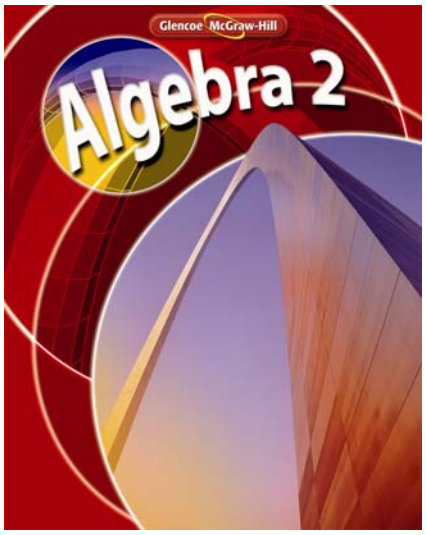
Mathematics Standards
Grades 9-12

South Dakota



Algebra 2

STANDARDS	PAGE REFERENCES
Core High School Algebra Grade Standards, Supporting Skills, and Examples	
Indicator 1: Use procedures to transform algebraic expressions.	
Standard, Supporting Skills, and Examples	
9-12.A.1.1. Students are able to write equivalent forms of algebraic expressions using properties of the set of real numbers. • Evaluate algebraic expressions. • Use laws of exponents. • Use conventional order of operations, including grouping and exponents.	**Student Edition:** 6-10, 11-17, 253-258, 312-318, 320-324, 325-330, 402-406, 408-414, 415-422, 442-449, 450-456 *Algebra Lab* 321 *Prerequisite Skills* 877-878 *Reading Mathematics* 319 **Teacher Wraparound Edition:** F 7, 313; Pre-AP 10, 318
Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.	
Standard, Supporting Skills, and Examples	
9-12.A.2.1. Students are able to use algebraic properties to transform multi-step, single-variable, first-degree equations.	**Student Edition:** 18-26, 27-31 **Teacher Wraparound Edition:** Pre-AP 21

Codes used for Teacher Wraparound Edition pages are the initial caps of headings on that page.

STANDARDS	PAGE REFERENCES
9-12.A.2.2. Students are able to use algebraic properties to transform multi-step, single-variable, first-degree inequalities and represent solutions using a number line.	**Student Edition:** 33-39, 41-48 *Graphing Calculator Lab* 36 *Reading Mathematics* 40 **Teacher Wraparound Edition:** Pre-AP 39
Indicator 3: Interpret and develop mathematical models.	
Standard, Supporting Skills, and Examples	
9-12.A.3.1. Students are able to create linear models to represent problem situations. • Calculate and interpret slope.	**Student Edition:** 18-26, 27-31, 33-39, 41-48, 71-77, 79-84, 86-91 *Algebra Lab* 88 *Graphing Calculator Lab* 92-94
9-12.A.3.2. Students are able to distinguish between linear and nonlinear models.	**Student Edition:** 66-70, 95-101 **Teacher Wraparound Edition:** F 67; Pre-AP 70
Indicator 4: Describe and use properties and behaviors of relations, functions, and inverses.	
Standard, Supporting Skills, and Examples	
9-12.A.4.1. Students are able to use graphs, tables, and equations to represent linear functions.	**Student Edition:** 66-70, 71-77, 79-84, 86-91, 102-105 *Algebra Lab* 88 *Graphing Calculator Lab* 73, 78, 92-94 **Teacher Wraparound Edition:** F 103; Pre-AP 70, 77, 81, 91
Core High School Algebra Performance Descriptors	
Advanced	
High school students performing at the advanced level: • transform algebraic expressions; • solve quadratic equations; • solve a system of linear equations.	**Student Edition:** 6-10, 11-17, 18-26, 116-122, 123-129, 201-207, 217-222, 246-251, 253-258, 268-275, 276-283 *Algebra Lab* 270 *Graphing Calculator Lab* 223 **Teacher Wraparound Edition:** F 118, 248; I 125; Pre-AP 126, 273

