



Math Teachers Press, Inc.

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VIRGINIA MATHEMATICS STANDARDS OF LEARNING CORRELATED TO MOVING WITH MATH-BY-TOPIC LEVEL D - Grade 7

		Lesson Plan/ Student Book	Skill Builders
NUMBER AND NUMBER SENSE			
7.1	The student will		
a.	investigate and describe the concept of negative exponents for powers of ten;		57-3
b.	compare and order numbers greater than zero written in scientific notation;		
c.	compare and order rational numbers;	DII: 5, 6, 29, 56, 65	11-4, 18-4
d.	determine square roots of perfect squares; and	DIV: 32	54-1
e.	identify and describe absolute value of rational numbers.	DV: 13	48-3, 48-4
COMPUTATION AND ESTIMATION			
7.2	The student will solve practical problems involving operations with rational numbers.	DII: 15, 18, 19, 20, 23, 24, 32, 35-41, 43, 46, 49, 50, 79, 80, 81, 83, 85-89, 95-102	12-4, 12-6, 13-3, 13-4, 14-2, 15-1, 16-2, 17-1, 17-2, 22-1, 22-2, 24-2, 28-1, 28-2, 43-4, 43-5, 43-6, 44-2, 44-4
7.3	The student will solve single-step and multistep practical problems, using proportional reasoning.	DIII: 32-37, 67, 68 DIV: 88-91	26-3, 46-2, 46-3
MEASUREMENT AND GEOMETRY			
7.4	The student will		
a.	describe and determine the volume and surface area of rectangular prisms and cylinders; and	DIV: 77	41-2, 41-3
b.	solve problems, including practical problems, involving the volume and surface area of rectangular prisms and cylinders.	DIV: 77-79	41-2
7.5	The student will solve problems, including practical problems, involving the relationship between corresponding sides and corresponding angles of similar quadrilaterals and triangles.	DIV: 30, 90, 91	46-2, 53-2
7.6	The student will		
a.	compare and contrast quadrilaterals based on their properties; and	DIV: 17	31-3, 31-4
b.	determine unknown side lengths or angle measures of quadrilaterals.		52-3
7.7	The student will apply translations and reflections of right triangles or rectangles in the coordinate plane.		
PROBABILITY AND STATISTICS			
7.8	The student will		
a.	determine the theoretical and experimental probabilities of an event; and		

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b.	investigate and describe the difference between the experimental probability and theoretical probability of an event.		
7.9	The student, given data in a practical situation, will		
a.	represent data in a histogram;		
b.	make observations and inferences about data represented in a histogram; and		
c.	compare histograms with the same data represented in stem-and-leaf plots, line plots, and circle graphs.		
	PATTERNS, FUNCTIONS, AND ALGEBRA		
7.10	The student will		
a.	determine the slope, m , as rate of change in a proportional relationship between two quantities and write an equation in the form $y = mx$ to represent the relationship;		
b.	graph a line representing a proportional relationship between two quantities given the slope and an ordered pair, or given the equation in $y = mx$ form, where m represents the slope as rate of change;		
c.	determine the y -intercept, b , in an additive relationship between two quantities and write an equation in the form $y = x + b$ to represent the relationship;		
d.	graph a line representing the additive relationship between two quantities given the y -intercept and an ordered pair, or given the equation in the form $y = x + b$ where b represents the y -intercept; and		
e.	make connections between and among representations of a proportional or additive relationship between two quantities using verbal descriptions, tables, equations, and graphs.		
7.11	The student will evaluate algebraic expressions for given replacement values of the variables.	DV: 63-65	59-2
7.12	The student will solve two-step linear equations in one variable, including practical problems that require the solution of a two-step linear equation in one variable.	DV: 54, 55	50-4
7.13	The student will solve one- and two-step inequalities in one variable, including practical problems, involving addition, subtraction, multiplication, and division, and graph the solution on a number line.	DV: 69, 70	
	DI: Numeration & Problem Solving with Whole Numbers		
	DII: Fractions & Decimals		
	DIII: Problem Solving with Percent		
	DIV: Geometry & Measurement		
	DV: Algebra & Computer		