

GLENCOE CORRELATION
ALGEBRA 1 © 2005
ARIZONA
Academic Content Standards
High School

CONTENT STANDARDS	PAGE REFERENCES
Strand 1: Number Sense and Operations	
Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	
PO 1. Classify real numbers as members of one or more subsets: natural, whole, integers, rational, or irrational numbers.	SE: 68-70, 104, 107 #7-11, #32-49 <i>Lesson 2-7 825 #9-16</i> <i>Study Guide and Review 114 #64-66</i> TWE: IE 104
PO 2. Identify properties of the real number system: commutative, associative, distributive, identity, inverse, and closure.	SE: 21-25, 26-31, 32-36, 74-75 TWE: A 25, 36 DI 22, 29, 33 IE 33
PO 3. Distinguish between finite and infinite sets of numbers.	SE: 16-19, 25 #44-49 <i>Study Guide and Review 110</i> <i>Study Tip 68</i> TWE: IE 17
Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	
PO 1. Select the grade level appropriate operation to solve word problems.	SE: 35 #30, 51, 75, 80 ex #4, 86 #45-46, 108 #70-72, 121, 131 ex #6, 139 #39-49 TWE: IE 121
PO 2. Solve word problems using grade level appropriate operations and numbers.	SE: 35 #30, 51, 75, 80 ex #4, 86 #45-46, 108 #70-72, 121, 131 ex #6, 139 #39-49 TWE: IE 121
PO 3. Simplify numerical expressions including signed numbers and absolute values.	SE: 28-31, 35 #32-43, 72 #68-69, 80 ex #2, 86 #37-44, 94 #57-64, 109 #85-88, 177 #46-48, 211 #69-74 TWE: IE 121
PO 4. Apply subscripts to represent ordinal position.	SE: 256, 286 <i>Study Guide and Review 311</i> TWE: DI 257
PO 5. Use grade level appropriate mathematical terminology.	SE: 68-69, 74-75, 84, 103-105, 137, 155-156, 197-198, 298, 598-599 <i>Reading Mathematics 263</i>
PO 6. Compute using scientific notation.	SE: 425-430, 436 #61-64, 443 #51-54 <i>Practice Test 469 #12-15</i> <i>Study Guide and Review 466 #29-34</i> <i>Lesson 8-3 837 #7-18</i> TWE: A 430 DI 426 F 425 IE 426

CONTENT STANDARDS	PAGE REFERENCES
PO 7. Simplify numerical expressions using the order of operations.	SE: 11-15, 17 ex #2, 119 #7-14, 140 #67-70 <i>Study Guide and Review</i> 58 #21-35, 181 #27-32 TWE: A 15 DI 15 IE 12
Concept 3: Estimation Use estimation strategies reasonably and fluently.	
PO 1. Solve grade level appropriate problems using estimation.	SE: 18, 96-101, 142, 147 #51-52, 267 <i>Algebra Activity</i> 49 <i>Study Guide and Review</i> 114 #52-59
PO 2. Determine if a solution to a problem is reasonable.	SE: 75 ex #3, 121 ex #2, 157 ex #4, 213-214 ex #4, 282 <i>Study Guide and Review</i> 312 #70 TWE: STP 106
PO 3. Determine rational approximations of irrational numbers.	SE: 105-106, 107 #4-7, #20-31, 108 #50-51, #70-72 <i>Study Guide and Review</i> 114 #60-63 <i>Lesson 2-7</i> 825 #1-8 TWE: TNT 106
Strand 2: Data Analysis, Probability, and Discrete Mathematics	
Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	
PO 1. Formulate questions to collect data in contextual situations.	SE: <i>Algebra Activity</i> 299 <i>Reading Mathematics</i> 95
PO 2. Organize collected data into an appropriate graphical representation.	SE: 88-90, 91 #4-5, #12, 92 #16, #22, 302 #6, 303 #18, #24 <i>Algebra Activity</i> 271, 299 TWE: AA 299 TT 99
PO 3. Display data as lists, tables, matrices, and plots.	SE: 93 #28, 303-304, 718 #12, #14, 719 #42, 720 #45 <i>Algebra Activity</i> 299 <i>Graphing Calculator Investigation</i> 306-307 <i>Spreadsheet Investigation</i> 56 TWE: TT 99
PO 4. Construct equivalent displays of the same data.	SE: 45 ex #4, 46 #8, 47 #15, #18, 50 <i>Algebra Activity</i> 49 <i>Spreadsheet Investigation</i> 56 #3
PO 5. Identify graphic misrepresentations and distortions of sets of data.	SE: 52, 53 #3, 54 #10-11, 55 #18 <i>Spreadsheet Investigation</i> 56 #3 <i>Standardized Test Practice</i> 117 #20 TWE: DI 52 IE 52
PO 6. Identify which of the measures of central tendency is most appropriate in a given situation.	SE: 90-94, 109 #84 <i>Study Guide and Review</i> 113 #50-51 TWE: DI 90, 91 IE 91

