

Carson City School District  
Carson City, Nevada

Pre- Algebra Math Curriculum Map  
High School

**KEY TO PRIORITY FRAMEWORK AND ASSESSMENT LEVEL**

**E = Enduring.** Complex, engaging, “big ideas”, will require more in-depth knowledge.

**I = Important to know and do.** Students should retain detailed but not extensive knowledge.

**W = Worth being familiar with.** Students should have awareness of key people, ideas, concepts, and terms.

**L = Nevada Academic Standards that are assessable at the local level ONLY.**

**S = Nevada Academic Standards that are assessable at the state and local levels.**

As an example the letters E/L would indicate that the standard requires enduring knowledge and will only be assessed at the local level.

**KEY TO INTERDISCIPLINARY LINKS**

**C = Civics   E = English Language Arts   Ec = Economics   G = Geography**  
**H = History   M = Mathematics   S = Science   He = Health**

**RESOURCE KEY**

**ML-PA = McDougal-Littel (Passport to Algebra and Geometry)**

**Content Organization: The problem solving and mathematical communication/reasoning/connection standards (6.0 – 9.0) are to be introduced and reinforced throughout the year.**

**Content Standard 1.0: Number Sense/Computation** – *Students will accurately calculate and use estimation techniques, number relationships, operation rules and algorithm; they will determine the reasonableness of answers and the accuracy of solutions.*

**Content Standard 2.0: Patterns/Algebraic Thinking** – *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.*

**Content Standard 3.0: Measurement** – *Students will use appropriate tools and techniques of measurement to determine, estimate, record and verify direct and indirect measurements.*

**Content Standard 4.0: Geometry** – *Students will identify, represent, verify and apply spatial relationships and geometric properties.*

**Content Standard 5.0: Data Analysis/Statistics** – *Students will collect, organize, display, interpret and analyze data to determine statistical relationships and probability projections.*

**Process Standard 6.0: Problem Solving** – *Students will develop their ability to solve problems by engaging in developmentally appropriate problem solving opportunities in which 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 wide variety of problems; and integrate mathematical reasoning, communication and connections.*

**Process Standard 7.0: Mathematical Communication**– *Students will develop their ability to communicate mathematically by solving problems in which there is a need to obtain information from the real world through reading, listening, and observing in order to transfer this information into a mathematical language and symbols; process this information mathematically; and present results in written, oral and visual formats.*

**Process Standard 8.0: Mathematical Reasoning** - *Students will develop their ability to reason mathematically by solving problems in which there is a need to investigate significant mathematical ideas and construct their own learning in all content areas in order to justify their thinking; reinforce their logical reasoning abilities; reflect on and clarify their own thinking; and ask questions to extend their thinking.*

**Process Standard 9.0: Mathematical Connections** - *Students will develop the ability to make mathematical connections by solving problems in which there is a need to view mathematics as an integrated whole, identifying relationships between context strands, and integrating mathematics with other disciplines, allowing the flexibility to approach problems in a variety of ways within and beyond the field of mathematics.*

