



**McDougal Littell  
Geometry ©2004**

correlated to the

**Nevada  
Math Content Standards  
9-12**

**CONTENT STANDARD 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.*

*Estimating and Estimation Strategies*

**1.12.6 E/S** Determine an approximate value of radical and exponential expressions using a variety of methods.

**PE/TE:** *This topic is treated in the previous Algebra 1 course.*

*Computation*

**1.12.7 E/S**

**1.12.7a** Solve mathematical problems involving exponents and roots.

**PE/TE:** 19-20, 24, 52, 55 (#19), 61, 244-246, 530, 535-541, 543-548, 551-556, 573-579, 584, 597, 631, 633, 636-640, 669-674, 743-748, 752-757, 759-765, 766-771

**1.12.7b** Perform addition, subtraction, and scalar multiplication on matrices.

**PE/TE:** 864-870

*Solving Problems and Number Theory*

**1.12.8 I/S** Identify and apply real number properties to solve problems.

**PE/TE:** 96-101, 103

## CONTENT STANDARD 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*

**2.12.1 E/S** Use algebraic expressions to identify and describe the  $n$ th term of a sequence.

**PE/TE:** *This topic is treated in a subsequent **Algebra 2** course.*

### *Variables and Unknowns*

**2.12.2 E/S** Isolate any variable in given equations, inequalities, proportions and formulas to use in mathematical and practical situations.

**PE/TE:** 656, 683, 691, 731, 745, 747, 802

### *Number Sentences, Expressions and Polynomials*

#### **2.12.3 I/S**

**2.12.3a** Add, subtract, multiply and factor 1st and 2nd degree polynomials connecting the arithmetic and algebraic processes.

**PE/TE:** 787

**2.12.3b** Simplify algebraic expressions, including exponents and radicals.

**PE/TE:** 258

### *Relations and Functions*

#### **2.12.4 E/S**

**2.12.4a** Determine the domain and range of functions, including linear, quadratic and absolute value, algebraically and graphically.

**PE/TE:** *This topic is treated in the previous **Algebra 1** course.*

**2.12.4b** Solve absolute value equations and inequalities both algebraically and graphically.

**PE/TE:** 259

*Linear Equations and Inequalities*

**2.12.5 I/S** Solve systems of two linear equations algebraically and graphically and verify solutions (*with and without technology*).

**PE/TE:** 796

*Algebraic Representations and Applications*

**2.12.6 E/S** Solve mathematical and practical problems involving linear and quadratic equations with a variety of methods, including discrete methods (*with and without technology*).

**PE/TE:** 52-57, 156 (#38), 274, 352, 358-362, 475-477, 480-487, 491, 460, 466-469, 494, 527-534, 536-541, 561-565, 678

### **CONTENT STANDARD 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***

**3.12.1 I/L** Estimate and convert between customary and metric systems.

**PE/TE:** *This topic is treated in a previous Arithmetic course.*

#### ***Precision in Measurements***

**3.12.2 I/S** Justify, communicate, and differentiate between precision, error and tolerance in practical problems.

**PE/TE:** 872-875

#### ***Formulas***

**3.12.3 E/S** Select and use appropriate measurement tools, techniques and formulas to solve problems in mathematical and practical situations.

**PE/TE:** 17-22, 26-30, 35-39, 372-379, 469, 532,536-539, 561-564, 630-635, 669-675, 685-688, 738-741, 747-748, 754-757

#### ***Money***

**3.12.4 E/S** Interpret and apply consumer data presented in charts, tables and graphs to make informed financial decisions related to practical applications.

**PE/TE:** *This topic is treated in the previous **Algebra 1** course.*

#### ***Ratios and Proportions***

**3.12.5 I/S** Determine the measure of unknown dimensions, angles, areas and volumes using relationships and formulas to solve problems.

**PE/TE:** 458-464, 466-471, 474-475, 477-478, 482-487, 491, 494-495, 678, 680-681, 767-768, 770-771

**CONTENT STANDARD 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***

**4.12.1 E/S**

**4.12.1a** Identify and use the parts of a circle to solve mathematical and practical problems.

**PE/TE:** 595-601, 603-611, 613-619, 621-627, 629-634, 636-640, 683-689, 691-697

**4.12.1b** Identify and apply properties of interior and exterior angles of polygons to solve mathematical and practical problems.