CONTENT STANDARDS	PAGE REFERENCES
PO 7. Make reasonable predictions based upon linear patterns in data sets or scatter plots.	SE: 240, 242-244, 267, 285 #38-39, 290 #60, 291 #71 TWE: IE 242
PO 8. Make reasonable predictions for a set of data, based on patterns.	SE: 45, 50-55, 240-245, 285 #38-39, 303 #21-22, #27 <i>Algebra Activity</i> 49 TWE: IE 242
PO 9. Draw inferences from charts, tables, graphs, plots, or data sets.	SE: 282-283, 298-305 <i>Algebra Activity</i> 49 <i>Graphing Calculator Investigation</i> 306-307, 729-730 <i>Standardized Test Practice</i> 117 #20 TWE: IE 301
PO 10. Apply the concepts of mean, median, mode, range, and quartiles to summarize data sets.	SE: 87 #74-77, 90-94 <i>Getting Started</i> 67 #17-19 <i>Study Guide and Review</i> 112-113 #49-51
PO 11. Evaluate the reasonableness of conclusions drawn from data analysis.	SE: 37, 45, 50-55 <i>Algebra Activity</i> 49 <i>Study Guide and Review</i> 68 TWE: IE 51-52
PO 12. Recognize and explain the impact of interpreting data (making inferences or drawing conclusions) from a biased sample.	SE: 52, 54, 709-712 <i>Reading Mathematics</i> 714 <i>Spreadsheet Investigation</i> 56 #3 TWE: A 713 IE 709-710
PO 13. Draw a line of best fit for a scatter plot.	SE: 300-305 <i>Graphing Calculator Investigation</i> 306-307 <i>Lesson 5-7</i> 833 #15 <i>Mixed Problem Solving</i> 857 #16-17 <i>Study Guide and Review</i> 312 #66-67
PO 14. Determine whether a displayed data has positive, negative, or no correlation.	SE: 298-299, 301 #1, #4-5, 302 #6 #10-13, 303 #24, 304 #38 <i>Lesson 5-7</i> 833 #1-4 TWE: AA 299
PO 15. Identify a normal distribution.	SE: 737-742 TWE: DI 738 IE 739
PO 16. Identify differences between sampling and census.	SE: 708, 710 #1, #6-7, 711 #8-19, 712 #20-21 TWE: DI 710
PO 17. Identify differences between biased and unbiased samples.	SE: 709-712 <i>Lesson 13-1</i> 849 #1-8 <i>Mixed Problem Solving</i> 865 #2 <i>Reading Mathematics</i> 714 <i>Study Guide and Review</i> 745-746 TWE: DI 52