STANDARDS	PAGE REFERENCES
Proficient	
High school students performing at the proficient level: • transform polynomial expressions using real number properties; • solve single variable linear equations with integral coefficients; • graph linear equations; • interpret tables, graphs, and charts to solve problems; • create a linear model from a problem context.	**Student Edition:** 11-17, 18-26, 66-70, 71-77, 79-84, 86-91, 312-318, 320-324, 325-330 *Algebra Lab* 88, 321 *Graphing Calculator Lab* 73, 78, 92-94 *Prerequisite Skills* 883-884, 885, 886-887, 888, 889-890 **Teacher Wraparound Edition:** Pre-AP 70, 77
Basic	
High school students performing at the basic level: • transform linear expressions with integral coefficients using real number properties; • solve linear equations of the form $ax + b = c$, where a, b, and c are integers; • recognize the graph of a linear equation; • graph a line from a table of values.	**Student Edition:** 11-17, 18-26, 58-64, 66-70, 71-77 *Algebra Lab* 13 *Graphing Calculator Lab* 73 *Reading Mathematics* 65 **Teacher Wraparound Edition:** F 59, 67, 72; Pre-AP 21, 70, 77
Core High School Geometry **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.	
Standard, Supporting Skills, and Examples	
9-12.G.1.1. Students are able to apply the properties of triangles and quadrilaterals to find unknown parts.	**Student Edition:** 26 #73, 76 #47, 184 #46, 669 #44, 759-767, 785-792, 793-798, 806-811 *Prerequisite Skills* 881-882 *Spreadsheet Lab* 758 *Standardized Test Practice* 112 #3, 231 #9, 819 #12

STANDARDS	PAGE REFERENCES
9-12.G.1.2. Students are able to identify and apply relationships among triangles. • Definitions and postulates • Similarity theorems • Congruence theorems	**Student Edition:** 64 #60, 122 #47, 184 #46, 648 #65, 669 #44, 759-767, 785-792, 793-798, 806-811 *Prerequisite Skills* 879-880, 881-882 *Spreadsheet Lab* 758 *Standardized Test Practice* 112 #3, 231 #9, 616 #5
Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.	
Standard, Supporting Skills, and Examples	
9-12.G.2.1. Students are able to recognize the relationship between a three-dimensional figure and its two-dimensional representation. • Interpret floor plans • Follow instructions for assembly of a product, e.g., "some assembly required."	**Student Edition:** *Standardized Test Practice* 55 #8, 381 #7, 558 #1, 753 #9
9-12.G.2.2. Students are able to reflect across vertical or horizontal lines, and translate two-dimensional figures. • Identify lines of symmetry. • Use the coordinate plane.	**Student Edition:** 185-192, 236-244, 246-251, 286-292, 509-517, 567-573, 574-579, 581-588, 590-597, 598-602 **Teacher Wraparound Edition:** F 188; Pre-AP 192
9-12.G.2.3. Students are able to use proportions to solve problems.	**Student Edition:** 465-471, 759-767 *Prerequisite Skills* 879-880 **Teacher Wraparound Edition:** I 467
Core High School Geometry Performance Descriptors	
Advanced	
High school students performing at the advanced level: • translate and reflect a figure using the coordinate plane; • supply a missing reason and/or statement in a deductive proof.	**Student Edition:** 185-192, 242 #51-#54, 566 #38, 587 #33, 288-292, 542 #51-#54, 566 #38, 587 #33, 767 #45, 783 #52, 792 #38 *Graphing Calculator Lab* 73, 78, 284-285 **Teacher Wraparound Edition:** Pre-AP 192

STANDARDS	PAGE REFERENCES
Proficient	
High school students performing at the proficient level: • use deductive reasoning and known properties of a geometric figure to find other properties; • use proportions to solve problems; • translate or reflect a simple figure using the coordinate plane; • match a two-dimensional drawing to its three-dimensional counterpart.	**Student Edition:** 185-192, 242 #51-#54, 566 #38, 587 #33, 288-292, 465-471, 759-767, 542 #51-#54, 566 #38, 587 #33, 767 #45, 783 #52, 792 #38 *Graphing Calculator Lab* 73, 78, 284-285 *Prerequisite Skills* 879-880 *Standardized Test Practice* 55 #8, 381 #7, 558 #1, 753 #9 **Teacher Wraparound Edition:** Pre-AP 192
Basic	
High school students performing at the basic level: • identify a translation or reflection; • solve a proportion.	**Student Edition:** 185-192, 242 #51-#54, 566 #38, 587 #33, 288-292, 465-471, 759-767, 542 #51-#54, 566 #38, 587 #33, 767 #45, 783 #52, 792 #38 *Graphing Calculator Lab* 73, 78, 284-285 *Prerequisite Skills* 879-880 *Standardized Test Practice* 55 #8, 381 #7, 558 #1, 753 #9 **Teacher Wraparound Edition:** Pre-AP 192

