West Virginia Mathematics Content Standards Correlated to
Moving with Math Moving with Algebra Grade 8

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders
	STANDARD 1. NUMBER AND OPERATIONS		
M.O.8.1.1	analyze, describe and compare the characteristics of rational and irrational numbers	80 **SB:** 61	
M.O.8.1.2	analyze and solve application problems with		
•	powers		215, 294, 295, 301 **SB:** 229, 247, 252
•	squares	16 **SB:** 13	215
•	square roots		216, 217 **SB:** 184, 185
•	scientific notation	22, 23, 25 **SB:** 17, 18	
•	verify solutions using estimation techniques	30, 31, 41, 52, 53, 91, 103, 104, 117, 158, 172 **SB:** 25, 26, 42, 43, 84-86, 100, 124, 135	
M.O.8.1.3	analyze and solve grade-appropriate real-world problems with:		
•	whole numbers	32-34, 54, 55, 58, 59 **SB:** 27-29, 44-46, 51-53	
•	decimals	145, 146, 159, 160 **SB:** 119, 128, 129	
•	fractions	105, 106, 116, 118, 119 **SB:** 87, 88, 100, 101	
•	percents, percent increase and decrease	169-171 **SB:** 133, 134	

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•	integers	78	244 **SB:** 202, 204
•	including but not limited to, rates, tips, discounts, sales tax and interest and verify solutions using estimation techniques	173-179 **SB:** 136-138	
	STANDARD 2. ALGEBRA		
M.O.8.2.1	use a verity of strategies to solve one and two-step linear equations and inequalities with rational solutions; defend the selection of the strategy; graph the solutions and justify the reasonableness of the solution		253-261, 281-287 **SB:** 211-218, 225
M.O.8.2.2	identify proportional relationships in real-world situations, then find and select an appropriate method to determine the solution; justify the reasonableness of the solution		221, 222, 225-227, 275-278 **SB:** 187-189, 191, 192, 222, 223, 246
M.O.8.2.3	add and subtract polynomials limited to two variables and positive exponents		262-265 **SB:** 209, 210
M.O.8.2.4	use systems of linear equations to analyze situations and solve problems		
M.O.8.2.5	apply inductive and deductive reasoning to write a rule from data in an input/output table analyze the table and the rule to determine if a functional relationship exists		231-234, 311, 312 **SB:** 196, 197
M.O.8.2.6	graph linear equations and inequalities within the Cartesian coordinate plane by generating a table of values (with and without technology		232, 312-314, 316, 317, 332, 333 **SB:** 197, 236-239, 254
M.O.8.2.7	formulate and apply a rule to generate an arithmetic, geometric and algebraic pattern		307-309 **SB:** 234, 235
M.O.8.2.8	determine the slope of a line using a variety of methods including		
•	graphing		320-326 **SB:** 241-243
•	change in y over change in x		321-323 **SB:** 241, 242
•	equation		324-331 **SB:** 244, 249
M.O.8.2.9	represent and solve real-world grade-appropriate problems using multiple strategies and justify solutions		

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M.O.8.2.10	identify a real life problem involving change over time; make a hypothesis as to the outcome; develop, justify, and implement a method to collect, organize and analyze data; generalize the results to make a conclusion; compare the hypothesis and the results of the investigation; present the project using words, graphs, drawings, models, or tables		
	STANDARD 3. GEOMETRY		
M.O.8.3.1	justify the relationships among corresponding, alternate interior, alternate exterior and vertical angles when parallel lines are cut by a transversal using models, pencil/paper, graphing calculator, and technology		200 SB: 167
M.O.8.3.2	classify polyhedrons according to the number and shape of faces; use inductive reasoning to determine the relationship between vertices, faces and edges (edges +2 = faces + vertices)		192, 193 SB: 161, 162
M.O.8.3.3	identify, apply and construct perpendicular and angle bisectors (with and without technology) given a real-world situation		
M.O.8.3.4	create geometric patterns including tiling, art design, tessellations and scaling using transformations (rotations, reflections, translations) and predict results of combining, subdividing, and changing shapes of plane figures and solids		204 SB: 171, 172
M.O.8.3.5	create scale models of similar figures using ratio, proportion with pencil/paper and technology and determine scale factor		223-227 SB: 189, 191, 192
M.O.8.3.6	make and test a conjecture concerning:		
•	regular polygons		
•	the cross section of a solid such as a cylinder, cone, and pyramid		
•	the intersection of two or more geometric figures in the plane (e.g., intersection of a circle and a line), and justify the results		
	STANDARD 4. MEASUREMENT		
M.O.8.4.1	select and apply an appropriate method to solve; justify the method and the reasonableness of the solution of problems involving volume of:		
•	prisms		212-214 SB: 180-182
•	cylinders		214
•	cones		
•	pyramids		

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•	spheres		
•	given real-world problem solving situations		213 **SB:** 180-182
M.O.8.4.2	solve problems involving missing measurements in plane and solid geometric figures using formulas and drawings including irregular figures, models or definitions		219 **SB:** 177, 186
M.O.8.4.3	solve right triangle problems where the existence of triangles is not obvious using the Pythagorean Theorem and indirect measurement in real-world problem solving situations		218, 225 **SB:** 189
	STANDARD 5. DATA ANALYSIS AND PROBABILITY		
M.O.8.5.1	determine and explain whether a real-world situation involves permutations or combinations, then use appropriate technology to solve the problem		
M.O.8.5.2	**compare the experimental and theoretical probability of a given situation (including compound probability of a dependent and independent event)**		
M.O.8.5.3	create and extrapolate information from multiple-bar graphs, box and whiskers plots, and other data displays suing appropriate technology	179 **SB:** 101	
M.O.8.5.4	analyze problem situations, games of chance, and consumer applications using random and non-random samplings to determine probability, make predictions, and identify sources of bias		
M.O.8.5.5	draw inferences, make conjectures and construct convincing arguments involving:		
•	different effects that changes in data values have on measures of central tendency		
•	misuses of statistical or numeric information, based on data analysis of same and different sets of data		