



Math Teachers Press, Inc.

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NEVADA MATHEMATICS STANDARDS CORRELATED TO MOVING WITH ALGEBRA GRADE 8

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
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	Represent numbers using scientific notation in mathematical and practical situations.	22, 23, 25 SB: 17, 18	
	Fractions		
1.8.2	Translate among fractions, decimals, and percents, including percents greater than 100 and percents less than 1.	134, 140-142, 161-168 SB: 105, 106, 110, 111, 115, 116, 130-132, 145	
•	Explain and use the relationship among equivalent representations of rational numbers in mathematical and practical situations.	140-142, 161- 169, 171-175, 177, 179 SB: 133, 134, 136- 138	
	Comparing and Ordering		
1.8.3	Compare and order real numbers, including powers of whole numbers in mathematical and practical situations.	6, 7, 64, 88-90, 135, 136 SB: 5, 6, 54, 67- 69, 112, 113, 139, 144	241, 242 SB: 200, 201, 204
	Facts		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
1.8.5	Identify perfect squares to 225 and their corresponding square roots.	16	215, 216, 304, 305 SB: 184, 233
	Estimating and Estimation Strategies		
1.8.6	Use estimation strategies to determine the reasonableness of an answer in mathematical and practical situations.	Throughout	Throughout
	Computation		
1.8.7	Calculate with real numbers to solve mathematical and practical situations.	26-29, 34-51, 68-78, 87, 93-102, 107-115, 123-127, 143-144, 147-157, 169-171, 173-179 SB: 19-24, 29-41, 56-60, 73-83, 89-99, 101, 103, 117, 118, 120-123, 125-127, 133, 134, 136-138, 141-143	Throughout
	<ul style="list-style-type: none"> Use order of operations to solve equations in the real number systems. 		
	Solving Problems and Number Theory		
1.8.8	Identify and apply the identity property, inverse property, and the absolute value of real numbers to solve problems.	15, 42, 113-116, 118, 119 SB: 12, 36, 96-101	242, 243, 256, 259, 261, 266, 267, 270-272 SB: 201, 213, 216-219, 221, 250, 251
2.0	PATTERNS, FUNCTIONS, AND ALGEBRA		
	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		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
2.8.1	Find the missing term in a numerical sequence or a pictorial representation of a sequence.	35, 122 SB: 30, 102	199, 221, 222, 307-309 SB: 234, 235
	Variables and Unknowns		
2.8.2	Evaluate formulas and algebraic expressions using rational numbers (with and without technology).		231-234, 311-317 SB: 196, 197, 236-239, 254
	<ul style="list-style-type: none"> Solve and graphically represent equations and inequalities in one variable, including absolute value. 		242, 243, 281-287 SB: 201, 225
	Number Sentences, Expressions, and Polynomials		
2.8.3	Add and subtract binomials.		263-265 SB: 209, 210
	Relations and Functions		
2.8.4	Identify, model, describe, and evaluate functions (with and without technology).		
	<ul style="list-style-type: none"> Translate among verbal descriptions, graphic, tabular, and algebraic representations of mathematical situations (with and without technology). 		231-234, 311-331 SB: 196, 197, 236-239, 240-244, 248, 249, 254
	Linear Equations and Inequalities		
2.8.5	Solve linear equations and represent the solution graphically.		281
	<ul style="list-style-type: none"> Solve inequalities and represent the solution on a number line. 		282-287 SB: 225
	Algebraic Representations and Applications		
2.8.6	Describe how changes in the value of one variable affect the values of the remaining variables in a relation.		231-234, 311-317 SB: 196, 197, 236-239, 254
3.0	MEASUREMENT		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
	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		
3.8.1	Estimate and convert units of measure for mass and capacity within the same measurement system (customary and metric).		233, 234 SB: 198, 199
	Precision in Measurements		
3.8.2	Demonstrate an understanding of precision, error, and tolerance when using appropriate measurement tools.		228-230 SB: 193-195, 253
	Formulas		
3.8.3	Identify how changes in a dimension of a figure effect changes in its perimeter, area and volume.		210 SB: 183
	Money		
3.8.4	Calculate percents in monetary problems.	169, 170, 172-178 SB: 133. 136-138	
	Ratios and Proportions		
3.8.5	Apply ratios and proportions to calculate rates and solve mathematical and practical problems using indirect measure.		222, 225-227, 275-278 SB: 187-189, 191, 192, 222, 223, 246
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		
4.8.1	Find and use the sum of the measures of interior angles of polygons		196-199 Sb: 164-166
	Congruence, Similarity, and Transformations		

