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

NEVADA MATHEMATICS STANDARDS CORRELATED TO *MOVING WITH MATH® EXTENSIONS GRADE 7*

		Student Book	Skill Builders
1.0	**NUMBERS, NUMBER SENSE, AND COMPUTATION**		
	Students will accurately calculate and use estimation techniques, number relationships, operation rules, and algorithms; they will determine the reasonableness of answers and the accuracy of solutions to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.		
	Place Value		
1.7.1	Identify and use place value in mathematical and practical situations.	1, 35	4-1, 18-1
•	Write, identify, and use powers of 10 from 10^3 through 10^6.		
	Fractions		
1.7.2	Translate among fractions, decimals, and percents, including fractional percents.	37, 38, 46, 47	20-1, 25-1, 25-2
	Comparing and Ordering		
1.7.3	Compare and order a combination of rational numbers, including fractions, decimals, percents, and integers in mathematical and practical situations.		
	Facts		
1.7.5	Identify absolute values of integers.		48-2
	Computation		
1.7.7	Calculate with integers and other rational numbers to solve mathematical and practical situations.	20, 40	48-1
•	Use order of operations to evaluate expressions and solve one-step equations (containing rational numbers).		
1.7.8	Identify and apply the distributive, commutative, and associative properties of rational numbers to solve problems.	5	2-1, 2-2
2.0	**PATTERNS, FUNCTIONS, AND ALGEBRA**		

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	Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs), of patterns, functions, and algebraic relations as modeled in practical situations to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.		
	Patterns		
2.7.1	Use and create tables, charts, and graphs to extend a pattern in order to describe a linear rule, including integer values.	16	42-1
	Variables and Unknowns		
2.7.2	Evaluate formulas and algebraic expressions for given integer values.	72, 74	38-2, 39-1, 40-2
•	Solve and graphically represent equations and inequalities in one variable with integer solutions.		
	Number Sentences, Expressions, and Polynomials		
2.7.3	Simplify algebraic expressions by combining like terms.		
	Relations and Functions		
2.7.4	Generate and graph a set of ordered pairs to represent a linear equation.	19	
	Linear Equations and Inequalities		
2.7.5	Identify linear equations and inequalities.		
•	Model and solve equations using concrete and visual representations.		
3.0	**MEASUREMENT**		
	Students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.		
	Comparison, Estimation, and Conversion		
3.7.1	Estimate and compare corresponding units of measure for area and volume/capacity between customary and metric systems.		
	Precision Measurements		
3.7.2	Given a measurement, identify the greatest possible error.		
	Formulas		
3.7.3	Select, model, and apply formulas to find the volume and surface area of solid figures.	76	41-1

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	Money		
3.7.4	Calculate simple interest in monetary problems.		
	Ratios and Proportions		
3.7.5	Write and apply proportions to solve mathematical and practical problems involving measurement and monetary conversations.	49, 50	
	Time		
3.7.6	Use elapsed time to solve practical problems.	62	34-1
4.0	**SPATIAL RELATIONSHIPS, GEOMETRY, AND LOGIC**		
	Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics.		
	Two-Dimensional Shapes		
4.7.1	Identify, classify, compare, and draw regular and irregular polygons.	59	31-1
•	Find and verify the sum of the measures of interior angles of triangles and quadrilaterals.		
	Congruence, Similarity, and transformations		
4.7.2	Make scale drawings using ratios and proportions.		
	Coordinate Geometry and Lines of Symmetry		
4.7.3	Demonstrate translation, reflection, and rotation using coordinate geometry and models.		32-1
•	Describe the location of the original figure and its transformation on a coordinate plane.		
	Three-Dimensional Figures		
4.7.4	Make a model of a three-dimensional figure from a two-dimensional drawing.		
•	Make a two-dimensional drawing of a three-dimensional figure.		
	Algebraic Connections		
4.7.5	Determine slope of a line, midpoint of a segment, and the horizontal and vertical distance between two points using coordinate geometry.		
	Lines, Angles, and Their Properties		
4.7.6	Describe the geometric relationships of parallel lines, perpendicular lines, triangles, quadrilaterals and bisectors.	57-59	
	Triangles		

