Math Teachers Press, Inc.
4850 Park Glen Road, Minneapolis, MN 55416
phone (800) 852-2435 fax (952) 546-7502

Arizona Mathematics Standards Correlated to *Moving with Math Extensions Grade 7*

		Student Book	Skill Builders
	STRAND 1: NUMBER AND OPERATIONS		
	Concept 1: Number Sense		
PO.1	Recognize and convert between expressions for positive and negative rational numbers, including fractions, decimals, percents, and ratios.	37, 38, 46, 47	20-1, 25-2
PO.2	Find or use factors, multiples, or prime factorization within a set of numbers.	4, 27	6-2, 26-2
PO.3	Compare and order rational numbers using various models and representations.	23, 25	11-4
PO.4	Model and solve simple problems involving absolute value.		48-2
	Concept 2: Numerical Operations		
PO.1	Add, subtract, multiply, and divide integers.	20	
PO.2	Solve problems with rational numbers and appropriate operations using exact answers or estimates.	31-34	43-6
PO.3	Solve problems involving percentages, ratio and proportion, including tax, discount, tips, and part/whole relationships.	49-53	27-1, 28-1, 46-1
PO.4	Represent and interpret numbers using scientific notation (positive exponents only).		
PO.5	Simplify numerical expressions using the order of operations and appropriate mathematical properties.		
	Concept 3: Estimation		
PO.1	Estimate and apply benchmarks for rational numbers and common irrational numbers.		
PO.2	Make estimates appropriate to a given situation.	34, 66	22-2
PO.3	Estimate square roots of numbers less than 1000 by locating them between two consecutive whole numbers.		
PO.4	Estimate the measure of an object in one system of units given the measure of that object in another system and the approximate conversion factor.		
	STRAND 2: DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS		
	Concept 1: Data Analysis (Statistics)		

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PO.1	Solve problems by selecting, constructing and interpreting displays of data including multi-line graphs and scatterplots.	78-80	47-2, 47-3
PO.2	Interpret trends in a data set, estimate values for missing data, and predict values for points beyond the range of the data set.		
PO.3	Identify outliers and determine their effect on mean, median, mode, and range.		
PO.4	Distinguish between a simple random and non-random sample.		
	Concept 2: Probability		
PO.1	Determine conditional probabilities (experimental) in compound probability experiments.		
PO.2	Experiment with two different events to determine whether the two events are dependent or independent of each other.		
PO.3	Compare the results of multiple repetitions of the same probability experiment to the theoretical probability.		
PO.4	Compare probabilities to determine fairness in experimental situations.		
	Concept 3: Systematic Listing and Counting		
PO.1	Analyze relationships among the tree diagrams where items repeat and do not repeat; make numerical connections to the multiplication principle of counting.		
PO.2	Solve counting problems using Venn diagrams and represent the answer algebraically.		
	Concept 4: Vertex-Edge Graphs		
PO.1	Use vertex-edge graphs and algorithmic thinking to represent and find solutions to practical problems related to Euler/Hamilton paths and circuits.		
	STRAND 3: PATTERNS, ALGEBRA, AND FUNCTIONS		
	Concept 1: Patterns		
PO.1	Recognize, describe, create, and analyze numerical and geometric sequences using tables or graphs; make conjectures about these sequences.		
	Concept 2: Functions and Relationships		
PO.1	Use a table of values to graph an equation or proportional relationship; describe the graph's characteristics.	19	
	Concept 3: Algebraic Representations		
PO.1	Write a single variable algebraic expression or one-step equation given a contextual situation.	15	50-1
PO.2	Evaluate an expression containing one or two variables by substituting numbers for the variables.		

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PO.3	Solve multi-step equations using inverse properties with rational numbers.		
PO.4	Translate between graphs and tables that represent a linear equation.		
PO.5	Create and solve two-step equations that can be solved using inverse operations with rational numbers.		
PO.6	Create and solve one-step inequalities with whole numbers.		
	Concept 4: Analysis of Change		
PO.1	Use graphs and tables to model and analyze change.		
	STRAND 4: GEOMETRY AND MEASUREMENT		
	Concept 1: Geometric Properties		
PO.1	Recognize the relationship between central angles and intercepted arcs; identify arcs and chords of a circle.		
PO.2	Analyze and determine relationships between angles created by parallel lines cut by a transversal.		
PO.3	Draw and classify 3-dimensional figures with appropriate labels showing specified attributes of parallelism, congruence, perpendicularity, and symmetry.		
PO.4	Describe the relationship between the number of sides in a regular polygon and the sum of its interior angles.		
PO.5	Identify corresponding parts of congruent figures.		
	Concept 2: Transformation of Shapes		
PO.1	Model the result of a double transformation (translations or reflections) of a 2-dimensional figure on a coordinate plane using all four quadrants.		
	Concept 3: Coordinate Geometry		
	No performance objectives at this grade level.		
	Concept 4: Measurement		
PO.1	Solve problems involving the circumference and area of a circle by calculating and estimating.	71, 72	39-1
PO.2	Identify polygons having the same perimeter or area.		
PO.3	Calculate the area and perimeter of composite 2-dimensional figures.		
PO.4	Determine actual lengths based on scale drawings or maps.		46-2
PO.5	Create a net to calculate the surface area of a given solid.		
PO.6	Identify the appropriate unit of measure to compute the volume of an object and justify reasoning.	75, 76	41-1
PO.7	Measure to the appropriate degree of accuracy and justify reasoning.	63	34-2

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	STRAND 5: STRUCTURE AND LOGIC		
	Concept 1: Algorithms and Algorithmic Thinking		
PO.1	Create an algorithm to determine the area of a given composite figure.		
	Concept 2: Logic, Reasoning, Problem Solving, and Proof		
PO.1	Analyze a problem situation to determine the question(s) to be answered.	13	43-1
PO.2	Analyze and compare mathematical strategies for efficient problem solving; select and use one or more strategies to solve a problem.	14	43-1
PO.3	identify relevant, missing, and extraneous information related to the solution to a problem.	13	43-1
PO.4	Represent a problem situation using multiple representations, describe the process used to solve the problem, and verify the reasonableness of the solution.	14	
PO.5	Apply a previously used problem-solving strategy in a new context.	15	
PO.6	Communicate the answer(s) to the question(s) in a problem using appropriate representations, including symbols and informal and formal mathematical language.	15	
PO.7	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.	16	
PO.8	Make and test conjectures based on information collected from explorations and experiments.	77	
PO.9	Solve logic problems using multiple variables and multiple conditional statements using words, pictures, and charts.		
PO.10	Demonstrate and explain that the process of solving equations is a deductive proof.		
PO.11	Use manipulatives and other modeling techniques to defend π (pi) as a ratio of circumference to diameter.	71	