STANDARDS	PAGE REFERENCES
Core High School Measurement **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Apply measurement concepts in practical applications.	
Standard, Supporting Skills, and Examples	
9-12.M.1.1. Students are able to choose appropriate unit label, scale, and precision. • Determine appropriate scales for histograms, scatterplots, and other graphs.	**Student Edition:** 66-70, 71-77, 86-91, 95-101, 236-244, 246-251, 339-345, 457-463, 567-573, 574-579, 581-588, 590-597 *Algebra Lab* 88 *Prerequisite Skills* 886-887, 888, 889-890
9-12.M.1.2. Students are able to use suitable units when describing rate of change.	**Student Edition:** 71-77, 79-84, 315 Ex5 *Reading Mathematics* 319
9-12.M.1.3. Students are able to use formulas to find perimeter, circumference, and area to solve problems involving common geometric figures. • Use algebraic expressions with geometric formulas.	**Student Edition:** 8 Ex2, 9 #23, 10 #40, 15 #34, 24 #43, 31 #60-#61, 197 Ex4, 199 #27-#29, 207 #35, 251 #51, 266 #78, 274 #60, 322 #14, 354 #50 *Algebra Lab* 321
Core High School Measurement **Performance Descriptors**	
Advanced	
High school students performing at the advanced level: • use dimensional analysis to solve problems; • apply indirect measurement methods; • represent and solve problems involving volume and surface area.	**Student Edition:** 8 Ex2, 17 #71, 21 Ex5, 25 #63, 26 #79, 64 #60, 122 #47, 222 #39, 244 #93, 315 Ex5, 354 #48-#49, 367 #42-#45, 371 Ex2, 371 #7, 465-471, 759-767 *Prerequisite Skills* 879-880 *Reading Mathematics* 319 *Spreadsheet Lab* 758
Proficient	
High school students performing at the proficient level: • select a suitable unit of measure for problem situations, including rate of change; • choose an appropriate scale for a graph; • represent and solve problems involving perimeter, circumference, and area.	**Student Edition:** 8 Ex2, 9 #23, 10 #40, 15 #34, 24 #43, 31 #60-#61, 66-70, 71-77, 79-84, 86-91, 95-101, 197 Ex4, 199 #27-#29, 207 #35, 236-244, 246-251, 266 #78, 274 #60, 322 #14, 339-345, 457-463, 567-573, 574-579, 581-588, 590-597 *Algebra Lab* 88, 321 *Prerequisite Skills* 886-887, 888, 889-890 *Reading Mathematics* 319

STANDARDS	PAGE REFERENCES
Basic	
High school students performing at the basic level: • recognize a unit of measure that describes a rate of change problem; • find circumference and area of circles; • find perimeter and area of rectangles and triangles.	**Student Edition:** 8 Ex2, 9 #23, 10 #40, 15 #34, 24 #43, 31 #60-#61, 71-77, 79-84, 197 Ex4, 199 #27-#29, 207 #35, 251 #51, 266 #78, 274 #60, 315 Ex5, 322 #14, 354 #50 *Algebra Lab* 321 *Reading Mathematics* 319
Core High School Number Sense **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.	
Standard, Supporting Skills, and Examples	
9-12.N.1.1. Students are able to identify multiple representations of a real number. • Given a real number identify the subset(s) of real numbers to which it belongs. • Represent rational and irrational numbers in different forms.	**Student Edition:** 11-17, 402-406, 408-414, 415-421, 650-655 *Algebra Lab* 410 **Teacher Wraparound Edition:** Pre-AP 655
9-12.N.1.2. Students are able to apply the concept of place value, magnitude, and relative magnitude of real numbers. • Scientific notation • Infinitely many solutions Completeness of the real numbers	**Student Edition:** 33-39, 102-105 *Reading Mathematics* 40 **Teacher Wraparound Edition:** DI 35; F 103

