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West Virginia Mathematics Content Standards Correlated to Moving with Math Intermediate/Middle (IM) Grade 7

		MH1 <i>Number Sense, Reasoning & Data</i> Student Book Skill Builders (SB)	MH2 <i>Fractions & Decimals</i> Student Book Skill Builders (SB)	MH3 <i>Percent & Probability</i> Student Book Skill Builders (SB)	MH4 <i>Geometry & Measurement</i> Student Book Skill Builders (SB)	MH5 <i>Algebra</i> Student Book Skill Builders (SB)
	STANDARD 1. NUMBER AND OPERATIONS					
M.O.7.1.1	compare, order, and differentiate among integers, decimals, fractions, and irrational numbers using multiple representations (e.g., symbols, manipulatives, graphing on a number line)	3, 6-8 SB: 1-3, 4-4	9, 11, 43-47, 50, 52-55, 77 SB: 11-2, 18-4, 20-1 to 20-3, 65-1	SB: 18-1, 65-1	SB: 18-1	5, 9, 26, 27 SB: 18-1, 48-2, 58-8
M.O.7.1.2	model the relationship between perfect squares and square roots using physical representations; estimate square root and evaluate using technology	23, 24 SB: 54-1, 54-2	SB: 6-1	SB: 6-1	33 SB: 54-1	74 SB: 54-1, 61-4
M.O.7.1.3	using simple computation and problem-solving situations, demonstrate fluency and justify solutions in performing operations with rational numbers including negative numbers for:					

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•	Throughout	Throughout	2, 3, 5, 39, 41, 44, 65, 67, 68 SB: 1-1, 2-1, 7-1, 12-1, 13-1, 21-1, 28-2, 28-3, 28-6, 28-8, 42-1, 43-1, 43-2, 44-1, 47-5, 68-2, 68-3	Throughout	Throughout
•	Throughout	Throughout	2, 3, 5, 34, 36, 37, 43, 44 SB: 1-1, 2-1, 8-1, 13-2, 21-1, 28-1, 28-4, 28-5, 28-7, 42-1, 43-1, 43-2, 44-1	Throughout	Throughout
•	Throughout	Throughout	Throughout	Throughout	Throughout
•	Throughout	Throughout	Throughout	Throughout	Throughout
M.O.7.1.4	9-16, 49 SB: 2-1 to 2-3, 43-6, 43-7, 43-13, 59-1, 59-2	SB: 2-1	SB: 2-1	SB: 2-1	29-31, 34, 36-38, 46-52, 58, 59, 65, 66, 70-76 SB: 2-1, 16-1, 17-1, 50-3 to 50-5, 59-1 to 59-6, 61-1 to 61-4
M.O.7.1.5	analyze and solve grade-appropriate real-world problems with whole numbers, integers, decimals, fractions and percents including problems involving:	Throughout	Throughout	Throughout	Throughout

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•	discounts		27	35-37, 44, 60 SB: 28-1, 28-7, 43-2	SB: 28-1, 51-1	SB: 28-1, 51-1
•	interest			40, 41 SB: 28-3, 28-6, 43-2		
•	taxes			38, 39 SB: 28-2, 43-2		
•	tips			42-44 SB: 28-4, 28-8, 43-2	SB : 27-1	
•	percent increase or decrease			50, 51 SB: 28-5		
•	justify solutions including using estimation and reasonableness	38, 43, 45-49, 54, 60, 77 SB: 10-3, 43-1, 43-4, 43-8, 43-11, 43-13, 43-14, 44-1, 44-2, 68-7, 70-1	21-23, 34-36, 58, 71-74 SB: 10-1, 22-2, 23-3, 44-1	31-34, 57, 59 SB: 10-1, 14-1, 44-1, 44-3, 68-4	5, 44-46, 48-51, 54, 55 SB: 27-1, 30-2, 34-3, 36-1 to 36-3, 43-1, 44-1, 52-2, 54-3	26, 63 SB: 30-1, 36-1, 43-1, 44-1, 52-1
M.O.7.1.6	use inductive reasoning to find and justify the laws of exponents with numeric bases	22, 23, 25-30 SB: 3-3, 6-1, 6-2, 54-1, 57-1, 57-2, 69-1			33, 72 SB: 6-1	70-74 SB: 54-1, 61-1, 61-2, 61-4
M.O.7.1.7	solve problems using numbers in scientific notation (positive and negative exponents) with and without technology, and interpret from real life contexts	29, 30 SB: 57-1, 57-2	SB: 57-1	SB: 57-1		SB: 57-1
	STANDARD 2. ALGEBRA					

