Mathematics Standards Bridge Document
8th Grade

Numbers, Number Sense & Computation	
Former Standard (2001)	Revised NV State Standard (2006)
1.8.1 I/S Read, write, add, subtract, multiply, and divide real numbers in various forms including radicals, exponential, and scientific notation.	1.8.7 I/S Calculate with real numbers to solve mathematical and practical situations. Use order of operations to solve equations in the real number system.
1.8.2 E/S Compute with rational and irrational numbers to solve a variety of problems including rates, recipes, unit costs, and percents (e.g., discounts, interest, sale, prices, commissions, taxes).	
1.8.3 I/L Explain and apply number theory and the properties of real numbers to solve problems.	1.8.8 I/L Identify and apply the identity property, inverse property, and the absolute value of real numbers to solve problems.
1.8.6 E/S Compare and order rational numbers.	1.8.3 E/S Compare and order real numbers, including powers of whole numbers in mathematical and practical situations.
1.8.7 E/S Estimate in problem-solving situations and in practical applications; determine the reasonableness of the answer and verify the results.	1.8.6 E/S Use estimation strategies to determine the reasonableness of an answer in mathematical and practical situations.
1.8.9 E/S Explain the relationship among fractions, decimals, and percents; translate among various representations of equal numbers (e.g., from fractions to decimals to percents, various forms of "1" such as 3/3 or 16/16) to solve problems efficiently.	1.8.2 E/S Translate among fractions, decimals, and percents, including percents greater than 100 and percents less than 1. Explain and use the relationship among equivalent representations of rational numbers in mathematical and practical situations.

	New Standard **1.8.1** **E/S** **Represent numbers using scientific notation in mathematical and practical situations.** **New Standard** **1.8.5** **E/S** **Identify perfect squares to 225 and their corresponding square roots.**

Patterns, Functions & Algebra	
Former Standard (2001)	Revised NV State Standard (2006)
2.8.1 E/S Use inductive reasoning to find the missing term in number and geometric patterns and to generalize basic patterns to the nth term, with and without calculators; use written, oral, and symbolic language to identify and describe patterns, sequences, and functions.	2.8.1 E/S Find the missing term in a numerical sequence or a pictorial representation of a sequence. 2.8.4 I/S Identify, model, describe, and evaluate functions (with and without technology). Translate among verbal descriptions, graphic, tabular, and algebraic representations of mathematical situations (with and without technology).
2.8.2 E/S Translate among verbal descriptions, graphic, tabular, and algebraic representations of mathematical situations. 2.8.3 I/S Identify, model, describe, and evaluate relationships, including functions, using a variety of methods with and without technology.	2.8.4 I/S Identify, model, describe, and evaluate functions (with and without technology). Translate among verbal descriptions, graphic, tabular, and algebraic representations of mathematical situations (with and without technology).
2.8.4 I/S Add and subtract binomials; describe the connection between the algebraic process and the arithmetic process.	2.8.3 I/S Add and subtract binomials.
2.8.5 I/S Describe how a change in one variable of a mathematical relationship affects the remaining variables using various tools and methods.	2.8.6 I/S Describe how changes in the value of one variable affect the values of the remaining variables in a relation.
2.8.6 E/S Model, identify, and solve linear equations and inequalities, relate this process to the order of operations.	2.8.2 I/S Evaluate formulas and algebraic expressions using rational numbers (with and without technology). Solve and graphically represent equations and inequalities in one variable, including absolute value.
2.8.7 I/S Solve simple linear equations and connect that process to the order of operations.	2.8.5 E/S Solve linear equations and represent the solution graphically. Solve inequalities and represent the solution on a number line.