CONTENT STANDARDS	PAGE REFERENCES
Concept 2: Probability	
Understand and apply the basic concepts of probability.	
PO 1. Find the probability that a specific event will occur, with or without replacement.	SE: 96-101, 109 #80-83, 126 #60-62, 422 #43-44, 436 #71 <i>Algebra Activity</i> 102 <i>Lesson 2-6</i> 824 <i>Study Guide and Review</i> 113-114 #52-59
PO 2. Determine simple probabilities related to geometric figures.	SE: 99 #28-33, 100 #51-53, 775 #41-47
PO 3. Predict the outcome of a grade level appropriate probability experiment.	SE: <i>Algebra Activity</i> 102, 783 TWE: A 788 DI 98 TNT 97
PO 4. Record the data from performing a grade level appropriate probability experiment.	TWE: AA 783 DI 98, 778 TNT 97, 779 TT 85
PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.	SE: <i>Algebra Activity</i> 783 TWE: A 788 DI 98, 786 TNT 97
PO 6. Distinguish between independent and dependent events.	SE: 769-776, 781 #27-29 <i>Lesson 14-3</i> 851 TWE: DI 770 F 769 IE 770-772
PO 7. Compare the results of two repetitions of the same grade level appropriate probability experiment.	SE: <i>Algebra Activity</i> 783 TWE: AA 783 DI 98 TNT 97
Concept 3: Discrete Mathematics – Systematic Listing and Counting	
Understand and demonstrate the systematic listing and counting of possible outcomes.	
PO 1. Determine the number of possible outcomes for a contextual event using a chart, a tree diagram, or the counting principle.	SE: 754-758, 760, 767 #58, 779 #4-6, #14-17, 780 #18-20, 788 #42-44 <i>Algebra Activity</i> 759 TWE: A 758 IE 755-756
PO 2. Determine when to use combinations versus permutations in counting objects.	SE: 760-767 <i>Lesson 14-2</i> 851 #1-7 <i>Reading Mathematics</i> 768 <i>Study Guide and Review</i> 790 TWE: A 767
PO 3. Use combinations or permutations to solve contextual problems.	SE: 760-767, 766 #55-56 <i>Lesson 14-2</i> 851 <i>Study Guide and Review</i> 790 #12-17 TWE: IE 761-763

CONTENT STANDARDS	PAGE REFERENCES
Concept 4: Vertex-Edge Graphs Understand and apply vertex-edge graphs.	
Strand 3: Patterns, Algebra, and Functions	
Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	
PO 1. Communicate a grade level appropriate iterative or recursive pattern, using symbols or numbers.	SE: 234-237, 240-245 <i>Reading Mathematics</i> 239 <i>Spreadsheet Investigation</i> 232 <i>Study Guide and Review</i> 249-250 TWE: IE 241-242
PO 2. Find the n^{th} term of an iterative or recursive pattern.	SE: 235, 236 #8-11, 237 #27-36 <i>Lesson 4-7</i> 830 #13-18 <i>Spreadsheet Investigation</i> 232 TWE: IE 235
PO 3. Evaluate problems using basic recursion formulas.	SE: 47 #19, 213-216, 218-223, 233-238 <i>Graphing Calculator Investigation</i> 224-225 <i>Lesson 4-7</i> 830 #13-18 <i>Spreadsheet Investigation</i> 232 TWE: F 233
Concept 2: Functions and Relationships Describe and model functions and their relationships.	
PO 1. Determine if a relationship is a function, given a graph, table, or set of ordered pairs.	SE: 226-227, 229-230, 240 <i>Lesson 4-6</i> 830 #1-7 TWE: A 231 F 226 IE 227
PO 2. Describe a contextual situation that is depicted by a given graph.	SE: 17-18, 21, 24, 26-27, 30, 43-48, 50-55, 73 <i>Algebra Activity</i> 49 <i>Spreadsheet Investigation</i> 56
PO 3. Identify a graph that models a given real-world situation.	SE: 17-18, 21, 24, 26-27, 30, 43-48, 50-55, 73 <i>Algebra Activity</i> 49 <i>Spreadsheet Investigation</i> 56
PO 4. Sketch a graph that models a given contextual situation.	SE: 45 ex #4, 46 #8, 47 #15, #18, 48 #22, 78 #71, 89-93 <i>Algebra Activity</i> 49 <i>Study Guide and Review</i> 62 #81, #83
PO 5. Determine domain and range for a function.	SE: 45 ex #5, 206, 209 #18-25, 210, 285 #52-53, 344 #667 <i>Algebra Activity</i> 271 <i>Study Guide and Review</i> 248 #21-24 TWE: IE 45
PO 6. Determine the solution to a contextual maximum/minimum problem, given the graphical representation.	SE: 525-526, 528-530, 538 #53-55 <i>Practice Quiz</i> 544 #1-3, 579 #4-7 TWE: IE 526
PO 7. Express the relationship between two variables using tables/matrices, equations, or graphs.	SE: 47, 213-217, 218-223, 226, 229, 235 <i>Graphing Calculator Investigation</i> 224-225 TWE: IE 214, 219