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M.O.7.2.1	use inductive reasoning to find missing elements in a variety of arithmetic and geometric patterns including algebraic sequences and series	25, 26, 31-34, 61, 69, 70 SB: 42-1 to 42-5, 60-1	SB: 42-1	16, 23-25, 45, 69 SB: 3-1, 11-1, 25-3, 42-1	SB: 42-1	60-69 SB: 42-1, 60-1 to 60-5, 60-6b, 60-6c
M.O.7.2.2	evaluate algebraic expression with whole numbers, integers, absolute value and exponents using the order of operations	18 SB: 59-3, 59-4	69		28-32 SB: 26-1 to 26-3	32-34, 36-38, 49, 50, 58, 59, 70-76 SB: 59-2 to 59-6, 61-1 to 61-4
M.O.7.2.3	solve problems by creating an input/output function table (including, but not limited to, spreadsheets) to predict future values, given a real-world situation involving rational numbers	70 SB: 42-3, 60-1				11, 12, 60-64, 67-69 SB: 60-1, 60-4, 60-5, 60-6b
M.O.7.2.4	analyze proportional relationships in real-world situations, select an appropriate method to determine the solution and justify reasoning for choice of method to solve		37, 38 SB: 46-1, 46-2	24-28, 30, 32, 36, 37, 40, 42, 45, 49, 50, 52, 60 SB: 26-2, 43-3, 46-1	27-32 SB: 26-1 to 26-3, 46-1 to 46-3, 53-2	SB: 26-1, 46-1, 53-1
M.O.7.2.5	solve one-step linear equations and inequalities using a variety of strategies containing rational numbers with integer solutions; graph solutions and justify the selection of the strategy and the reasonableness of the solution	61, 70 SB: 42-3, 60-1				48, 53-57, 61-68 SB: 50-6, 60-1 to 60-5, 60-6c

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M.O.7.2.6	plot lines with the Cartesian coordinate plane from a table of values to solve mathematical real-world problems	69 SB: 49-1			14, 69 SB: 32-1, 49-1, 53-3	11, 12, 61, 62, 64, 67-69, 77 SB: 49-1, 49-2, 60-1, 60-4 to 60-6a
M.O.7.2.7	determine the slope of a line from its graphical representation					77
M.O.7.2.8	represent algebraically and solve real-world application problems and justify solutions	17, 18 SB: 42-3, 59-3, 59-4	37, 38, 69 SB: 46-1	25-28, 30, 32, 36, 37, 40, 42, 45, 49, 50, 52, 54, 60 SB: 2-1, 26-2, 43-3, 46-1	Throughout	32-50, 53-76 SB: 26-1, 38-1, 39-1, 40-1, 41-1, 46-1, 50-1 to 50-6, 53-1, 55-1, 56-1, 59-2 to 59-6, 60-1 to 60-5, 60-6c, 61-1 to 61-4
M.O.7.2.9	identify a real life problem involving proportionality; 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 conclusion; present the project using words, graphs, drawings, models or tables		37, 38 SB: 46-1, 46-2	24-28, 30, 32, 36, 37, 40, 42, 45, 49, 50, 52, 60 SB: 26-2, 43-3, 46-1	27-32 SB: 26-1 to 26-3, 46-1 to 46-3, 53-2	SB: 26-1, 46-1, 53-1
	STANDARD 3. GEOMETRY					
M.O.7.3.1	identify and construct					
•	angle-pairs, adjacent, complementary, supplementary, vertical				17-19 SB: 33-1, 33-2	SB: 33-1