Measurement	
Former Standard (2001)	Revised NV State Standard (2006)
3.8.2 I/S Demonstrate and understanding of precision, error, and tolerance in measurement using the appropriate measurement tool to the required degree of accuracy.	3.8.2 I/S Demonstrate an understanding of precision, error, and tolerance when using appropriate measurement tools.
3.8.3 E/S Select and apply appropriate formulas to solve problems; identify the relationship between changes in area and volume and changes in linear measures of figures.	3.8.3 E/S Identify how changes in a dimension of a figure effect changes in its perimeter, area and volume.
3.8.5 E/S Apply ratios and proportions to calculate rates and as a method of indirect measure (e.g., miles per hour, cost per unit).	3.8.5 E/S Apply ratios and proportions to calculate rates and solve mathematical and practical problems using indirect measure.
	New Standard **3.8.1 I/S** **Estimate and convert units of measure for mass and capacity within the same measurement system (customary and metric).**
	New Standard **3.8.4 E/S** **Calculate percents in monetary problems.**

Geometry	
Former Standard (2001)	Revised NV State Standard (2006)
4.8.2 E/S Apply the properties of equality and proportionality to solve problems involving congruent or similar shapes.	4.8.2 E/S Apply the properties of equality and proportionality to congruent or similar shapes.
4.8.3 I/S Use coordinate geometry and models to change scale (enlarge and reduce)	4.8.3 I/S Demonstrate dilation using coordinate geometry and models. Describe the relationship between an original figure and its transformation or dilation.
4.8.5 I/S Use coordinate geometry to represent and interpret relationships defined by equations and formulas (including distance, midpoint, and slope), with and without technology.	4.8.5 I/S Calculate slope, midpoint, and distance using equations and formulas (with and without technology). Determine the *x*- and *y*- intercepts of a line.
4.8.6 I/S Form generalizations and validate conclusions about properties of geometric shapes including parallel lines, perpendicular lines, bisectors, triangles, and quadrilaterals.	4.8.6 I/S Form generalizations and validate conclusions about geometric figures and their properties.
4.8.7 I/S Verify and explain the Pythagorean Theorem using various methods (e.g., using grid paper, applying it to a missing side of a right triangle); determine missing sides and angles of triangles based on properties of their sides and angles.	4.8.7 I/S Verify and explain the Pythagorean Theorem using a variety of methods. Determine the measure of the missing side of a right triangle.
4.8.8 W/L Use hand tools, technology, and models to construct figures and bisect angles and line segments; distinguish among constructions, sketches and drawings.	4.8.8 W/L Construct geometric figures using a variety of tools.

	New Standard **4.8.1** **E/S** **Find and use the sum of the measures of interior angles of polygons.** **New Standard** **4.8.3** **I/S** **Demonstrate dilation using coordinate geometry and models.** **Describe the relationship between an original figure and its transformation or dilation.** **New Standard** **4.8.9** **I/L** **Represent logical relationships using conditional statements.**

Data Analysis & Probability	
Former Standard (2001)	Revised NV State Standard (2006)
5.8.1 E/S Organize, display, read, and analyze data, with and without technology, using a variety of displays including box and whisker plots.	5.8.1 E/S Formulate questions and design a study that guides the collection of data. Organize, display, and read data including box and whisker plots (with and without technology).
5.8.2 I/S Find the theoretical probability of an event using different counting methods (e.g., tree diagrams, sample spaces, and organized lists) and compare those results with actual (experimental) results, differentiating between the probability of an event and the odds of an event.	5.8.5 I/S Differentiate between the probability of an event and the odds of an event.
5.8.3 I/S Find the number of combinations possible in given situations using a variety of counting methods.	5.8.4 I/S Find the number of combinations possible in mathematical and practical situations. Distinguish between permutations and combinations.
5.8.5 E/S Evaluate arguments that are based on data analysis for accuracy and validity; analyze the effect a change of scale or a change of format will have on statistical charts and graphs.	5.8.3 E/S Evaluate statistical arguments that are based on data analysis for accuracy and validity.
5.8.6 I/S Formulate reasonable inferences and projections based on interpolations and extrapolations of data to solve problems.	5.8.6 I/S Formulate reasonable inferences and predictions through interpolation and extrapolation of data to solve practical problems. **New Standard** **5.8.2 I/S** **Select and apply appropriate measures of data distribution, using inter-quartile range and central tendency.**