STANDARDS	PAGE REFERENCES
Indicator 2: Apply number operations with real numbers and other number systems.	
Standard, Supporting Skills, and Examples	
9-12.N.2.1. Students are able to add, subtract, multiply, and divide real numbers including integral exponents.	**Student Edition:** 6-10, 11-17, 18-26, 33-39, 71-77, 79-84, 123-129, 138-144, 236-244, 253-258, 259-266, 268-275, 276-283, 312-318, 320-324, 325-330, 331-338
Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.	
Standard, Supporting Skills, and Examples	
9-12.N.3.1. Students are able to use estimation strategies in problem situations to predict results and to check the reasonableness of results. • Use rounding as an estimation strategy. • Use non-routine estimation strategies.	**Student Edition:** 148 Ex4, 269 Ex2, 272 Ex6&7, 278-279 Ex3&4, 296 Ex3, 297 Ex4, 298 #10, 387 Ex5, 298 Ex2, 400 #21, 404 Ex3, 424 Ex3, 467-468 Ex4
9-12.N.3.2. Students are able to select alternative computational strategies and explain the chosen strategy. • Use properties of numbers that allow operational shortcuts for computational procedures.	The following references can be integrated in classroom discussion to meet this objective. **Student Edition:** 6-10, 11-17 *Prerequisite Skills* 881-882
Core High School Number Sense Performance Descriptors	
Advanced	
High school students performing at the advanced level: • classify a number as real, pure imaginary, or complex; • evaluate numerical expressions using rational exponents; • explain a reasonable solution to a problem.	**Student Edition:** 11-17 (especially #35), 148 Ex4, 259-266, 269 Ex2, 272 Ex6&7, 278-279 Ex3&4, 296 Ex3, 297 Ex4, 298 #10, 387 Ex5, 298 Ex2, 400 #21, 404 Ex3, 415-421, 422-427, 467-468 Ex4 **Teacher Wraparound Edition:** F 263, 416; I 404; Pre-AP 266, 417
Proficient	
High school students performing at the proficient level: • identify the subsets of the set of real numbers to which a given number belongs; • evaluate numerical expressions using integral exponents; • check reasonableness of a solution to a problem.	**Student Edition:** 11-17, 148 Ex4, 269 Ex2, 272 Ex6&7, 278-279 Ex3&4, 296 Ex3, 297 Ex4, 298 #10, 312-318, 320-324, 325-330, 387 Ex5, 298 Ex2, 400 #21, 404 Ex3, 424 Ex3, 467-468 Ex4 **Teacher Wraparound Edition:** Pre-AP 318

STANDARDS	PAGE REFERENCES
Basic	
High school students performing at the basic level: • give an example of each of the following: a whole number, an integer, and a rational number; • evaluate numerical expressions using whole number exponents.	**Student Edition:** 11-17, 312-318 **Teacher Wraparound Edition:** Pre-AP 318
Core High School Statistics & Probability Grade Standards, Supporting Skills, and Examples	
Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.	
Standard, Supporting Skills, and Examples	
9-12.S.1.1. Students are able to draw conclusions from a set of data. • Determine and use appropriate statistical values. • Determine which questions can or cannot be answered from a given data set.	**Student Edition:** 717-723 *Graphing Calculator Lab* 719 *Prerequisite Skills* 883-884, 889-890 **Teacher Wraparound Edition:** F 718; Pre-AP 723
9-12.S.1.2. Students are able to compare multiple one-variable data sets, using range, interquartile range, mean, mode, and median.	**Student Edition:** 717-723 *Graphing Calculator Lab* 719 **Teacher Wraparound Edition:** F 718; Pre-AP 723
9-12.S.1.3. Represent a set of data in a variety of graphical forms and draw conclusions. • Make a scatterplot to draw a regression line and make predictions. • Make a box-and-whisker plot to model a set of one-variable data. • Make a histogram from a frequency distribution.	**Student Edition:** 86-91 *Algebra Lab* 88 *Graphing Calculator Lab* 92-94 *Prerequisite Skills* 886-887, 889-890 **Teacher Wraparound Edition:** F 87; Pre-AP 91