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4.8.2	Apply the properties of equality and proportionality to congruent or similar shapes.		203, 223, 224 SB: 169, 170, 190
	Coordinate Geometry and Lines of Symmetry		
4.8.3	Demonstrate dilation using coordinate geometry and models.		223, 224
	<ul style="list-style-type: none"> Describe the relationship between an original figure and its transformation or dilation. 		204 SB: 171, 172
	Algebraic Connections		
4.8.5	Calculate slope, midpoint, and distance using equations and formulas (with and without technology).		320-326, 330, 331 SB: 241-244, 248, 254
	<ul style="list-style-type: none"> Determine the x- and y- intercepts of a line. 		327, 328, 330, 331 SB: 243, 249
	Lines, Angles, and Their Properties		
4.8.6	Form generalizations and validate conclusions about geometric figures and their properties.		182-200 SB: 147-167
	Triangles		
4.8.7	Verify and explain the Pythagorean Theorem using a variety of methods.		218, 219
	<ul style="list-style-type: none"> Determine the measure of the missing side of a right triangle. 		219 SB: 186
	Constructions		
4.8.8	Construct geometric figures using a variety of tools.		193 SB: 162, 169
	Logic		
4.8.9	Represent logical relationships using conditional statements.		
5.0	DATA ANALYSIS		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
	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		
5.8.1	Formulate questions and design a study that guides the collection of data.	179 SB: 101	
	<ul style="list-style-type: none"> Organize, display, and read data including box and whisker plots (with and without technology). 		
	Central Tendency and Data Distribution	56, 57 SB: 47-50	
5.8.2	Select and apply appropriate measures of data distribution, using interquartile range and central tendency.		
	Interpretation of Data		
5.8.3	Evaluate statistical arguments that are based on data analysis for accuracy and validity.		
	Permutations and Combinations		
5.8.4	Find the number of combinations possible in mathematical and practical situations.		
	<ul style="list-style-type: none"> Distinguish between permutations and combinations. 		
	Experimental and Theoretical Probability		
5.8.5	Differentiate between the probability of an event and the odds of an event.		
	Statistical Inferences		
5.8.6	Formulate reasonable inferences and predictions through interpolation and extrapolation of data to solve practical problems.		
	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:		

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	- 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	32-34, 54, 55, 58, 59, 105, 106, 116, 118, 119, 145, 146, 159, 160 SB: 27, 28, 44-46, 51-53, 87, 88, 101, 119, 128, 129	Throughout
•	Evaluate written and oral presentations in mathematics	Throughout	Throughout
•	Identify and translate key words and phrases that imply mathematical operations	Throughout	Throughout
•	Model and explain mathematical relationships using oral, written, graphic, and algebraic methods	35, 63-78, 82-87, 89, 122, 128-132, 161-166, 168-171 SB: 54-60, 62-66, 102, 104-109, 130	Throughout
•	Use everyday language, both orally and in writing, to communicate strategies and solutions to mathematical problems.	Throughout	Throughout
	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		

		Part A Student Book Skill Builders (SB)	Part B Student Book Skill Builders (SB)
	- 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	Throughout	Throughout
	• Review and refine the assumptions and steps used to derive conclusions in mathematical arguments		Throughout
	• Justify answers and the steps taken to solve problems with and without manipulatives and physical models.	Throughout	Throughout
	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.		
	• Use manipulatives and physical models to explain the relationships between concepts and procedures	Throughout	Throughout
	• Use the connections among mathematical topics to develop multiple approaches to problems	169, 171-177, 179 SB: 133, 134, 136- 138	Throughout
	• Apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science.	83	
	• Identify, explain, and apply mathematics in everyday life.	Throughout	Throughout