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# OKLAHOMA PRIORITY ACADEMIC STUDENT SKILLS CORRELATED TO *MOVING WITH MATH® EXTENSIONS GRADE 8*

| | Student Book | Skill Builders |
|---|---|---|
| **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. | 80 | 50-3 |
| **b.** Graph and interpret the solution to linear equations on a number line with one variable and on a coordinate plane with two variables. | 70 (T.G.) | 50-2 |
| **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). | | |
| **2.** Inequalities | | |
| **a.** Model, write, and solve 1-step and 2-step linear inequalities with one variable. | | |
| **b.** Graph the solution to linear inequalities with one variable on a number line. | | |
| **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. | 17, 68 | 48-1, 51-1 |
| **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). | 7, 10, 11, 19-25, 30-33, 71-74 | 14-1, 15-1, 17-1, 24-1, 27-1 |
| **c.** Apply ratios and proportions to solve problems. | 35, 36, 40 | 26-2, 46-1 |
| **2.** Exponents | | |

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| | **a.** Use the rules of exponents, including integer exponents, to solve problems (e.g., $7^2 \bullet 7^3 = 7^5$). | | |
| | **b.** Represent and interpret large numbers and numbers less than one in exponential and scientific notation. | 5 | 57-1, 57-2 |
| | **c.** Use estimation strategies (e.g., rounding) to describe the magnitude of large numbers and numbers less than one. | 2, 28 | 5-1 |
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| | STANDARD 3: GEOMETRY | | |
| | **The student will use geometric properties 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). | 66 (T.G.) | 41-2 |
| **2.** | Develop the Pythagorean Theorem and apply the formula to find the length of missing sides of a right triangle and the length of other line segments. | 54, 55 | 54-1 |
| | | | |
| | STANDARD 4: MEASUREMENT | | |
| | **The student will use measurement to solve problems in a variety of contexts.** | | |
| **1.** | 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). | 65 | 41-2 |
| **2.** | 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). | 53 (T.G.) | 46-3 |
| **3.** | Formulas | | |
| | **a.** Select and apply appropriate formulas for given situations:<br>– an equation (e.g., d = rt, I = prt)<br>– measurement problems (e.g., p = 21 + 2w, v = lwh) | 38, 59-64 | 38-1, 39-1, 40-1, 41-1 |
| | **b.** Find the area of a "region of a region" for simple composite figures (e.g., area of a rectangular picture frame). | 62 (T.G.) | |
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| | STANDARD 5: DATA ANALYSIS AND STATISTICS | | |
| | **The student will use data analysis and statistics to interpret data in a variety of contexts.** | | |

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| 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. | 15, 16 (T.G.) | 47-2 |
| 2. | Measures of central tendency | | |
| | a. Find the measures of central tendency (mean, median and mode) of a set of data and understand why a specific measure provides the most useful information in a given context. | 14 | 47-1 |
| | b. Compute the mean, median, and mode for data sets and understand how additional data in a set may affect the measures of central tendency. | 14 | |
| 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?). | | |