



# Math Teachers Press, Inc.

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## VIRGINIA MATHEMATICS STANDARDS OF LEARNING CORRELATED TO MOVING WITH MATH-BY-TOPIC LEVEL D - GRADE 8

		Lesson Plan/ Student Book	Skill Builders
<b>NUMBER AND NUMBER SENSE</b>			
<b>8.1</b>	The student will compare and order real numbers.	<b>DI:</b> 24 <b>DII:</b> 5, 29, 56 <b>DV:</b> 8, 9	11-4, 18-4, 48-2
<b>8.2</b>	The student will describe the relationships between the subsets of the real number system.	<b>DV:</b> 23	
<b>8.3</b>	The student will		
<b>a.</b>	estimate and determine the two consecutive integers between which a square root lies; and	<b>DIV:</b> 32	
<b>b.</b>	determine both the positive and negative square roots of a given perfect square.		
<b>COMPUTATION AND ESTIMATION</b>			
<b>8.4</b>	The student will solve practical problems involving consumer applications.	<b>DII:</b> 49, 50, 81, 86, 87, 93, 94, 97, 98, 99 <b>DIII:</b> 32, 35, 43, 47, 49-60	15-1, 28-1, 28-2, 43-3, 43-4
<b>MEASUREMENT AND GEOMETRY</b>			
<b>8.5</b>	The student will use the relationships among pairs of angles that are vertical angles, adjacent angles, supplementary angles, and complementary angles to determine the measure of unknown angles.	<b>DIV:</b> 23, 24	33-1
<b>8.6</b>	The student will		
<b>a.</b>	solve problems, including practical problems, involving volume and surface area of cones and square-based pyramids; and		
<b>b.</b>	describe how changing one measured attribute of a rectangular prism affects the volume and surface area.		
<b>8.7</b>	The student will		
<b>a.</b>	given a polygon, apply transformations, to include translations, reflections, and dilations, in the coordinate plane; and		
<b>b.</b>	identify practical applications of transformations.		
<b>8.8</b>	The student will construct a three-dimensional model, given the top or bottom, side, and front views.		
<b>8.9</b>	The student will		
<b>a.</b>	verify the Pythagorean Theorem; and	<b>DIV:</b> 33	54-2
<b>b.</b>	apply the Pythagorean Theorem.	<b>DIV:</b> 34	54-2

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<b>8.10</b>	The student will solve area and perimeter problems, including practical problems, involving composite plane figures.	<b>DIV:</b> 64, 74	39-3
<b>PROBABILITY AND STATISTICS</b>			
<b>8.11</b>	The student will		
<b>a.</b>	compare and contrast the probability of independent and dependent events; and		
<b>b.</b>	determine probabilities for independent and dependent events.	<b>DIV:</b> 95, 96	47-3
<b>8.12</b>	The student will		
<b>a.</b>	represent numerical data in boxplots;		
<b>b.</b>	make observations and inferences about data represented in boxplots; and		
<b>c.</b>	compare and analyze two data sets using boxplots.		
<b>8.13</b>	The student will		
<b>a.</b>	represent data in scatterplots;		
<b>b.</b>	make observations about data represented in scatterplots; and		
<b>c.</b>	use a drawing to estimate the line of best fit for data represented in a scatterplot.		
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>			
<b>8.14</b>	The student will		
<b>a.</b>	evaluate an algebraic expression for given replacement values of the variables; and	<b>DV:</b> 63-65	59-2
<b>b.</b>	simplify algebraic expressions in one variable.	<b>DV:</b> 43-45, 59, 60	
<b>8.15</b>	The student will		
<b>a.</b>	determine whether a given relation is a function; and		
<b>b.</b>	determine the domain and range of a function.		
<b>8.16</b>	The student will		
<b>a.</b>	recognize and describe the graph of a linear function with a slope that is positive, negative, or zero;		
<b>b.</b>	identify the slope and $y$ -intercept of a linear function, given a table of values, a graph, or an equation in $y = mx + b$ form;		
<b>c.</b>	determine the independent and dependent variable, given a practical situation modeled by a linear function;		
<b>d.</b>	graph a linear function given the equation in $y = mx + b$ form; and	<b>DV:</b> 67	
<b>e.</b>	make connections between and among representations of a linear function using verbal descriptions, tables, equations, and graphs.	<b>DV:</b> 66, 67	
<b>8.17</b>	The student will solve multistep linear equations in one variable on one or both sides of the equation, including practical problems that require the solution of a multistep linear equation in one variable.	<b>DV:</b> 54, 55	50-4
<b>8.18</b>	The student will solve multistep linear inequalities in one variable with the variable on one or both sides of the inequality symbol, including practical problems, and graph the solution on a number line.		

		<b>Lesson Plan/ Student Book</b>	<b>Skill Builders</b>
	<b>DII: <i>Fractions &amp; Decimals</i></b>		
	<b>DIII: <i>Problem Solving with Percent</i></b>		
	<b>DIV: <i>Geometry &amp; Measurement</i></b>		
	<b>DV: <i>Algebra &amp; Computer</i></b>		