CONTENT STANDARDS	PAGE REFERENCES
PO 8. Interpret the relationship between data suggested by tables/matrices, equations, or graphs.	SE: 47, 213-217, 218-223, 556-559, 561-565, 715-720, 732 <i>Algebra Activity 573</i> <i>Graphing Calculator Investigation 729-730</i>
PO 9. Determine from two linear equations whether the lines are parallel, perpendicular, coincident, or intersecting but not perpendicular.	SE: 292-293 ex #1, 294-296, 369-374 <i>Algebra Activity 293</i> <i>Graphing Calculator Investigation 375</i> <i>Study Guide and Review 311-312, 399</i> TWE: A 297 IE 293-294, 370
Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	
PO 1. Evaluate algebraic expressions, including absolute value and square roots.	SE: 11-15, 23, 25, 33, 48, 130, 170, 351, 376-381 <i>Getting Started 119</i>
PO 2. Simplify algebraic expressions.	SE: 17, 29, 33-35, 42 #54-59, 386 #51-54 <i>Algebra Activity 451</i> <i>Study Guide and Review 60</i> TWE: DI 15 IE 34
PO 3. Multiply and divide monomial expressions with integral exponents.	SE: 417-423, 444-449, 664, 666 <i>Algebra Activity 450-451</i> <i>Study Guide and Review 464-465</i> TWE: IE 418-419, 45
PO 4. Translate a written expression or sentence into a mathematical expression or sentence.	SE: 120-126, 136, 140 #57, 144, 172-173, 492 <i>Study Guide and Review 58</i> TWE: A 126 IE 121-123
PO 5. Translate a sentence written in context into an algebraic equation involving multiple operations.	SE: 124-126, 131, 144, 172-173, 492 <i>Algebra Activity 122</i> TWE: A 126 IE 122
PO 6. Write a linear equation for a table of values.	SE: 128, 133 #58-64, 237 #51, 242-243, 245 <i>Spreadsheet Investigation 232</i> TWE: IE 242
PO 7. Write a linear algebraic sentence that represents a data set that models a contextual situation.	SE: 213 ex #4, 237 #51, 242 ex #3, 245, 266 ex #5, 267 #12, 269 #52, #54, 274, 276 #45, #47
PO 8. Solve linear (first degree) equations in one variable (may include absolute value).	SE: 128-134, 135-140, 142-148 <i>Algebra Activity 127, 141</i> TWE: IE 129-131, 136-137, 143-144
PO 9. Solve linear inequalities in one variable.	SE: 318-323, 325-331, 332-337, 344 #59-62 <i>Algebra Activity 324</i> TWE: DI 321 IE 319-320, 326-328, 333-334
PO 10. Write an equation of the line given: two points on the line, the slope and a point on the line, or the graph of the line.	SE: 240, 242-245, 262 #63-64, 273 ex #2, 275-276, 280-285, 286-291 <i>Study Guide and Review 250 #52-53</i> TWE: IE 273, 281

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PO 11. Solve an algebraic proportion.	SE: 156-159, 164 #53-55, 615 #63-68, 644 ex #3 <i>Getting Started</i> 641 #1-8 <i>Lesson 3-6</i> 827 <i>Study Guide and Review</i> 182 #39-44 TWE: IE 156-157
PO 12. Solve systems of linear equations in two variables (integral coefficients and rational solutions).	SE: 369-374, 376-381, 382-386, 387-392, 394-398 <i>Graphing Calculator Investigation</i> 375 TWE: IE 370-371, 377-378
PO 13. Add, subtract and perform scalar multiplication with matrices.	SE: 716-721, 728 #30-33 <i>Lesson 13-2</i> 849 <i>Practice Test</i> 749 #8-13 <i>Study Guide and Review</i> 746 TWE: IE 716-717
PO 14. Calculate powers and roots of real numbers, both rational and irrational, using technology when appropriate.	SE: 411, 535, 547 <i>Graphing Calculator Investigation</i> 418, 545, 553, 556 TWE: GCI 418, 556
PO 15. Simplify square roots and cube roots with monomial radicands (including those with variables) that are perfect squares or perfect cubes.	SE: 103-104, 107-108, 126 #56-59, 586-592, 593-597 TWE: IE 587-589, 594
PO 16. Solve square root radical equations involving only one radical.	SE: 598-603, 605-610 <i>Lesson 11-3</i> 844 <i>Practice Test</i> 637 <i>Study Guide and Review</i> 634-635 TWE: A 603 GCI 600, IE 599, 606-607
PO 17. Solve quadratic equations.	SE: 533-538, 539-544, 546-552 <i>Graphing Calculator Investigation</i> 553 TWE: IE 534-535, 540-541, 547-549
PO 18. Identify the sine, cosine, and tangent ratios of the acute angles of a right triangle.	SE: 623-630, 647 #43-45 <i>Algebra Activity</i> 622 <i>Lesson 11-7</i> 846 <i>Reading Mathematics</i> 631 <i>Study Guide and Review</i> 636 TWE: IE 624-625
Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	
PO 1. Determine slope, x-, and y-intercepts of a linear equation.	SE: 220-223, 257-260, 264-270, 272-277 <i>Graphing Calculator Investigation</i> 224-225 TWE: IE 220, 265, 273-274
PO 2. Solve formulas for specified variables.	SE: 132 #41-42, 139 #42-45, 147 #54, 153 #48, 167-170, 172-176 <i>Practice Quiz</i> 140 <i>Study Guide and Review</i> 183-184 TWE: IE 167

