



Math Teachers Press, Inc.

4850 Park Glen Road, Minneapolis, MN 55416
 phone (800) 852-2435 fax (952) 546-7502

PENNSYLVANIA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT STANDARDS CORRELATED TO *MOVING WITH ALGEBRA GRADE 7*

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.A	NUMBERS AND OPERATIONS		
M7.A.1	Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.		
M7.A.1.1	Express numbers in equivalent forms.	3, 23, 25, 134, 140-142, 161- 165, 167, 168 SB: 2, 17, 18, 110, 111, 116, 130- 132, 145	
M7.A.1.1.1	Convert between fractions, decimals and/or percents (e.g., 20% = 0.2 = 1/5) (terminating decimals only).	134, 140-142, 161-165, 167, 168 SB: 110, 111, 116, 130-132, 145	
M7.A.1.2	Compare quantities and/or magnitudes of numbers.	6, 7, 64, 89, 90, 135, 136 SB: 5, 6, 54, 67, 69, 112, 113, 139, 140	
M7.A.1.2.1	Compare and/or order integers, mixed numbers, fractions and decimals (fractions and decimals may be mixed – no more than 5 numbers in a set to be ordered).	64, 89, 90, 135, 136 SB: 54, 67, 69, 112, 113	242 SB: 201
M7.A.1.2.2	Locate/identify decimals, fractions, mixed numbers and/or integers on a number line (a mix of these number forms may be on the same number line).	63, 84, 130, 131, 137, 167 SB: 65, 104, 107	241-243 SB: 200-201
M7.A.2	Understand the meanings of operations, use operations and understand how they relate to each other.		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.A.2.1	Complete calculations by applying the order of operations.		290-293 SB: 226-228
M7.A.2.1.1	Use the order of operations to simplify numerical expressions (may use parentheses, brackets, +, -, x, ÷, squares up to 10^2 and cubes up to 4^3 ; whole numbers only).	14 SB: 11	290-293 SB: 226-228
M7.A.2.2	Solve problems using ratios, proportions, percents and/or rates.	122, 169-179 SB: 102, 133-135, 138	
M7.A.2.2.1	Write ratios to compare quantities (e.g., ratio of boys to girls).	122 SB: 102	220
M7.A.2.2.2	Solve for a variable in a given proportion.	122 SB: 102	222 B: 187, 188
M7.A.2.2.3	Use proportions to determine if two quantities are equivalent (e.g., similar figures, prices of different sized items, etc.).		221, 222
M7.A.2.2.4	Calculate and/or apply unit rates or unit prices (terminating decimals through the hundredth place only).		277 SB: 223, 246
M7.A.2.2.5	Select and/or use ratios or proportions to solve problems.	171, 172, 174, 175 SB: 134-136	225, 275-278 SB: 187-189, 222, 223, 246
M7.A.2.2.6	Use proportions to find the missing length of a side in similar figures.		224, 225 SB: 189
M7.A.3	Compute accurately and fluently and make reasonable estimates.		
M7.A.3.1	Apply estimation strategies to a variety of problems.	30, 31, 41, 52, 53, 103, 104, 117, 158, 172 SB: 25, 26, 42, 43, 84-86, 100, 124, 135	186, 206, 217 SB: 155, 185
M7.A.3.1.1	Estimate answers to problems involving whole numbers, decimals, fractions or mixed numbers.	30, 31, 41, 52, 53, 103, 104, 117, 158, 172 SB: 25, 26, 42, 43, 84-86, 100, 124, 135	186, 206, 217 SB: 155, 185
M7.A.3.2	Compute accurately with and without use of a calculator.	Throughout	Throughout

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.A.3.2.1	Solve problems involving operations (=, -, x, ÷) of whole numbers, decimals, fractions, or mixed numbers (straight computation or word problems).	14, 29, 32, 105, 116, 158-160 SB: 11, 27, 46, 88, 129	275-278 SB: 217, 218, 222, 223, 245, 246
M7.A.3.2.2	Solve problems involving addition and subtraction of integers.	68-73 SB: 56, 58	244, 245 SB: 202-204
M7.B	MEASUREMENT		
M7.B.1	Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.		
M7.B.1.1	Add, subtract, or convert measurements.		
M7.B.1.1.1	Add, subtract, or convert measurements, using only the units below, with and without regrouping (e.g., 4 ft- 2 ft 5 in = 1 ft 7 in). Answer should be converted to the largest whole unit (e.g., 37 oz = 2 lb 5 oz or 39 in = 1 yd 3 in. Conversion chart provided on the reference sheet.		
•	in, ft, yd		232
•	fl oz, cup, pint, quart, gallon		233
•	oz, lb		234
•	sec, min, hours, days		232
•	metric units including milli, centi and kilo (m, g or L)		SB: 198, 199
M7.B.2	Apply appropriate techniques, tools and formulas to determine measurements.		
M7.B.2.1	Develop, use and/or describe strategies to find the measure of length, perimeter, circumference, area or volume.		206-214 SB: 174-183
M7.B.2.1.1	Develop and/or use strategies to find the perimeter and/or area of compound figures (compound figures should only include quadrilaterals and triangles). Area formulas provided on the reference sheet.		206 SB: 174
M7.B.2.1.2	Find the circumference and/or area of circles (formulas provided on the reference sheet).		209 SB: 177
M7.B.2.1.3	Find the area of triangles and/or all types of parallelograms (formulas provided on the reference sheet).		210, 211 SB: 178, 179, 183