STANDARDS	PAGE REFERENCES
Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems.	
Standard, Supporting Skills, and Examples	
9-12.S.2.1. Students are able to distinguish between experimental and theoretical probability.	**Student Edition:** 702 #35-#37
9-12.S.2.2. Students are able to predict outcomes of simple events using given theoretical probabilities. • Determine the sample space of an experiment.	**Student Edition:** 697-702, 703-709, 710-715 *Algebra Lab* 703 **Teacher Wraparound Edition:** F 699; I 704; Pre-AP 702, 707
Core High School Statistics & Probability Performance Descriptors	
Advanced	
High school students performing at the advanced level: • calculate probability of compound events; • determine correlation coefficient in a data set.	**Student Edition:** 703-709, 710-715 **Teacher Wraparound Edition:** I 704; F 705; Pre-AP 707, 715
Proficient	
High school students performing at the proficient level: • calculate probability of a simple event and make predictions; • answer questions about measures of central tendency and five-number summary based on a given data set; • draw a regression line for a scatterplot.	**Student Edition:** 86-91, 697-702 *Algebra Lab* 88 *Graphing Calculator Lab* 92-94 *Prerequisite Skills* 883-884 **Teacher Wraparound Edition:** Pre-AP 91, 702
Basic	
High school students performing at the basic level: • calculate the probability of a simple event; • calculate mean, median, and mode for a data set.	**Student Edition:** 697-702 *Prerequisite Skills* 883-884 **Teacher Wraparound Edition:** Pre-AP 702

STANDARDS	PAGE REFERENCES
Advanced High School Algebra **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Use procedures to transform algebraic expressions.	
Standard, Supporting Skills, and Examples	
9-12.A.1.1A. Students are able to write equivalent forms of rational algebraic expressions using properties of real numbers.	**Student Edition:** 312-318, 442-449, 450-456 **Teacher Wraparound Edition:** Pre-AP 449, 456
9-12.A.1.2A. Students are able to extend the use of real number properties to expressions involving complex numbers.	**Student Edition:** 259-266, 362-368 *Algebra Lab* 262 **Teacher Wraparound Edition:** Pre-AP 266
Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.	
Standard, Supporting Skills, and Examples	
9-12.A.2.1A. Students are able to determine solutions of quadratic equations. • Use the quadratic formula. • Use the discriminant, $b^2 - 4ac$, to describe the nature of the roots.	**Student Edition:** 246-251, 253-258, 268-275, 276-283, 349-355, 356-361, 362-368 *Algebra Lab* 270 **Teacher Wraparound Edition:** F 248; Pre-AP 258, 273, 280
9-12.A.2.2A. Students are able to determine the solution of systems of equations and systems of inequalities.	**Student Edition:** 116-122, 123-129, 130-135, 138-144, 145-152, 201-207, 216-222 *Graphing Calculator Lab* 136, 223 **Teacher Wraparound Edition:** Pre-AP 122, 126, 135, 207, 222
9-12.A.2.3A. Students are able to determine solutions to absolute value statements.	**Student Edition:** 27-31, 41-48 **Teacher Wraparound Edition:** Pre-AP 31

STANDARDS	PAGE REFERENCES
Indicator 3: Interpret and develop mathematical models.	
Standard, Supporting Skills, and Examples	
9-12.A.3.1A. Students are able to distinguish between linear, quadratic, inverse variation, and exponential models.	**Student Edition:** 66-70, 95-101, 236-244, 465-471, 473-478, 498-506 *Graphing Calculator Lab* 78, 284-285, 499 **Teacher Wraparound Edition:** F 67, 475
9-12.A.3.2A. Students are able to create formulas to model relationships that are algebraic, geometric, trigonometric, and exponential.	**Student Edition:** 10 #36, 18-26, 36 Ex4, 47 #45, 79-84, 148-149 Ex4, 239-240 Ex4, 274 #58, Introduction on 276, 465-471, 498-506, 544-550, 785-792, Introduction on 793, 837-841, 842-846, 848-852, 853-859
9-12.A.3.3A. Students are able to use sequences and series to model relationships.	**Student Edition:** 622-628, 629-635, 626-641, 643-649, 650-655, 658-662, *Algebra Lab* 624, 659 *Graphing Calculator Lab* 632 **Teacher Wraparound Edition:** F 623, 637, 644, 651; I 630, 651; Pre-AP 628, 635, 641, 649, 662
Indicator 4: Describe and use properties and behaviors of relations, functions, and inverses.	
Standard, Supporting Skills, and Examples	
9-12.A.4.1A. Students are able to determine the domain, range, and intercepts of a function.	**Student Edition:** 58-64, 236-244, 246-251, 331-338, 339-345, 362-368, 369-373, 397-401, 457-463 *Graphing Calculator Lab* 464 **Teacher Wraparound Edition:** F 459; Pre-AP 64, 345, 368, 463

