



Math Teachers Press, Inc.

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Wisconsin Model Academic Standards Correlated to Moving with Algebra Grade 8

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
	By the end of grade eighth, students will:		
A.8.1	Use reasoning abilities to		
	• evaluate information	32	213
	• perceive patterns	42	307
	• identify relationships	32, 33	311
	• formulate questions for further exploration	57	
	• evaluate strategies	33	246, 271
	• justify statements	13	196
	• test reasonableness of results	118	274
	• defend work	74	188
A.8.2	Communicate logical arguments clearly to show why a result makes sense	Journal prompts throughout	Journal prompts throughout
A.8.3	Analyze non-routine problems by modeling, illustrating, guessing, simplifying, generalizing, shifting to another point of view, etc.	58	283
A.8.4	Develop effective oral and written presentations that include	Class discussions throughout	Class discussions throughout
	• appropriate use of technology		
	• the conventions of mathematical discourse (e.g., symbols, definitions, labeled drawing)		
	• mathematical language		
	• clear organization of ideas and procedures		
	• understanding of purpose and audience		
A.8.5	Explain mathematical concepts, procedures, and ideas to others who may not be familiar with them	12	197
A.8.6	Read and understand mathematical texts and other instructional materials and recognize mathematical ideas as they appear in other contexts	throughout	throughout

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
B.8.1	Read, represent, and interpret various rational numbers (whole numbers, integers, decimals, fractions, and percents) with verbal descriptions, geometric models, and mathematical notation (e.g., expanded, scientific, exponential)	2-5, 22-25, 62, 63, 81, 82, 129-133, 161 SB: 2, 17, 65, 104	240, 241 SB: 200
B.8.2	Perform and explain operations on rational numbers (add, subtract, multiply, divide, raise to a power, extract a root, take opposites and reciprocals, determine absolute value)	16, 17, 26-31, 68-77, 93-96, 124-127, 143, 148 SB: 19-24, 56-60, 73-83, 99, 117-126	242-248, 294-305 SB: 201-207, 229
B.8.3	Generate and explain equivalencies among fractions, decimals, and percents	134, 162-167 SB: 110, 111, 131, 132	
B.8.4	Express order relationships among rational numbers using appropriate symbols (>,<)	6, 7, 64, 89, 90, 135, 136 SB: 5, 54, 67, 112	
B.8.5	Apply proportional thinking in a variety of problem situations that include, but are not limited to		
	<ul style="list-style-type: none"> ratios and proportions (e.g., rates, scale drawings, similarity) 	122, 156 SB: 102	220-227, 276, 277 SB: 188-192, 222, 223
	<ul style="list-style-type: none"> percents, including those greater than 100 and less than one (e.g. discounts, rate of increase or decrease, sales tax) 	173-176 SB: 136	
B.8.6	Model and solve problems involving number-theory concepts such as		
	<ul style="list-style-type: none"> prime and composite numbers 	20 SB: 15	
	<ul style="list-style-type: none"> divisibility and remainders 	51	
	<ul style="list-style-type: none"> greatest common factors 	87 SB: 66	
	<ul style="list-style-type: none"> least common multiples 	97, 123 SB: 103, 141	
B.8.7	In problem-solving situations, select and use appropriate computational procedures with rational numbers such as		
	<ul style="list-style-type: none"> calculating mentally 	30, 35, 152	
	<ul style="list-style-type: none"> estimating 	30, 31, 41, 52, 53, 105 SB: 25, 26, 42, 43	
	<ul style="list-style-type: none"> creating, using, and explaining algorithms 	36, 39, 50, 112 SB: 33, 37	
	<ul style="list-style-type: none"> using technology (e.g., scientific calculators, spreadsheets) 	31 (T.G.)	

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
C.8.1	Describe special and complex two- and three-dimensional figures (e.g., rhombus, polyhedron, cylinder) and their component parts (e.g., base, altitude, and slant height) by		
	<ul style="list-style-type: none"> naming, defining, and giving examples 		190-192 SB: 157
	<ul style="list-style-type: none"> comparing, sorting, and classifying them 		191 SB: 158, 159
	<ul style="list-style-type: none"> identifying and contrasting their properties (e.g., symmetrical, isosceles, regular) 		191, 192
	<ul style="list-style-type: none"> drawing and constructing physical models to specifications 		190 SB: 153
	<ul style="list-style-type: none"> explaining how these figures are related to objects in the environment 		
C.8.2	Identify and use relationships among the component parts of special and complex two- and three-dimensional figures (e.g., parallel sides, congruent faces)		203 SB: 170
C.8.3	Identify three-dimensional shapes from two-dimensional perspectives and draw two-dimensional sketches of three-dimensional objects preserving their significant features		193 SB: 162
C.8.4	Perform transformations on two-dimensional figures and describe and analyze the effects of the transformations on the figures		204 SB: 171
C.8.5	Locate objects using the rectangular coordinate system		201, 202, 310 SB: 168
D.8.1	Identify and describe attributes in situations where they are not directly or easily measurable (e.g., distance, area of an irregular figure, likelihood of occurrence)		209
D.8.2	Demonstrate understanding of basic measurement facts, principles, and techniques including the following		
	<ul style="list-style-type: none"> approximate comparisons between metric and US Customary units (e.g., a liter and a quart are about the same; a kilometer is about six-tenths of a mile) 		
	<ul style="list-style-type: none"> knowledge that direct measurement produces approximate, not exact, measures 		230
	<ul style="list-style-type: none"> the use of smaller units to produce more precise measures 		230
D.8.3	Determine measurement directly using standard units (metric and US Customary) with these suggested degrees of accuracy		
	<ul style="list-style-type: none"> lengths to the nearest mm or 1/16 of an inch 		228, 229 SB: 194, 195