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•	congruent segments and angles				12, 13 SB: 32-2 to 32-4	SB: 32-1
•	perpendicular bisectors of segments				4, 18 SB: 30-1, 32-5	SB: 33-1
•	angle-bisectors			57	3, 4, 17-19 SB: 30-1, 32-5, 33-1, 33-2	SB: 33-1
M.O.7.3.2	apply line symmetry to classify plane figures				15, 16 SB: 32-4	
M.O.7.3.3	apply rotations, reflections, translations to plane figures and determine the coordinates of its transformation and compare and contrast the new figure with the original				14, 16 SB: 32-4, 49-1, 53-3	
M.O.7.3.4	pose and solve ratio and proportion problems including scale drawings and similar polygons		37, 38 SB: 46-1, 46-2	21-28, 30, 32, 36, 37, 40, 42, 45, 49, 50, 52, 60 SB: 26-1, 26-2, 43-3, 46-1	26-32, 77 SB: 25-1, 26-1 to 26-3, 46-1 to 46-3, 53-2, 64-1	SB: 26-1, 46-1, 53-1
M.O.7.3.5	solve problems and explain the relationships among scale factor and area and volume including: square of a scale factor					
•	cube of a scale factor				SB: 63-1	
M.O.7.3.6	solve mathematical real-world problems using compound geometric figures				Throughout	SB: 39-1, 41-1, 46-1
	STANDARD 4. GEOMETRY					

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M.O.7.4.1	select and apply an appropriate method to solve (including, but not limited to, formulas) justify the method and the reasonableness of the solution, given a real-world problem solving situation involving:	Throughout	Throughout	Throughout	Throughout	Throughout
•	perimeter				60-62, 69 SB: 38-1	SB: 38-1
•	circumference				3, 63 SB: 29-2, 39-1	SB: 29-2, 39-1
•	area				49, 50, 64-70 SB: 36-2, 40-1 to 40-2, 55-1, 55-2, 56-1	SB: 40-1, 55-1, 56-1
•	surface area of prisms (rectangular and triangular)				75, 76 SB: 62-2	
•	volume of prisms and cylinders				51, 52, 71-74 SB: 36-3, 41-1, 41-2, 63-1	SB: 41-1
•	distance and temperature (Celsius and Fahrenheit)				42-48, 59 SB: 34-2, 34-3, 36-1, 37-1, 37-2	2, 5, 12, 64-66 SB: 26-1, 36-1, 37-1, 58-9, 59-2, 60-2

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M.O.7.4.2	use the Pythagorean Theorem to find the length of any side of a right triangle and apply to problem solving situations				34, 35 SB: 54-2, 54-3	
M.O.7.4.3	convert units of measurement, linear, area and volume, within customary and metric systems	61			31, 32, 42, 47-55 SB: 34-3, 37-1, 37-2, 46-3	SB: 37-1, 59-2
	STANDARD 5. DATA ANALYSIS AND PROBABILITY					
M.O.7.5.1	determine theoretical probability of an event, make and test predictions through experimentation	78 SB: 47-1		61-68, 70-74 SB: 47-1 to 47-6	SB: 47-1	SB: 47-1
M.O.7.5.2	determine combinations and permutations by constructing sample spaces (e.g., listing, tree diagrams, frequency distribution tables)			69, 75-77 SB: 66-1, 66-2		
M.O.7.5.3	collect, organize, graphically represent, and interpret data displays including frequency distributions, line-plots, scatter plots, box and whiskers, and multiple-line graphs	59, 61-77 SB: 45-4 to 45-6, 49-1, 60-1, 67-1 to 67-4, 68-1 to 68-7, 70-1		55, 56, 58-60 SB: 68-1 to 68-4		
M.O.7.5.4	analyze and solve application problems involving measures of central tendency (mean, median, mode) and dispersion (range) from data, graphs, tables, and experiments using appropriate technology to compare two sets of data	55-60, 64, 67, 71-74 SB: 45-1 to 45-6, 67-1 to 67-4, 68-2, 68-4, 68-5	75, 67 SB: 45-1	SB: 45-1	SB: 45-1	SB: 45-1