CONTENT STANDARDS	PAGE REFERENCES
Strand 4: Geometry and Measurement	
Concept 1: Geometric Properties	
Analyze the attributes and properties of two- and three-dimensional shapes and develop mathematical arguments about their relationships.	
PO 1. Identify the attributes of special triangles. (isosceles, equilateral, right)	SE: 124 #27, 288 ex #5, 613 #33, 788 #55-57 <i>Algebra Activity</i> 293 <i>Prerequisite Skills</i> 810-811
PO 2. Identify the hierarchy of quadrilaterals.	SE: <i>Prerequisite Skill</i> 811
PO 3. Make a net to represent a three-dimensional object.	SE: 442 <i>Algebra Activity</i> 122, 416
PO 4. Make a three-dimensional model from a net.	SE: 442 <i>Algebra Activity</i> 122, 416
PO 5. Draw 2-dimensional and 3-dimensional figures with appropriate labels.	SE: 157, 618 #2, 627 #2 <i>Algebra Activity</i> 416, 501, 626 TWE: IE 157
PO 6. Solve problems related to complementary, supplementary, or congruent angle concepts.	SE: 380 #29 See Glencoe's <i>Geometry</i> .
PO 7. Solve problems by applying the relationship between circles, angles, and intercepted arcs.	SE: 8 #20, 134 #69-70, 420, 601 #50-53, 620 #33-35 <i>Prerequisite Skills</i> 815-816
PO 8. Solve problems by applying the relationship between radii, diameters, chords, tangents or secants.	SE: 623-630 <i>Algebra Activity</i> 626 <i>Prerequisite Skill</i> 815-816 <i>Study Guide and Review</i> 636 TWE: IE 624
PO 9. Solve problems using the triangle inequality property.	SE: 346-348 <i>Algebra Activity</i> 347 <i>Study Guide and Review</i> 362 TWE: IE 347-348 TT 349
PO 10. Solve problems using special case right triangles.	SE: 124 #27, 288 ex #5, 613 #33, 788 #55-57 <i>Algebra Activity</i> 293 <i>Prerequisite Skills</i> 810-811
PO 11. Determine when triangles are congruent by applying SSS, ASA, AAS or SAS.	This objective can be referenced in Glencoe's <i>Geometry</i> .
PO 12. Determine when triangles are similar by applying SAS, SSS, or AA similarity postulates.	SE: 616-621 <i>Lesson 11-6</i> 845 <i>Study Guide and Review</i> 635-636 TWE: IE 617
PO 13. Construct a triangle congruent to a given triangle.	This objective can be referenced in Glencoe's <i>Geometry</i> .
PO 14. Solve contextual situations using angle and side length relationships.	SE: 373 #42-43, 441 #30-31, 457 #63-64, 616-621, 647 #43-45, 775 #41-43 <i>Practice Test</i> 469
Concept 2: Transformation of Shapes	
Apply spatial reasoning to create transformations and use symmetry to analyze mathematical situations.	
PO 1. Sketch the planar figure that is the result of two or more transformations.	SE: <i>Graphing Calculator Investigation</i> 556