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4.7.7	Model the Pythagorean Theorem and solve for the hypotenuse.		
	Construction		
4.7.8	Construct and identify congruent angles, parallel lines, and perpendicular lines.	57	
	Logic		
4.7.9	Make and test conjectures to explain observed mathematical relationships and to develop logical arguments to justify conclusions.		
5.0	**DATA ANALYSIS**		
	Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections to solve problems, communicate, reason, and make connections within and beyond the field of mathematics		
	Data Collection and Organization		
5.7.1	Formulate questions that guide the collection of data.	17	47-2
•	Organize, display, and read data using the appropriate graphical representation (with and without technology).		47-2
	Central Tendency and Data Distribution		
5.7.2	Interpret graphical representations of data to describe patterns, trends, and data distribution.	78, 79	
	Interpretation of Data		
5.7.3	Analyze the effect a change of scale will have on statistical charts and graphs.		
	Permutations and Combinations		
5.7.4	Find the number of permutations possible for an event in mathematical and practical situations.		47-4
	Experimental and Theoretical Probability		
5.7.5	Find the theoretical probability of an event using different counting methods including sample spaces and compare that probability with experimental results.		
•	Represent the probability of an event as a number between 0 and 1.	77	47-1
	Statistical Inferences		
5.7.6	Interpolate and extrapolate from data to make predictions for a given set of data.		47-1
	PROBLEM SOLVING		

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	Students will develop their ability to solve problems by engaging in developmentally appropriate opportunities where there is a need to use various approaches to investigate and understand mathematical concepts in order to:		
	- Formulate their own problems		
	- Find solutions to problems from everyday situations		
	- Develop and apply strategies to solve a variety of problems		
	- Integrate mathematical reasoning, communication and connections		
•	Generalize solutions and apply previous knowledge to new problem solving situations.	10, 25	
•	Determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem.	13-15	43-1
•	Apply problem solving strategies until a solution is found or it is clear that no solution exists.	13-15	43-1
•	Interpret and solve a variety of mathematical problems by paraphrasing.	13 (T.G.)	43-2
•	Identify necessary and extraneous information.		43-2, 43-4
•	Check the reasonableness of a solution.	13-15	22-2
•	Apply technology as a tool in problem solving situations.	44	
	MATHEMATICAL COMMUNICATION		
	Students will develop their ability to communicate mathematically by solving problems where there is a need to obtain information from the real world through reading, listening, and observing in order to:		
	- Translate information into mathematical language and symbols		
	- Process information mathematically		
	- Present results in written, oral, and visual formats		
	- Discuss and exchange ideas about mathematics as a part of learning		
	- Read a variety of fiction and nonfiction texts to learn about mathematics		
	- Use mathematical notation to communicate and explain problems		
•	Use formulas, algorithms, inquiry, and other techniques to solve mathematical problems	10, 16, 24, 31	
•	Evaluate written and oral presentations in mathematics.		
•	Identify and translate key words and phrases that imply mathematical operations.	13	
•	Model and explain mathematical relationships using oral, written, graphic, and algebraic methods.	throughout	
•	Use everyday language, both orally and in writing, to communicate strategies and solutions to mathematical problems.	throughout	

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	MATHEMATICAL REASONING		
	Students will develop their ability to reason mathematically by solving problems where there is a need to investigate mathematical ideas and construct their own learning in all content areas in order to:		
	- Reinforce and extend their logical reasoning abilities		
	- reflect on, clarify, and justify their thinking		
	- Ask questions to extend their thinking		
	- Use patterns and relationships to analyze mathematical situations		
	- Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems		
•	Recognize and apply deductive and inductive reasoning.		
•	Review and refine the assumptions and steps used to derive conclusions in mathematical arguments.		
•	Justify answers and the steps taken to solve problems with and without manipulatives and physical models.		
	MATHEMATICAL CONNECTIONS		
	Students will develop the ability to make mathematical connections by solving problems where there is a need to view mathematics as an integrated whole in order to:		
	- Link new concepts to prior knowledge		
	- Identify relationships between content strands		
	- Integrate mathematics with other disciplines		
	- Allow the flexibility to approach problems in a variety of ways within and beyond the field of mathematics		
•	Use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics.	6	
•	Use manipulatives and physical models to explain the relationships between concepts and procedures.	throughout	
•	Use the connections among mathematical topics to develop multiple approaches to problems.	13, 14	
•	Apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science.	2, 18	
•	Identify, explain, and apply mathematics in everyday life.	13, 17, 18	