



Math Teachers Press, Inc.

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

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
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.	142, 159, 178	209, 225, 231
7-1.2	Evaluate conjectures and pose follow-up questions to prove or disprove conjectures.	118	188
7-1.3	Use inductive and deductive reasoning to formulate mathematical arguments.	12, 178	199, 307-309 SB 234, 235
7-1.4	Understand equivalent symbolic expressions as distinct symbolic forms that represent the same relationship.	122 SB: 102	221, 231, 232, 240 SB: 196, 197
7-1.5	Generalize mathematical statements based on inductive and deductive reasoning.	22	191
7-1.6	Use correct and clearly written or spoken words, variables, and notation to communicate about significant mathematical tasks.	13	183
7-1.7	Generalize connections among a variety of representational forms and real-world situations.	179	185, 312
7-1.8	Use standard and nonstandard representations to convey and support mathematical relationships.	100	240
NUMBER AND OPERATIONS			

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
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.	165-167, 176, 177 SB: 131, 132	
7-2.2	Represent the location of rational numbers and square roots of perfect squares on a number line.	80, 84, 89, 130, 131, 137 SB: 61, 65, 104, 107	217
7-2.3	Compare rational numbers, percentages, and square roots of perfect squares by using the symbols \leq , \geq , $<$, $>$, and $=$.	6, 64, 89, 90, 135, 136 SB: 5, 54, 67-69, 112, 144	
7-2.4	Understand the meaning of absolute value.		242, 243 SB: 201
7-2.5	Apply ratios, rates, and proportions to discounts, taxes, tips, interest, unit costs, and similar shapes.	110, 173-175 SB: 91	224-227, 277 SB: 189
7-2.6	Translate between standard form and exponential form.	16, 17, 21, 22 SB: 13, 16	
7-2.7	Translate between standard form and scientific notation.	23, 25 SB: 17, 18	
7-2.8	Generate strategies to add, subtract, multiply, and divide integers.	68-78 SB: 56, 58-60	244-248 SB: 202, 203, 205, 206
7-2.9	Apply an algorithm to multiply and divide fractions and decimals.	107-109, 113, 114, 147-154 SB: 89, 90, 92 96, 97, 120-123, 125, 126	
7-2.10	Understand the inverse relationship between squaring and finding the square roots of perfect squares.		216, 304 SB: 184
	ALGEBRA		
7-3:	The student will demonstrate through the mathematical processes an understanding of proportional relationships.		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
7-3.1	Analyze geometric patterns and pattern relationships.		307-309 SB: 234, 235
7-3.2	Analyze tables and graphs to describe the rate of change between and among quantities.		231, 232, 317 SB: 196, 197, 254
7-3.3	Understand slope as a constant rate of change.		321, 322 SB: 242, 254
7-3.4	Use inverse operations to solve two-step equations and two-step inequalities.		266, 267, 270-272, 285-288 SB: 219, 221, 225, 250, 251
7-3.5	Represent on a number line the solution of a two-step inequality.		285-288 SB: 225
7-3.6	Represent proportional relationships with graphs, tables, and equations.	122 SB: 102	222, 225-227, 275-278, 311-316 SB: 187-189, 191, 192, 222, 223, 236-239, 246, 254
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.		188, 189, 203, 204, 218, 219, 223-227 SB: 156, 170-172, 186, 189-192
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.		192, 193 SB: 161

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
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.		200 SB: 167
7-4.6	Compare the areas of similar shapes and the areas of congruent shapes.		203, 223
7-4.7	Explain the proportional relationship among attributes of similar shapes.		224
7-4.8	Apply proportional reasoning to find missing attributes of similar shapes.		225-227 SB: 189, 191, 192
7-4.9	Create tessellations with transformations.		204 SB: 172
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.		
7-5.1	Use ratio and proportion to solve problems involving scale factors and rates.		226-228, 275 SB: 191, 192, 222, 223, 246
7-5.2	Apply strategies and formulas to determine the surface area and volume of the three-dimensional shapes prism, pyramid, and cylinder.		212-214 Sb: 180-182
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.		233, 234 Sb: 198, 199
7-5.5	Use one-step unit analysis to convert between and within the U.S. Customary System and the metric system.		233, 234 SB: 198, 199
	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.		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
7-6.2	Organize data in box plots or circle graphs as appropriate.	179 SB: 101	
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.		
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.		