



GIRARD USD 248 COURSE STANDARDS

6th grade - Mathematics



Standard One: "NUMBER AND COMPUTATION"

Benchmark 1: Number Sense

- Be able to compare and order integers. **KSA**
- Be able to compare and order fractions **KSA**
- Be able to compare and order decimals through the thousandths place **KSA**
- Know the relationships between percents, decimals, and fractions between 0 & 1 **KSA**

Benchmark 2: Number Systems and their Properties

- Be able to identify prime and composite numbers
- Be able to use and describe the following properties: (commutative, associative, identity, symmetric, zero property for multiplication, distributive, substitution, additive inverse)

Benchmark 3: Estimation

- Understand the difference between an exact and an approximate answer **KSA**

Benchmark 4: Computation

- Be able to divide whole number by a two-digit divisor and express remainder as a whole number, fraction, or decimal. **KSA**
- Be able to add and subtract decimals from millions through thousandths places
- Be able to multiply and divide a four-digit number by a two-digit number using thousands through hundredths
- Be able to multiply and divide numbers by powers of ten
- Be able to add integers
- Be able to add, subtract, multiply, and divide fractions & mixed numbers and put in simplest form. **KSA**
- Be able to find the root of perfect whole number squares
- Be able to use the basic order of operations with whole numbers
- Be able to add, subtract, multiply, and divide rational numbers **KSA**
- Be able to generate and solve one- and two-step real world problems involving all four operations with decimals through hundredths place
- Be able to generate and solve one- and two-step real world problems involving all four operations with fractions

Standard Two: "ALGEBRA"

Benchmark 1: Patterns

- Be able to find the next number of a pattern and be able to state the pattern **KSA**

Benchmark 2: Variables, Equations, and Inequalities

- Be able to use the relationship between ratios, proportions, and percents to find the missing term in simple proportions
- Be able to find the value of algebraic expressions using whole numbers
- Write and solve one-step equations using variables and symbols for all four operations

Benchmark 3: Functions

- Be able to find the values and determine the rule with one operation using a function table (input/output machine, T-table)
- Be able to use a function table to identify, plot, and label the ordered pairs using the four quadrants of the coordinate plane



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Standard Three: "GEOMETRY"

Benchmark 1: Geometric Figures and their Properties

- Be able to recognize and name regular and irregular polygons through ten sides includes all special quadrilaterals (squares, rectangles, parallelograms, rhombi, trapezoids)
- Be able to name and describe the solids, cylinders, cones, spheres, and pyramids
- Be able to recognize and use the symbols for angle, line, line segment, ray, parallel, and perpendicular.
- Be able to classify angles (right, obtuse, acute, straight) **KSA**
- Be able to classify triangles (right, obtuse, acute, scale, isosceles, equilateral) **KSA**
- Be able to identify and define circumference, radius, and diameter of circles
- Understand that the sum of the angles of a triangle equals 180 degrees
- Be able to determine the radius or diameter of a circle given one or the other
- Be able to solve real-world problems by applying properties of intersecting, parallel, and perpendicular lines

Benchmark 2: Measurement and Estimation

- Be able to determine approximations for length, width, weight, volume, temperature, time, perimeter, and area
- Be able to convert within the customary English measurement system
- Be able to convert within metric system (kilo, hecto, deka, deci, centi, milli) **KSA**
- Be able to use customary units to measure to nearest sixteenth of an inch
- Be able to use metric units to measure to nearest millimeter
- Be able to recognize and state perimeter and area formulas for squares, rectangles, and triangles
- Understand the root measure composition of the metric system (meter, liter, gram)
- Solve real-world problems by finding perimeter of polygons **KSA**
- Solve real-world problems by finding area of squares, rectangles, and triangles **KSA**

Benchmark 3: Transformational Geometry

- Identify and perform one or two transformations (reflection, rotation, translation) **KSA**

Benchmark 4: Geometry from an Algebraic Perspective

- Be able to use a number line to order integers and positive rational numbers
- Be able to organize integer data using a T-table and plot the ordered pairs
- Be able to identify the ordered pair of integers in the four quadrants of a coordinate plane **KSA**
- Be able to plot the ordered pair of integers in the four quadrants of a coordinate plane **KSA**

Standard Four: "DATA"

Benchmark 1: Probability

- Be able to list all possible outcomes of an experiment composed of two independent events **KSA**
- Represent the probability of a simple event in an experiment using fractions and decimals **KSA**

Benchmark 2: Statistics

- Be able to organize, display, and read data using frequency tables and line plots, bar graphs, line graphs, circle graphs, charts and tables, stem-and-leaf plots, and scatter plots.
- Be able to determine mean, median, mod, and range