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•	weight (mass) to the nearest 0.1 g or 0.5 ounce		234 SB: 199
•	liquid capacity to the nearest ml		233 SB: 198
•	angles to the nearest degree		186
•	temperature to the nearest C or F		
•	elapsed time to the nearest second		
D.8.4	Determine measurements indirectly using		
•	estimation		
•	conversion of units within a system (e.g., quarts to cups, millimeters to centimeters)		233, 234 SB: 198, 199
•	ratio and proportion (e.g., similarity, scale drawings)		223-227 SB: 189-192
•	geometric formulas to derive lengths, areas, volumes of common figures (e.g., perimeter, circumference, surface area)		207-214 SB: 176-181
•	the Pythagorean relationship		218, 219 SB: 186
•	geometric relationships and properties for angle size (e.g., parallel lines and transversals; sum of angles of a triangle; vertical angles)		194-196, 200 SB: 163-167
E.8.1	Work with data in the context of real-world situations by		
•	formulating questions that lead to data collection and analysis	57 (T.G.)	
•	designing and conducting a statistical investigation	57 (T.G.)	
•	using technology to generate displays, summary statistics, and presentations		
E.8.2	Organize and display data from statistical investigations using		
•	appropriate tables, graphs, and/or charts (e.g., circle, bar or line for multiple sets of data)		
•	appropriate plots (e.g., line, stem-and-leaf, box, scatter)		
E.8.3	Extract, interpret, and analyze information from organized and displayed data by using		
•	frequency and distribution, including mode and range	57 SB: 50	
•	central tendencies of data (mean and median)	56, 57 SB: 47-50	
•	indicators of dispersion (e.g., outliers)		
E.8.4	Use the results of data analysis to		
•	make predictions		

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	<ul style="list-style-type: none"> develop convincing arguments 		
	<ul style="list-style-type: none"> draw conclusions 		
E.8.5	Compare several sets of data to generate, test, and, as the data dictate, confirm or deny hypotheses		
E.8.6	Evaluate presentations and statistical analysis from a variety of sources for		
	<ul style="list-style-type: none"> credibility of the source 		
	<ul style="list-style-type: none"> techniques of collection, organization, and presentation of data 		
	<ul style="list-style-type: none"> missing or incorrect data 		
	<ul style="list-style-type: none"> inferences 		
	<ul style="list-style-type: none"> possible sources of bias 		
E.8.7	Determine the likelihood of occurrence of simple events by		
	<ul style="list-style-type: none"> using a variety of strategies to identify possible outcomes (e.g., lists, tables, tree diagrams) 		
	<ul style="list-style-type: none"> conducting an experiment 		
	<ul style="list-style-type: none"> designing and conducting simulations 		
	<ul style="list-style-type: none"> applying theoretical notions of probability (e.g., that four equally likely events have a 25% chance of happening) 		
F.8.1	Work with algebraic expressions in a variety of ways, including		
	<ul style="list-style-type: none"> using appropriate symbolism, including exponents and variables 		249-252 SB: 208
	<ul style="list-style-type: none"> evaluate expressions through numerical substitution 		207
	<ul style="list-style-type: none"> generating equivalent expressions 		260, 261 SB: 209, 210
	<ul style="list-style-type: none"> adding and subtracting expressions 		264, 265 SB: 209, 210
F.8.2	Work with linear and nonlinear patterns and relationships in a variety of ways, including		
	<ul style="list-style-type: none"> representing them with tables, with graphs, and with algebraic expressions, equations, and inequalities 		231, 232, 312-317 SB: 196, 197
	<ul style="list-style-type: none"> describing and interpreting their graphical representations (e.g., slope, rate of change, intercepts) 		321-326 SB: 241-243
	<ul style="list-style-type: none"> using them as models of real-world phenomena 		273, 274, 312, 314 SB: 245
	<ul style="list-style-type: none"> describing a real-world phenomenon that a given graph might represent 		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
F.8.3	Recognize, describe, and analyze functional relationships by generalizing a rule that characterizes the pattern of change among variables. These functional relationships include exponential growth and decay (e.g., cell division, depreciation)		231, 232, 311 SB: 196, 197, 236, 237
F.8.4	Use linear equations and inequalities in a variety of ways, including		
	<ul style="list-style-type: none"> writing them to represent problem situations and to express generalizations 	55 SB: 46	273, 274 SB: 204, 224
	<ul style="list-style-type: none"> solving them by different methods (e.g., informally, graphically, with formal properties, with technology) 		225-261, 283-287 SB: 212, 213
	<ul style="list-style-type: none"> writing and evaluating formulas (including solving for a specified variable) 		207-214 SB: 176-181
	<ul style="list-style-type: none"> using them to record and describe solution strategies 		272
F.8.5	Recognize and use generalized properties and relations, including		
	<ul style="list-style-type: none"> additive and multiplicative property of equations and inequalities 		256 SB: 214, 215
	<ul style="list-style-type: none"> commutatively and associatively of addition and multiplication 	10-12 SB: 9	
	<ul style="list-style-type: none"> distributive property 	13 SB: 10	
	<ul style="list-style-type: none"> inverse and identities for addition and multiplication 	15, 43 SB: 12	