

**GLENCOE CORRELATION**  
**MATHEMATICS: APPLICATIONS AND CONCEPTS COURSE 3**  
**OKLAHOMA**  
Priority Academic Student Skills  
Mathematics Content Standards  
Grade 8

CONTENT STANDARDS	PAGE REFERENCES
<b>Standard 1: Algebraic Reasoning - The student will graph and solve linear equations and inequalities in problem-solving situations.</b>	
1. Equations	
a. Model, write, and solve 2-step linear equations using a variety of methods.	SE: 474-477, 479 ex 5, 481 #26-29, 484-487, 490 #10-15 <i>Hands-on Lab</i> 482-483 TWE: DI 475
b. Graph and interpret the solution to linear equations on a number line with one variable and on a coordinate plane with two variables.	SE: 522-525, 533-536, 544-547 <i>Hands-on Lab</i> 532 TWE: ICE 523
c. Predict the effect on the graph of a linear equation when the slope changes (e.g., make predictions from graphs, identify the slope in the equation $y = mx + b$ and relate to a graph).	SE: 522-525, 526-529, 533-536, 544-547 <i>Hands-on Lab</i> 532 TWE: A 529 DI 523, 527, 545
2. Inequalities	
a. Model, write, and solve 1-step and 2-step linear inequalities with one variable.	SE: 492-495, 496-499, 500-504, 506, 507 #14-19 TWE: A 495 B 500 ICE 493, 501
b. Graph the solution to linear inequalities with one variable on a number line.	SE: 492-495, 496-499, 500-504, 506, 507 #14-19 TWE: A 495 B 500 ICE 493, 501
<b>Standard 2: Number Sense - The student will use numbers and number relationships to solve problems.</b>	
1. Rational Numbers and Proportional Reasoning	
a. Compare and order rational numbers (positive and negative integers, fractions, decimals) in real-life situations.	SE: 18, 57 #6-8, 67-69, 75 #37-40, 109 #22-25, 129 #45-48, 54 TWE: DI 68
b. Use the basic operations on rational numbers to solve problems in real-life situations (e.g., describe the effect of multiplying whole numbers by a fraction or a decimal less than 1).	SE: 6-10, 23-27, 28-31, 34-38, 59 #17, 91 #36-40 <i>Problem-Solving Strategy</i> 96-97, 123-124, 276-277 TWE: B 6 DI 24
c. Apply ratios and proportions to solve problems.	SE: 156-159, 166-169, 170-173, 184-187, 188-191, 216-219, 374-377 <i>Hands-on Lab</i> 183, 192-193 TWE: DI 157

CONTENT STANDARDS	PAGE REFERENCES
<b>2. Exponents</b>	
a. Use the rules of exponents to solve problems (e.g., $7^2 \cdot 7^3 = 7^5$ , $a^m/a^n = a^{m-n}$ ).	SE: 584-587, 593 #30-33 TWE: DI 585 ICE 585
b. Represent and interpret large numbers and numbers less than one in exponential and scientific notation.	SE: 98-101, 104-107, 110, 111 #21-24, 112 #7, #8, #9 TWE: DI 99, 105 ICE 99, 105
c. Use estimation strategies (e.g., rounding) to describe the magnitude of large numbers and numbers less than one.	SE: 157 ex 3 & 4, 228-231, 232-233, 586 #38-39 TWE: DI 229
<b>Standard 3: Geometry and Measurement - The student will use geometric properties and measurement to solve problems in a variety of contexts.</b>	
1. Construct models, sketch (from different perspectives), and classify solid figures such as rectangular solids, prisms, cones, cylinders, pyramids, and combined forms.	SE: 326-329, 331-334, 347-351, 352-355 <i>Hands-on Lab</i> 330, 346 <i>Spreadsheet Investigation</i> 356-357 TWE: B 347 DI 331 TNT 347
2. Estimate and find the surface area and volume in real world settings (e.g., unwrap a box to explore surface area; use rice, 1-inch cubes, centimeter cubes, cups ... to estimate the volume of boxes, irregular shaped objects, containers).	SE: 335-339, 342-345, 347-351, 352-355 <i>Spreadsheet Investigation</i> 356-357 TWE: B 347 DI 353
3. Apply knowledge of ratio and proportion to solve relationships between similar geometric figures.	SE: 178-182, 184-187, 188-191, 194 <i>Hands-on Lab</i> 183 <i>Spreadsheet Investigation</i> 356-357 TWE: DI 189 ICE 179, 189
<b>4. Formulas</b>	
a. Select and apply appropriate formulas for given situations: I. an equation (e.g., $d = rt$ , $I = prt$ ).	SE: 53 #46, 75 #35, 232-235, 241-244 <i>Spreadsheet Investigation</i> 245 TWE: A 95 ICE 93
II. measurement problems (e.g., $p = 2l + 2w$ , $v = lwh$ ).	SE: 117 ex 4, 122 #34, 314-318, 319-323, 335-339, 342-345, 347-351, 352-355
b. Find the area of a "region of a region" for simple composite figures.	SE: 326-329 TWE: B 326 ICE 327
5. Develop the Pythagorean Theorem and apply the formula.	SE: 132-136, 137-140, 142-145, 267-270 TWE: ICE 133
<b>Standard 4: Data Analysis and Statistics - The student will use data analysis and statistics to interpret data in a variety of contexts.</b>	
1. Select and apply appropriate formats (e.g., line plots, bar graphs, stem-and-leaf plots, scatter plots, histograms, circle graphs) to display collected data.	SE: 420-424, 426-429, 430-433, 446-449, 539-542 <i>Graphing Calculator Investigation</i> 425, 543 <i>Hands-on Lab</i> 434 <i>Problem-Solving Strategy</i> 418-419 TWE: A 429

CONTENT STANDARDS	PAGE REFERENCES
2. Find the range and measures of central tendency (mean, median and mode) of a set of data.	SE: 435-438, 442-445, 446-449, 451-453 <i>Spreadsheet Investigation 439</i> TWE: A 437 ICE 436
3. Determine how samples are chosen (random, limited, biased) to draw and support conclusions about generalizing a sample to a population.	SE: 406-409, 412 TWE: ICE 407

### Codes Used for TWE Pages

A	Assess
B	Bellringer
DI	Daily Intervention
ICE	In-Class Example
TNT	Tips for New Teachers