CONTENT STANDARDS	PAGE REFERENCES
PO 2. Identify the properties of the planar figure that is the result of two or more transformations.	SE: 59 #42-44 <i>Graphing Calculator Investigation 556</i>
PO 3. Determine the new coordinates of a point when a single transformation is performed on a planar geometric figure.	SE: 198-203, 217 #59-60 TWE: IE 199-200
PO 4. Determine whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation.	SE: 197, 200-201, 211 #57-59, 415 #71-73 TWE: IE 198
PO 5. Classify transformations based on whether they produce congruent or similar figures.	SE: 197-198, 200-203, 211 <i>Study Guide and Review 247</i> TWE: A 203
PO 6. Determine the effects of a single transformation on linear or area measurements of a planar geometric figure.	SE: 559 #42-44 <i>Graphing Calculator Investigation 556</i> TWE: F 197
Concept 3: Coordinate Geometry Specify and describe spatial relationships using coordinate geometry and other representational systems.	
PO 1. Graph a quadratic equation with lead coefficient equal to one.	SE: 533-538, 544 #56-58 <i>Graphing Calculator Investigation 531-532, 545, 553</i> <i>Study Guide and Review 574-575</i> TWE: IE 534-535
PO 2. Graph a linear equation in two variables.	SE: 218-223, 231 #56-58, 351 #74-79 <i>Getting Started 367</i> <i>Graphing Calculator Investigation 224-225</i> <i>Study Guide and Review 248-249</i> TWE: IE 219-220
PO 3. Graph a linear inequality in two variables.	SE: 352-357, 392 #54-57, 415 #61-63 <i>Graphing Calculator Investigation 358</i> <i>Study Guide and Review 362</i> TWE: IE 353-354
PO 4. Determine the solution to a system of equations in two variables from a given graph.	SE: 369-374, 376-377 <i>Graphing Calculator Investigation 375</i> <i>Practice Quiz 381</i> TWE: F 218, 369 IE 370-371
PO 5. Determine the midpoint between two points in a coordinate system.	SE: 196 #48-50
PO 6. Determine changes in the graph of a linear function when constants and coefficients in its equation are varied.	SE: 218-228, 370-372 <i>Getting Started 523 #1-8</i>
PO 7. Determine the distance between two points in the coordinate system.	SE: 611-615, 621 #39-42 <i>Practice Test 637</i> <i>Study Guide and Review 635</i> TWE: DI 612, 613 IE 612

CONTENT STANDARDS	PAGE REFERENCES
Concept 4: Measurement - Units of Measure - Geometric Objects	
Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	
PO 1. Calculate the area of geometric shapes composed of two or more geometric figures.	SE: 147 #54, 420, 433-435, 462 #46-47, 485 #44-45, 505 #15, 537 #43 <i>Algebra Activity</i> 416 TWE: IE 433
PO 2. Calculate the volumes of three-dimensional geometric figures.	SE: 124 #24, #26, 125 #42, #44, 414 #46-48, 415 #60, 456 #43-44, 513 #41, 670 #39, 695 #33 <i>Getting Started</i> 409
PO 3. Calculate the surface areas of three-dimensional geometric figures.	SE: 9 #44 <i>Algebra Activity</i> 122, 416 <i>Mixed Problem Solving</i> 853 #1-2, 855 #1-4, 860 #1-4
PO 4. Compare perimeter, area, or volume of figures when dimensions are changed.	SE: 422 #39-40, 456 #53, 489, 492 ex #6, 508, 601 #53
PO 5. Find the length of a circular arc.	This objective can be referenced in Glencoe's <i>Geometry</i> .
PO 6. Find the area of a sector of a circle.	SE: 601 #52, 609 #48
PO 7. Solve for missing measures in a pyramid. (i.e., slant height, height)	SE: 13, 133
PO 8. Find the sum of the interior and exterior angles of a polygon.	SE: 47 #17-19 <i>Prerequisite Skill</i> 810
PO 9. Solve scale factor problems using ratios and proportions.	SE: 155-159 <i>Reading Mathematics</i> 165 TWE: A 159 F 155 IE 156-157 TT 164
PO 10. Solve applied problems using similar triangles.	SE: 616, 618 ex #5, 619 #26-28, 620 #29-32 TWE: IE 618
Strand 5: Structure and Logic	
Concept 1: Algorithms and Algorithmic Thinking	
Use reasoning to solve mathematical problems in contextual situations.	
PO 1. Determine whether a given procedure for simplifying an expression is valid.	SE: 29 #3, 413 #3, 414 #55-57, 421 #3, 441 #3, 686 #3
PO 2. Determine whether a given procedure for solving an equation is valid.	SE: 13 #3, 76 #3, 138 #3, 214 #3, 348 #3, 381 #39, 492 #3, 504 #4, 550 #3, 600 #4 TWE: DI 498
PO 3. Determine whether a given procedure for solving a linear inequality is valid.	SE: 329 #3, 343 #49, 396 #3
PO 4. Select an algorithm that explains a particular mathematical process.	SE: 13 #2, 132, 222, 237, 274, 333 <i>Spreadsheet Investigation</i> 232
PO 5. Determine the purpose of a simple mathematical algorithm.	SE: 9 #47, 13, 131, 136, 256, 273, 332
PO 6. Determine whether given simple mathematical algorithms are equivalent.	SE: 29, 129, 171, 345, 350, 652 #55, 663 #42 <i>Reading Mathematics</i> 10

