between experimental and theoretical probability of the same event.		
7-6.8	use the fundamental counting principle to determine the number of possible outcomes for multi-stage event.		