## Carson City School District Curriculum Map: Pre-Algebra

Content Standards	Objective	Priority	Resource	Process Standards 6.0 – 9.0
<b>Quarter One Skills</b>		<b>ML:PA</b>		
1.12.1	Using basic operations with whole numbers, fractions, and decimals	<b>I/S</b>	1.2	8.12.4,8, 9.12.1, 3, 5, 8
1.12.1, 2.12.3	Solving equations using mental math	<b>I/S</b>	2.3	6.12.2,5, 9.12.8
1.12.1, 1.12.3	Evaluating expressions using order of operations	<b>I/S</b>	1.4	8.12.4, 8,10, 9.12.1,8
1.12.1, 1.12.3	Evaluating variable and algebraic expressions	<b>I/S</b>	1.5	8.12.8,10, 9.12.1, 2
1.12.1, 1.12.3	Simplifying expressions by adding like terms	<b>I/S</b>	2.2, 3.3	6.12.1, 8.12.8, 9.12.1
1.12.1, 1.12.3	Using absolute values to add to integers	<b>I/S</b>	3.2	6.12.1, 8.12.8, 9.12.1
1.12.1, 1.12.3	Adding three or more integers	<b>E/S</b>	3.3	6.12.1, 8.12.8, 9.12.1,3,8
1.12.1, 1.12.3	Simplifying expressions by adding like terms	<b>I/S</b>	2.2, 3.3	6.12.1, 8.12.8, 9.12.1
1.12.1, 1.12.3	Simplifying expressions involving subtraction	<b>I/S</b>	3.4	6.12.1, 8.12.8, 9.12.1
1.12.1, 1.12.3	Multiplying integers	<b>E/S</b>	3.5	8.12.8, 9.12.1,3,8
1.12.1, 1.12.3	Dividing integers	<b>E/S</b>	3.6	8.12.8, 9.12.1,3,8
1.12.1, 1.12.3	Using properties of equality to solve equations involving integers	<b>I/S</b>	3.7	6.12.1,2,5, 8.12.8, 9.12.1, 3,8
1.12.1, 2.12.3, 2.12.6	Solving one-step equations using multiplication and division	<b>E/S</b>	2.5	6.12.2, 5,9, 9.12.1
1.12.1, 2.12.3,6	Solving one-step equations using addition and subtraction	<b>E/S</b>	2.4	6.12.2, 5,9, 9.12.1
1.12.2	Evaluating expressions containing exponents and square roots	<b>E/S</b>	1.3	8.12.4, 8,10, 9.12.1,8
1.12.3	Modeling integers on a number line	<b>E/S</b>	3.1	6.12.1, 8.12.4,8, 9.12.3

1.12.3	Finding the absolute value of a number	<b>E/S</b>	3.1	6.12.1, 8.12.8, 9.12.8
1.12.3, 2.12.3	Evaluating expressions using the Distributive Property	<b>E/S</b>	2.1	8.12.8, 9.12.1,3, 8
2.12.1, 2.12.5	Recognizing and describing number patterns	<b>E/S</b>	1.1	6.12.1,14, 7.12.9, 9.12.8
2.12.1, 2.12.5	Using technology to discover number patterns	<b>E/S</b>	1.8	6.12.14, 7.12.9, 9.12.8
2.12.2, 4.12.5	Plotting points in a coordinate plane	<b>E/S</b>	3.8	8.12.8, 9.12.1,8
2.12.4	Translating verbal expressions into algebraic expressions	<b>I/S</b>	2.6, 2.7	6.12.1,2, 10, 7.12.9,16,17 9.12.8
2.12.5	Using problem solving strategies	<b>E/S</b>	2.8, 4.6, 4.7	6.12.1,5,7,10,13,14, 7.12.9, 9.12.6
2.12.6	Solving simple inequalities	<b>I/S</b>	2.9	6.12.2,9,10, 7.12.9, 17
4.12.1	Identifying polygons and parts of polygons	<b>I/S</b>	1.7	7.12.2 ,9
<b>Quarter Two Skills</b>				
1.12.1, 1.12.2	Evaluating powers with positive and negative exponents	<b>W/L</b>	6.7	6.12.2,13, 7.12.2, 9, 9.12.1,3,8
1.12.1, 1.12.2, 1.12.3	Using scientific notation to represent numbers and to solve problems	<b>W/L</b>	6.8	6.12.2,13, 7.12.2, 9, 9.12.1,3,8
1.12.1, 2.12.3	Solving equations using addition/subtraction/multiplication/division	<b>I/S</b>	4.1, 4.2, 4.3, 4.4	6.12.1,2,6, 8.12.8, 9.12.3
1.12.1, 2.12.3	Solving multistep equations	<b>I/S</b>	4.1, 4.2, 4.3, 4.4	6.12.1,2,6, 8.12.8, 9.12.3
1.12.1, 2.12.3	Solving equations with variables on both sides	<b>I/S</b>	4.5	6.12.1, 2,6, 8.12.8, 9.12.3
1.12.3	Factoring natural numbers	<b>I/S</b>	6.1	6.12.6
1.12.3	Factoring integers and algebraic expressions	<b>I/S</b>	6.2	6.12.1,9
1.12.3	Finding the greatest common factors of integers and algebraic expressions	<b>I/S</b>	6.3	6.12.2, 6.12.6, 6.12.9, 9.12.1, 9.12.4
1.12.3	Finding the least common multiple of two numbers	<b>I/S</b>	6.4	6.12.2, 6.9, 9.12.1, 9.12.4
1.12.3	Simplifying and comparing two fractions	<b>I/S</b>	6.5	7.12.2,9, 8.12.4, 9.12.1, 3,8