CONTENT STANDARDS	PAGE REFERENCES
Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof	
Evaluate situations, select problem-solving strategies, draw logical conclusions, develop and describe solutions and recognize their applications.	
PO 1. Draw a simple valid conclusion from a given <i>if...then</i> statement and a minor premise.	SE: 37-42 TWE: A 42 F 37 IE 38, 39
PO 2. List related <i>if... then</i> statements in logical order.	SE: 38, 42
PO 3. Write an appropriate conjecture given a certain set of circumstances.	SE: 291 #71, 614 #43 <i>Algebra Activity</i> 22, 28, 49, 207, 293, 783 <i>Graphing Calculator Investigation</i> 204
PO 4. Analyze assertions related to a contextual situation by using principles of logic.	SE: 37-42, 291 #70 <i>Algebra Activity</i> 49 TWE: A 42 DI 558 F 37 IE 38-39
PO 5. Identify a valid conjecture using inductive reasoning.	SE: 240-241, 243, 244 #12-13 <i>Algebra Activity</i> 241 <i>Reading Mathematics</i> 239
PO 6. Distinguish valid arguments from invalid arguments.	SE: 41 #30-35, 414 #55-7, 674 #4, 683 #58, 717 #3 <i>Algebra Activity</i> 49 <i>Getting Started</i> 707 #1-4
PO 7. Create inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.	SE: 548, 597 #49, 607 #2, 608, 618 #3, 620 #33-35 TWE: DI 607
PO 8. Critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.	SE: 548, 572 #62 <i>Algebra Activity</i> 49, 626
PO 9. Identify a counterexample for a given conjecture.	SE: 39, 40, 536 #3
PO 10. Construct a counterexample to show that a given conjecture is false.	SE: 39, 40-41, 154 #63-64, 434 #3, 662 #2, 694 #3, 733 #1, 772 #2
PO 11. State the inverse, converse, or contrapositive of a given statement.	SE: 37-42, 645 #3, 646 #38-40
PO 12. Determine if the inverse, converse, or contrapositive of a given statement is true or false.	SE: 37-42, 645 #3, 646 #38-40
PO 13. Construct a simple formal or informal deductive proof.	SE: 38-39, 570 #3, 289 #3, 597 #50, 621 #43-46, 630 #66 <i>Reading Mathematics</i> 239 TWE: A 42 IE 38, 39

CONTENT STANDARDS	PAGE REFERENCES
PO 14. Verify characteristics of a given geometric figure using coordinate formulas such as distance, mid-point, and slope to confirm parallelism, perpendicularity, and congruency.	SE: 196 #48-50, 292-297, 527, 612 #2-3, 662 #3 TWE: A 297 DI 294 F 292

Codes Used for TWE Pages

A	Assess
AA	Algebra Activity
DI	Daily Intervention
F	Focus
GCI	Graphing Calculator Investigation
IE	In-Class ex
STP	Standardized Test Practice
TNT	Tips for New Teachers
TT	Teacher to Teacher