**PE/TE:** 193-200, 296, 324-327, 661-667, 708

***Congruence, Similarity and Transformations***

**4.12.2 E/S** Apply properties of similarity through right triangle trigonometry to find missing angles and sides.

**PE/TE:** 475, 477-478, 482-487, 491, 494-495, 498-505, 527-533, 561-565, 568-571

***Algebraic Connections***

**4.12.5 E/S**

**4.12.5a** Determine the slope of lines using coordinate geometry and algebraic techniques.

**PE/TE:** 124, 165-171, 456

**4.12.5b** Identify parallel, perpendicular, and intersecting lines by slope.

**PE/TE:** 166-169, 172-173, 175-177

**4.12.5c** Graph linear equations and find possible solutions to those equations using coordinate geometry.

**PE/TE:** 793

**4.12.5d** Find possible solution sets of systems of equations whose slopes indicate parallel, perpendicular or intersecting lines.

**PE/TE:** 796

*Lines, Angles and their Properties*

**4.12.6 I/S** Solve problems using complementary and supplementary angles, congruent angles, vertical angles, angles formed when parallel lines are cut by a transversal and angles in polygons.

**PE/TE:** 43, 44-50, 62, 64-65, 109-116, 131-133, 137-141, 143-149, 203-207, 324-328, 661, 662-668, 708

*Triangles*

**4.12.7 I/S** Apply the Pythagorean Theorem and its converse in mathematical and practical situations.

**PE/TE:** 535-541, 543-548

*Constructions*

**4.12.8 W/L** Solve problems by drawing and/or constructing geometric figures to demonstrate geometric relationships.

**PE/TE:** 34, 36, 38-39, 130, 159, 161, 213, 218, 228, 264, 268, 275, 283, 286, 290, 329, 496, 500, 505, 507, 510, 610, 612, 618, 639, 673, 674

*Logic*

**4.12.9 I/S** Formulate, evaluate and justify arguments using inductive and deductive reasoning in mathematical and practical situations.

**PE/TE:** 3-9, 87-95, 96-101, 102-106, 109-114

## **CONTENT STANDARD 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***

**5.12.1 E/S** Organize statistical data through the use of tables, graphs and matrices (*with and without technology*).

**PE/TE:** *This topic is treated in the previous **Algebra 1** course.*

### ***Central Tendency and Data Distribution***

**5.12.2 I/S** Select and apply appropriate statistical measures in mathematical and practical situations.

**PE/TE:** *This topic is treated in the previous **Algebra 1** course.*

### ***Interpretation of Data***

**5.12.3 E/S**

**5.12.3a** Distinguish between a sample and a census.

**PE/TE:** *This topic is treated in the previous **Algebra 1** course.*

**5.12.3b** Identify sources of bias and their effect on data representations and statistical conclusions.

**PE/TE:** *This topic is treated in a subsequent **Algebra 2** course.*

**5.12.3c** Use the shape of a normal distribution to compare and analyze data from a sample.

**PE/TE:** *This topic is treated in a subsequent **Algebra 2** course.*

### ***Permutations and Combinations***

**5.12.4 I/S** Apply permutations and combinations to mathematical and practical situations, including the Fundamental Counting Principle.

**PE/TE:** *This topic is treated in a subsequent **Algebra 2** course.*

*Experimental and Theoretical Probability*

**5.12.5 I/S**

**5.12.5a** Determine the probability of an event with and without replacement using sample spaces.

**PE/TE:** 699-704

**5.12.5b** Design, conduct, analyze and effectively communicate the results of multi-stage probability experiments.

**PE/TE:** 706

*Statistical Inferences*

**5.12.6 I/L**

**5.12.6a** Design, construct, analyze and select an appropriate type of graphical representations to communicate the results of a statistical experiment.

**PE/TE:** *This topic is treated in a subsequent **Algebra 2** course.*

**5.12.6b** Formulate and justify inferences based on a valid data sample.

**PE/TE:** *This topic is treated in a subsequent **Algebra 2** course.*