1.12.3	Writing decimals as fractions	<b>I/S</b>	6.6	7.12.2, 9, 8.12.4, 9.12.1,3,8
1.12.3	Recognizing and using formulas to predict number patterns	<b>I/S</b>	6.9	6.12.1, 6.12.14, 7.12.9, 9.12.8
2.12.2, 2.12.5, 5.12.1	Make and interpret pictographs and timelines	<b>E/S</b>	5.1	6.12.1, 7.12.7, 9.12.1, 8
2.12.2, 2.12.5, 5.12.1	Make and interpret bar graphs and histograms	<b>E/S</b>	5.2	6.12.1, 7.12.7, 9.12.1,8
2.12.2, 2.12.5, 5.12.1	Make and interpret line graphs	<b>E/S</b>	5.3	6.12.1, 7.12.7, 9.12.1, 8
2.12.5	Using problem solving strategies	<b>I/S</b>	2.8, 4.6, 4.7	6.12.1, 5,7,10,13,14, 7.12.9, 9.12.6
3.12.5	Use simple geometric figures to estimate areas	<b>I/S</b>	4.8	6.12.1, 9, 7.12.15,17, 8.12.4,9, 9.12.7
5.12.1	Choose and create an appropriate graph	<b>E/S</b>	5.4	6.12.1, 10, 9.12.1, 8
5.12.1	Recognize and correct misleading graphs	<b>E/S</b>	5.5	6.12.1,10, 9.12.1,8
5.12.1	Make and interpret line plots	<b>I/S</b>	5.6	6.12.1,10, 9.12.1,8
5.12.1	Make and interpret scatter plots	<b>I/S</b>	5.7	6.12.1,10, 9.12.1, 8
5.12.2, 5.12.3, 5.12.5, 5.12.6	Calculate the probability of an event	<b>I/S</b>	5.8, 8.8	8.12.8, 9.12.1, 3, 8

### Quarter Three Skills

1.12.1, 1.12.2, 1.12.3, 2.12.3, 3.12.4	Exploring, using, and converting between percents, decimals, and fractions	<b>E/S</b>	<b>7.3, 7.6, 7.7, 7.9</b>	6.12.1, 8.12.11, 9.12.1,8
1.12.1, 1.12.2, 1.12.3, 2.12.3, 3.12.4	Exploring, using, and converting between percents, decimals, and fractions	<b>E/S</b>	7.3, 7.6, 7.7, 7.9	6.12.1, 8.12.11, 9.12.1,8
1.12.1, 1.12.2, 1.12.3, 2.12.3, 3.12.4	Exploring, using, and converting between percents, decimals, and fractions	<b>I/S</b>	7.3, 7.6, 7.7, 7.9	6.12.1, 8.12.11, 9.12.1,8
1.12.1, 1.12.2, 1.12.3, 2.12.3, 3.12.4	Finding the percent of a number	<b>E/S</b>	7.8	6.12.1, 8.12.11, 9.12.1,8
1.12.1, 1.12.2, 1.12.3, 2.12.3, 3.12.4	Exploring, using, and converting between percents, decimals, and fractions	<b>I/S</b>	7.3, 7.6, 7.7, 7.9	6.12.1, 8.12.11, 9.12.1,8
1.12.1, 1.12.2, 1.12.3, 2.12.3, 3.12.4	Solving equations involving percents	<b>I/L</b>	8.4, 8.5, 8.6	6.12.1, 6.12.9, 8.12.11, 9.12.1, 9.12.7, 9.12.8
1.12.1, 1.12.2, 2.12.3, 3.12.5	Exploring and calculating rates and ratios	<b>E/S</b>	8.1	6.12.1, 6.12.9, 7.12.14, 9.12.1, 9.12.8