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.B.2.2	Construct, interpret and/or use scale drawings to solve real-world problems.		226, 227 SB: 191, 192
M7.B.2.2.1	Interpret and/or apply scales shown on maps, blueprints, models, etc.		226, 227 SB: 191, 192
M7.B.2.2.2	Determine and/or apply an appropriate scale for reduction or enlargement.		226, 227 SB: 191, 192
M7.C	GEOMETRY		
M7.C.1	Analyze characteristics and properties of two- and three-dimensional geometric shapes and demonstrate understanding of geometric relationships.		
M7.C.1.1	Define and/or apply basic properties of two- and three-dimensional geometric shapes.		188-193 SB: 156-161
M7.C.1.1.1	Identify, describe and/or define diameter, radius, chord and/or circumference in circles.		183 SB: 149
M7.C.1.1.2	Solve problems involving the relationship between the radius and diameter of the same circle.		SB: 149
M7.C.1.1.3	Identify parallel, perpendicular and/or skew line segments within three-dimensional figures.		
M7.C.1.2	Identify congruence and/or similarity in polygons.		203, 223-225
M7.C.1.2.1	Identify and/or use polygons that are similar and/or congruent, given either measurements or tic and angle marks.		203, 223-225 SB: 170, 189, 190
M7.C.1.2.2	Identify corresponding sides and/or angles of congruent or similar polygons.		203, 223-225 SB: 170, 189, 190
M7.C.2	Identify and/or apply concepts of transformations or symmetry.		
	Not assessed at Grade 7.		204, 205 SB: 171, 173
M7.C.3	Locate points or describe relationships using the coordinate plane.		
M7.C.3.1	Locate, plot and/or describe points on a coordinate plane.		203, 310 SB: 168
M7.C.3.1.1	Plot and/or identify ordered pairs on a coordinate plane (all four quadrants).		201, 202, 310 SB: 168

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.C.3.1.2	Identify Quadrants I, II, III, IV, the x-*y-axes and the origin on a coordinate plane.		202, 310 SB: 168
M7.D	ALGEBRAIC CONCEPTS		
M7.D.1	Demonstrate an understanding of patterns, relations and functions.		
M7.D.1.1	Recognize, reproduce, extend and/or describe patterns.		307-309 SB: 234, 235
M7.C.1.1.1	Describe, extend or find a missing element of a pattern (show 3 repetitions of the pattern)		307-309 SB: 234, 235
	<ul style="list-style-type: none"> fractions or decimals - may use only one operation from +, - or x 		
	<ul style="list-style-type: none"> whole numbers – may use only one operation from +, -, x, ÷ or squares 		307-309 SB: 234, 235
M7.D.2	Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.		
M7.D.2.1	Select and/or use appropriate strategies to solve or represent equations or expressions.		254-261
M7.D.2.1.1	Select and/or use appropriate strategies to solve one-step equations (no negative numbers).		255-259
M7.D.2.1.2	Use substitution of one and/or two variables to simplify expressions (whole numbers only – use order of operations).		
M7.D.2.2	Create and/or interpret expressions, equations or inequalities that model problem situations.		249-252, 283-287 SB: 207, 208, 225
M7.D.2.2.1	Identify expressions, equations or inequalities that model mathematical situations (using whole numbers or decimals, no more than two operations and one variable).		262-265 SB: 209, 210
M7.D.3	Analyze change in various contexts.		
M7.D.3.1	Describe the relationship between two variables (e.g., time, temperature).		311, 312, 332, 333 SB: 236
M7.D.3.1.1	Solve problems involving a constant rate of change (e.g., word problems, graphs or data tables).		312, 313, 315, 332, 333 SB: 236, 237

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.D.3.1.2	Describe and/or use the relationship of data displayed on a rate of change graph (e.g., how does the x-axis data relate to the y-axis data).		312-314, 316, 317, 332, 333 SB: 236-239, 254
M7.D.4	Describe or use models to represent quantitative relationships.		
	Not assessed at Grade 7.		
M7.E	DATA ANALYSIS AND PROBABILITY		
M7.E.1	Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.		
M7.E.1.1	Interpret data shown in complex data displays.		
M7.E.1.1.1	Analyze data and/or answer questions pertaining to data represented in histograms, double bar graphs, multiple line graphs or stem-and-leaf plots.		
M7.E.2	Select and/or use appropriate statistical methods to analyze data.		
M7.E.2.1	Describe, compare and/or contrast data using measures of mean, median, mode or range.	56, 57 SB: 47-50	
M7.E.2.1.1	Identify/calculate the mean (average), median, mode or range of a set of data.	56, 57 SB: 47-50	
M7.E.2.1.2	Decide/choose which measure of central tendency (mean, median, mode or range) would be most appropriate for a given situation.	57	
M7.E.3	Understand and/or apply basic concepts of probability or outcomes		
M7.E.3.1	Determine theoretical or experimental probability.		
M7.E.3.1.1	Find the theoretical probability of a simple and/or compound event (answer written as a fraction in lowest terms – any compound events should be independent).		
M7.E.3.1.2	Find the theoretical probability of an event not occurring (e.g., what is the probability of not rolling a 1 on a number cube).		
M7.E.3.1.3	use data displayed in charts, graphs or tallies to find experimental probability.		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
M7.E.4	Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.		
M7.E.4.1	Draw conclusions and/or make predictions based on data displays.		
M7.E.4.1.1	Formulate predictions and/or draw conclusions based on data displays (bar graphs, circle graphs or line graphs or probability).	179	