

**GLENCOE CORRELATION**  
**GEOMETRY: CONCEPTS AND APPLICATIONS © 2001**  
**WYOMING**  
**Grade 11 Mathematics**

OBJECTIVES	PAGE REFERENCES
<b>1. NUMBER OPERATIONS AND CONCEPTS</b>	
Students use numbers, number sense, and number relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.	
1. Students represent, use, and apply numbers in a variety of forms including rational, radical, and exponential expressions.	SE: 256-261, 262-267, 350-355 TWE: F 356
2. Students apply the structure and properties of the real number system including the use of opposites, reciprocals, estimation, and absolute value.	SE: 50-55, 479-482 TWE: F 56
<b>2. GEOMETRY</b>	
Students apply geometric concepts, properties, and relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.	
1. Students use transformations, congruency, symmetry, similarity, perpendicularity, and parallelism to solve problems.	SE: 128-133, 148-153, 156-161, 198-202, 388-393, 434-437, 534-539 TWE: F 203, 440
2. Students identify and apply scale factors, ratios, and proportions to length, area, and volume.	SE: 350-355, 390-393, 534-539 TWE: F 402
3. Students communicate, using mathematical language, to: <ul style="list-style-type: none"> <li>• Interpret, represent, or create geometric figures;</li> <li>• Draw or build figures from a mathematical description;</li> <li>• Give a precise geometric description of a physical object.</li> </ul>	SE: 402-407, 496-501 <i>Communicating Mathematics</i> 508, 531, 537 TWE: F 504
4. Students apply the Pythagorean theorem and right-triangle trigonometry in a variety of situations (sine, cosine, and tangent ratios).	SE: 256-261, 564-569, 572-577 TWE: F 262
5. Students formulate conjectures through inductive reasoning, verify conjectures through deductive reasoning, construct and present a valid argument, and use counter examples to invalidate arguments.	SE: 4-9, 632-637, 638-643 TWE: F 12, 644
6. Students connect geometry with other mathematical topics.	SE: <i>Algebra Link</i> 57, 70, 284, 357, 389, 593 TWE: T 57
<b>3. MEASUREMENT</b>	
Students use a variety of tools and techniques of measurement in a problem-solving situation. Students communicate the reasoning used in solving these problems.	
1. Students apply the appropriate methods and units to solve problems involving length, weight, area, volume, and angle measure.	SE: 35-40, 96-101, 413-418, 419-424, 425-430, 510-515, 522-527 TWE: F 50, 104

OBJECTIVES	PAGE REFERENCES
2. Students understand the structure of standard measurement systems both metric and U.S. customary including derived units, and within system unit conversion.	SE: 56-61 TWE: F 62
<b>4. ALGEBRAIC CONCEPTS AND RELATIONSHIPS</b>	
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation. Students evaluate and communicate the reasoning used in solving these problems.	
1. Students use algebraic concepts, symbols, and skills to analyze, represent, and solve consumer and professional problems including mortgages and compound interest, rate-time-distance relationships, and profit and loss.	SE: <i>Math in the Workplace</i> 41, 431, 459, 623 TWE: A 40
2. Students write, model, and evaluate expressions, functions, systems, and inequalities.	SE: 174-179, 276-281, 676-680, 681-686 TWE: F 282, 687
3. Students use linear, inverse, and quadratic relationships to solve problems involving practical applications.	SE: 174-179, 256-261, 676-680, 681-686 TWE: F 262
4. Students graph linear equations and interpret the results to solve algebra problems.	SE: 174-179, 676-680 TWE: F 681
5. Students connect algebra with other mathematical topics.	SE: <i>Algebra Link</i> 57, 70, 284, 357, 389, 593 TWE: T 57
<b>5. STATISTICS AND PROBABILITY</b>	
Students use statistics and probability to analyze given situations and the results of experiments. Students communicate the reasoning used in arriving at a conclusion.	
1. Students apply knowledge of statistical indicators to interpret and evaluate information and data for reasonableness, reliability, accuracy, and bias to make informed decisions.	SE: <i>Math in the Workplace</i> 41, 339 <i>Mixed Review</i> 133, 267 <i>Preparing for Standardized Tests</i> 184-185, 347
2. Students draw valid inferences from statistical data to predict likely outcomes.	SE: <i>Applications and Problem Solving</i> 9 <i>Math in the Workplace</i> 41 <i>Mixed Review</i> 133, 267 <i>Preparing for Standardized Tests</i> 273, 347
3. Students determine the probability of independent and dependent events.	SE: 484-487 <i>Applications and Problem Solving</i> 438 <i>Preparing for Standardized Tests</i> 138-139, 185, 273, 347, 451, 545, 629 TWE: RA 486
4. Students solve problems using fundamental methods of combinations and permutations.	SE: <i>Preparing for Standardized Tests</i> 138-139
5. Students determine whether to use theoretical or experimental probability to represent and solve a problem involving uncertainty.	See Glencoe's <i>Algebra: Concepts and Applications</i> © 2001 SE: 219-223, 649 TWE: ICE 221

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<b>6. TOOLS AND TECHNOLOGY</b>	
Students use appropriate tools and technologies to model, measure, and apply the results in a problem-solving situation. Students communicate the reasoning used in solving these problems.	
1. Students select and use appropriate calculator/computer technology including spreadsheets, graphing calculators, and geometric modeling and algebra software to accurately model and solve consumer and professional problems.	SE: <i>Graphing Calculator Exploration</i> 112, 246-247, 478 <i>Investigation</i> 432-433 <i>Mixed Review</i> 321 <i>Problem-Solving Workshop</i> 89 TWE: T 247, 479
2. Students select and use appropriate manipulatives including 3D and 2D models, algebra tiles, Mira devices, patty paper, dice and cards.	SE: <i>Hands-On Geometry</i> 203, 415, 425, 469, 510, 522 TWE: F 203
<b>7. PROBLEM SOLVING AND MATHEMATICAL REASONING</b>	
Students apply a variety of problem-solving strategies to investigate and solve problems from across the curriculum as well as from practical applications.	
1. Students identify a problem to be solved mathematically from a real-life situation in business, personal finance, health care, or industry.	SE: <i>Math in the Workplace</i> 23, 41, 95, 115, 301, 339, 379, 431, 445, 459, 623, 691 TWE: A 487
2. Students determine, collect, and organize the relevant data needed to make decisions regarding personal and professional situations.	SE: <i>Math in the Workplace</i> 23, 41, 95, 115, 301, 339, 379, 431, 445, 459, 623, 691 TWE: FA 16, 113, 145
3. Students demonstrate strategies for solving multiple-step problems.	SE: <i>Problem-Solving Workshop</i> 3, 49, 89, 141, 187, 227, 275, 309, 349, 401, 453, 495, 547, 585, 631, 675
4. Students demonstrate logical reasoning, both inductive and deductive.	SE: 4-9, 632-637, 638-643 TWE: F 644
5. Students communicate mathematically to explain reasoning, verify results, and write solutions in a quantitative form.	SE: <i>Communicating Mathematics</i> 20, 71, 108, 171, 212, 259, 330 TWE: A 332, 378, 553

### Codes Used for TWE Pages

A	Assess
F	Focus
FA	Family Activity
RA	Reteaching Activity
T	Teach