STANDARDS	PAGE REFERENCES
9-12.A.4.2A. Students are able to describe the behavior of a polynomial, given the leading coefficient, roots, and degree.	**Student Edition:** 331-338, 339-345, 362-368, 369-373 *Graphing Calculator Lab* 342 **Teacher Wraparound Edition:** F 342, 363; Pre-AP 338, 345, 373; TfNT 334
9-12.A.4.3A. Students are able to apply transformations to graphs and describe the results. • Change coefficients and/or constants. • Graph the inverse of a function.	**Student Edition:** 95-101, 236-244, 286-292, 331-338, 339-345, 473-478, 498-506, 509-517, 567-573, 574-579, 581-588, 590-597, 598-602 *Algebra Lab* 585 *Geometry Software Lab* 511 *Graphing Calculator Lab* 73, 78, 97, 284-285, 499 **Teacher Wraparound Edition:** Pre-AP 77, 292, 338
9-12.A.4.4A. Students are able to apply properties and definitions of trigonometric, exponential, and logarithmic expressions.	**Student Edition:** 498-506, 509-517, 520-526, 528-533, 536-542, 544-550, 837-841, 842-846, 848-852, 853-859 **Teacher Wraparound Edition:** F 500; Pre-AP 506, 517, 523, 533, 846, 859
9-12.A.4.5A. Students are able to describe characteristics of nonlinear functions and relations. • Conic sections • Trigonometric functions • Exponential and logarithmic functions	**Student Edition:** 498-506, 509-517, 520-526, 528-533, 536-542, 544-550, 567-573, 574-579, 581-588, 590-597, 598-602, 837-841, 842-846, 848-852, 853-859 *Algebra Lab* 569, 580, 585
9-12.A.4.6A. Students are able to graph solutions to linear inequalities.	**Student Edition:** 102-105 **Teacher Wraparound Edition:** F103

STANDARDS	PAGE REFERENCES
Advanced High School Geometry **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.	
Standard, Supporting Skills, and Examples	
9-12.G.1.1A. Students are able to justify properties of geometric figures.	The following references can be integrated in classroom discussions to meet this objective. **Student Edition:** 191 345, 242 #51-#54, 566 #38, 587 #33, 767 #45-47, 783 #52, 792 #38 *Algebra Lab* 569, 580, 585
9-12.G.1.2A. Students are able to determine the values of the sine, cosine, and tangent ratios of right triangles.	**Student Edition:** 759-767
9-12.G.1.3A. Students are able to apply properties associated with circles.	See Glencoe *Geometry* © 2008. **Student Edition:** 554-561, 563-569, 570-577, 578-586, 588-596, 599-606, 607-613 *Practice Test* 625 *Standardized Test Practice* 626-627 #1, #3, #9, #11 *Study Guide and Review* 621-624 **Teacher Wraparound Edition:** A 569; AE 555-557, 564-566, 571-573, 579-582, 589-592, 600-602, 608-610; DI 565; PAP 569
9-12.G.1.4A. Students are able to use formulas for surface area and volume to solve problems involving three-dimensional figures.	**Student Edition:** 8 Ex2, 17 #71, 21 Ex5, 25 #63, 26 #79, 222 #39, 244 #93, 354 #48-#49, 367 #42-#45, 371 Ex2, 371 #7
Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.	
Standard, Supporting Skills, and Examples	
9-12.G.2.1A. Students are able to use Cartesian coordinates to verify geometric properties.	**Student Edition:** 76 #47, 565 #22 & #23