1.12.1, 1.12.2, 2.12.3, 3.12.5	Solving proportions	<b>E/L</b>	8.2, 8.3	6.12.1, 6.12.9, 6.12.10, 7.12.14, 9.12.1, 9.12.8
1.12.1, 1.12.3	Adding and subtracting fractions with like denominators	<b>E/S</b>	7.1	6.12.6, 10, 7.12.14, 8.12.4, 9.12.1,8
1.12.1, 1.12.3	Adding and subtracting fractions with unlike denominators	<b>E/S</b>	7.2	6.12.6,10, 7.12.14, 8.12.4, 9.12.1,8
1.12.1, 1.12.3	Multiplying rational numbers	<b>E/S</b>	7.4	6.12.6,10, 7.12.14, 8.12.4, 9.12.8
1.12.1, 1.12.3	Dividing rational numbers	<b>E/S</b>	7.5	6.12.6,10, 7.12.14, 8.12.4, 9.12.8
5.12.2, 5.12.3, 5.12.5, 5.12.6	Calculate the probability of an event	<b>I/S</b>	5.8, 8.8	8.12.8, 9.12.1, 9.12.3, 9.12.8
5.12.3	Using the Counting Principle	<b>I/S</b>	8.7	6.12.2, 7.12.2, 8.12.4, 8.12.10, 9.12.1, 9.12.3, 9.12.8
<b>Quarter Four Skills</b>				
1.12.1	Solving square roots and solving equations involving square roots	<b>I/S</b>	9.1	6.12.2, 6.12.4, 6.12.13, 9.12.1
1.12.3, 2.12.6	Classifying and representing numbers in the real number system	<b>I/S</b>	9.2	6.12.2, 6.12.9, 6.12.13, 6.12.14, 7.12.14, 9.12.1
1.12.3, 2.12.6	Writing and graphing inequalities	<b>W/L</b>	9.5	6.12.2, 6.12.9, 6.12.13, 6.12.14, 7.12.14, 9.12.1
2.12.6	Solving one-step inequalities using multiplication and division	<b>W/L</b>	9.6	6.12.2, 6.12.9, 6.12.13, 6.12.14, 7.12.14, 9.12.1
2.12.6	Solving multi-step inequalities	<b>W/L</b>	9.7	6.12.2, 6.12.9, 6.12.13, 6.12.14, 7.12.14, 9.12.1
3.12.3, 3.12.5, 4.12.1	Calculating the area and perimeter of quadrilaterals and triangles	<b>E/S</b>	11.1	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.1	Calculating the area and circumference of circles	<b>I/S</b>	12.1	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.8	Identifying and describing polyhedrons and other three-dimensional solids	<b>I/S</b>	12.2	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.8	Exploring and calculating the surface area of prisms, pyramids, and cylinders	<b>I/S</b>	12.3	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.8	Exploring and calculating the volumes of prisms	<b>I/S</b>	12.4	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.8	Exploring and calculating the volumes of cylinders	<b>I/S</b>	12.5	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1,

				9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.8	Exploring and calculating the volumes of pyramids and cones	<b>I/S</b>	12.6	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
3.12.3, 3.12.5, 4.12.8	Exploring and calculating the volumes of spheres	<b>I/L</b>	12.7	6.12.1, 6.12.2, 7.12.2, 7.12.9, 7.12.16, 7.12.17, 8.12.8, 8.12.10, 8.12.11, 9.12.1, 9.12.7, 9.12.8
4.12.7	Using the Pythagorean Theorem	<b>I/S</b>	9.3, 9.4	6.12.5, 6.12.13, 6.12.14, 8.12.8, 9.12.1, 9.12.7