

GLENCOE CORRELATION
MATHSCAPE LEVEL 8
OKLAHOMA
Priority Academic Student Skills
Mathematics Content Standards
Grade 8

CONTENT STANDARDS	PAGE REFERENCES
Standard 1: Algebraic Reasoning - The student will graph and solve linear equations and inequalities in problem-solving situations.	
1. Equations	
a. Model, write, and solve 2-step linear equations using a variety of methods.	<i>Exploring the Unknown</i> SE: 28-29, 30-31, 43, 44 TG: 56, 62, 64, 72
b. Graph and interpret the solution to linear equations on a number line with one variable and on a coordinate plane with two variables.	<i>Family Portraits</i> SE: 6-7, 18-19, 36, 37, 41 TG: 18, 19, 40, 41
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).	<i>Family Portraits</i> SE: 14-15, 16-17, 39, 40 TG: 30, 34, 44
2. Inequalities	
a. Model, write, and solve 1-step and 2-step linear inequalities with one variable.	See <i>Mathscape Level 7</i> <i>The Language of Algebra</i> SE: 8-9, 43 TG: 18, 56
b. Graph the solution to linear inequalities with one variable on a number line.	See <i>Mathscape Level 7</i> <i>The Language of Algebra</i> SE: 8-9, 29, 35 TG: 18, 64
Standard 2: Number Sense - The student will use numbers and number relationships to solve problems.	
1. Rational Numbers and Proportional Reasoning	
a. Compare and order rational numbers (positive and negative integers, fractions, decimals) in real-life situations.	<i>Roads and Ramps</i> SE: 31, 42 #4, 44 <i>Family Portraits</i> SE: 27-30, 34-35, 46, 47 #19 TG: 74, 78
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).	<i>Exploring the Unknown</i> SE: 16-17, 38 #14 TG: 36 <i>What Comes Next?</i> SE: 12-13, 42 <i>Roads and Ramps</i> Decimals in formulas SE: 18-19, 26-27, 30-31, 41

CONTENT STANDARDS	PAGE REFERENCES
c. Apply ratios and proportions to solve problems.	<i>Roads and Ramps</i> SE: 22-23, 24-25, 26-27, 42, 43, 44 TG: 48, 56 <i>What Comes Next?</i> SE: 30-31, 44
2. Exponents	
a. Use the rules of exponents to solve problems (e.g., $7^2 \cdot 7^3 = 7^5$, $a^m/a^n = a^{m-n}$).	<i>Family Portraits</i> SE: 30-31, 32-33, 34-35 TG: 66, 72, 76
b. Represent and interpret large numbers and numbers less than one in exponential and scientific notation.	<i>Family Portraits</i> SE: 30-31, 34-35, 46, 47 TG: 66, 72, 76
c. Use estimation strategies (e.g., rounding) to describe the magnitude of large numbers and numbers less than one.	<i>Family Portraits</i> SE: 44 #4, 45 #11, 47 #19
Standard 3: Geometry and Measurement - The student will use geometric properties and measurement to solve problems in a variety of contexts.	
1. Construct models, sketch (from different perspectives), and classify solid figures such as rectangular solids, prisms, cones, cylinders, pyramids, and combined forms (e.g., draw a figure that could result from making 1, 2, or 3 cuts in a given solid).	<i>Shapes and Space</i> SE: 6-7, 8-9, 22-23, 26-27, 28-29, 32-33, 35, 40 TG: 12, 16, 48, 58
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).	<i>Shapes and Space</i> SE: 6-7, 10-11, 12-13, 16-17, 18-19, 22-23, 26-27, 38, 39, 40 TG: 12, 22, 34, 38, 56, 58, 66
3. Apply knowledge of ratio and proportion to solve relationships between similar geometric figures (e.g., build a model of a 3-dimensional object to scale).	<i>Roads and Ramps</i> SE: 22-23, 24-25, 42 TG: 48, 50
4. Formulas	
a-I. Select and apply appropriate formulas for an equation (e.g., $d = rt$, $I = prt$).	<i>Mathematics of Motion</i> SE: 6-7, 8-9, 30-31, 35 TG: 12, 13
a-II. Select and apply appropriate formulas for measurement problems (e.g., $p = 2l + 2w$, $V = lwh$).	<i>Shapes and Space</i> SE: 10-11, 16-17, 18-19, 22-23, 30-31, 36, 38, 39, 41, 43 TG: 22, 34 <i>Family Portraits</i> SE: 26-27 TG: 58
b. Find the area of a "region of a region" for simple composite figures.	<i>Family Portraits</i> SE: 26-27 TG: 58 <i>Shapes and Space</i> SE: 22-23, 41

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5. Develop the Pythagorean Theorem and apply the formula.	<i>Roads and Ramps</i> SE: 16-17, 18-19, 26-27, 30-31, 40, 41 TG: 28, 29, 30, 38, 40, 42
Standard 4: Data Analysis and Statistics - The student will use data analysis and statistics to interpret data in a variety of contexts.	
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.	<i>Looking Behind the Numbers</i> SE: 6-7, 12-13, 16-17, 18-19, 20-21, 22-23, 34, 39, 40, 41 TG: 12, 34, 40, 42
2. Find the range and measures of central tendency (mean, median and mode) of a set of data.	<i>Looking Behind the Numbers</i> SE: 6-7, 8-9, 10-11, 12-13, 16-17, 35, 36, 37, 38 TG: 11, 18, 24, 26, 28
3. Determine how samples are chosen (random, limited, biased) to draw and support conclusions about generalizing a sample to a population (e.g., is the average height of a men's college basketball team a good representative sample for height predictions?).	<i>Looking Behind the Numbers</i> SE: 6-7, 8-9, 34 TG: 14, 18 <i>What Comes Next?</i> SE: 6-7, 22-23, 28-29, 42, 44 #12-#13