STANDARDS	PAGE REFERENCES
Advanced High School Measurement **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Apply measurement concepts in practical applications.	
Standard, Supporting Skills, and Examples	
9-12.M.1.1A. Students are able to use dimensional analysis to check answers and determine units of a problem solution.	**Student Edition:** 315 Ex4, Introduction on 391, 394 #6-#7 *Reading Mathematics* 319
9-12.M.1.2A. Students are able to use indirect measurement in problem situations that defy direct measurement.	**Student Edition:** 759-767
Advanced High School Number Sense **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.	
Standard, Supporting Skills, and Examples	
9-12.N.1.1A. Students are able to describe the relationship of the real number system to the complex number system.	**Student Edition:** 259-266 *Algebra Lab* 262 **Teacher Wraparound Edition:** DI 260; F263
9-12.N.1.2A. Students are able to apply properties and axioms of the real number system to various subsets, e.g., axioms of order, closure.	**Student Edition:** 11-17, 169-176, 177-184 **Teacher Wraparound Edition:** I 171; Pre-AP 17
Indicator 2: Apply number operations with real numbers and other number systems.	
Standard, Supporting Skills, and Examples	
9-12.N.2.1A. Students are able to add, subtract, multiply, and divide real numbers including rational exponents. • Simplify numeric expressions with radicals.	**Student Edition:** 6-10, 11-17, 18-26, 312-318, 397-401, 402-406, 408-414, 415-421 **Teacher Wraparound Edition:** Pre-AP 318

STANDARDS	PAGE REFERENCES
Advanced High School Statistics & Probability **Grade Standards, Supporting Skills, and Examples**	
Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.	
Standard, Supporting Skills, and Examples	
9-12.S.1.1A. Students are able to analyze and evaluate the design of surveys and experiments.	**Student Edition:** 741-744 **Teacher Wraparound Edition:** DI 742
9-12.S.1.2A. Students are able to analyze and evaluate graphical displays of data.	See Glencoe *Geometry* © 2008. The following references discuss graphical displays of data and can be used to meet this objective. **Student Edition:** 565 Real-World Example 3, 566 Check Your Progress, 567 #9, #29-#31 *Mixed Problem Solving and Proof* 837 #2-#4 *Standardized Test Practice* 90 #55 **Teacher Wraparound Edition:** AE 565 #3
9-12.S.1.3A. Students are able to compare multiple one-variable data sets, using standard deviation and variance. • Calculate the standard deviation and variance of a data set.	**Student Edition:** 717-723 *Graphing Calculator Lab* 719 **Teacher Wraparound Edition:** F 718; Pre-AP 723
9-12.S.1.4A. Students are able to describe the normal curve and use it to make predictions.	**Student Edition:** 724-728 **Teacher Wraparound Edition:** F 725; Pre-AP 728
9-12.S.1.5A. Students are able to use scatterplots, best-fit lines, and correlation coefficients to model data and support conclusions.	**Student Edition:** 86-91 *Algebra Lab* 88 *Graphing Calculator Lab* 92-94, 252, 346-347, 518-519 **Teacher Wraparound Edition:** Pre-AP 91

STANDARDS	PAGE REFERENCES
Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems	
Standard, Supporting Skills, and Examples	
9-12.S.2.1A. Students are able to use probabilities to solve problems. • Compute combinations, permutations. • Interpret tables. • Create and use tree diagrams.	**Student Edition:** 684-689, 690-695, 697-702, 703-709, 710-715 *Algebra Lab* 703 *Reading Math* 696 **Teacher Wraparound Edition:** I 704; Pre-AP 689, 702, 707, 715; TfNT685
9-12.S.2.2A. Students are able to determine probability of compound, complementary, independent, and mutually exclusive events.	See Glencoe *Geometry* © 2008. The following references discuss finding probabilities (using inscribed angles of a circle and geometric probability) and can be used to meet this objective. **Student Edition:** 580 Example 3, 583-584 #3, #11-#14, 665-671 *Mid-Chapter Quiz* 587 #19 *Practice Test* 675 #11-#13 *Study Guide and Review* 674 11-5 **Teacher Wraparound Edition:** A 671; AE 580 #3, 666-667; PAP 671
9-12.S.2.3A. Students are able to generate data and use the data to determine empirical (experimental) probabilities.	See Glencoe *Algebra I* © 2008. **Student Edition:** 677-683, 688, 743, 755 *Practice Test* 689 **Teacher Wraparound Edition:** AE 678, 679; AL 678; DI 664; PA 680; RWC 683; T 672, 677