

Course Objectives/Course Outline
Spokane Community College

Course Title: Mathematics Center 2

Prefix and Course Number: MATH 95

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Convert between percent, fraction and decimal notation.
- Identify the amount, base and percent in an applied problem.
- Setup and solve percent problems using proportions or equations
- Find a percent of increase or decrease.
- Compute the perimeter and area of rectangles, squares, triangles, trapezoids, parallelograms, rhombuses and irregular geometric figures.
- Compute the circumference and area of a circle.
- Compute the volume of rectangular solids, cubes, spheres, cones and right circular cylinders.
- Solve for the unknown dimension given two similar triangles.
- Setup and solve problems using Pythagorean Theorem.
- Setup and solve applied problems that involve geometry formulas.
- Perform basic operations and order of operations with signed numbers.
- Setup and simplify application problems using signed numbers.
- Combine like terms and use distributive property to simplify expressions.
- Solve linear equations using the addition and multiplication properties of equality.
- Translate English statements to algebraic equations and solving applied problems using algebra.

Course Outline:

- I. Real Number Operations
 - A. Simplify positive real number expressions containing exponents.
 - B. Simplify positive real number expressions using the rule for order of operations.
 - C. Locate real numbers on the number line.
 - D. Identify the opposite, reciprocal, and absolute value of a real number.
 - E. Add two or more real numbers.
 - F. Subtract two or more real numbers.
 - G. Multiply two or more real numbers.
 - H. Divide two real numbers.
 - I. Simplify expressions using the rule for order of operations with real numbers.
 - J. Simplify expressions containing exponents with real numbers.
- II. Algebraic Expressions and Equations
 - A. Translate a word expression into an algebraic expression with one variable.
 - B. Find the value of an expression for a given value of its variable.
 - C. Evaluate formulas.
 - D. Identify and use the distributive property.
 - E. Simplify first degree algebraic expressions containing one variable.
 - F. Solve linear equations involving one variable.

- G. Solve word problems whose solutions are found from a linear equation in one variable.
 - H. Solve linear inequalities in one variable and graph the solution.
- III. Exponents and Polynomials
- A. Identify polynomials including terms and coefficients and variable parts.
 - B. Find the value of a polynomial for a given value of a variable.
 - C. Add and subtract monomials.
 - D. Add and subtract polynomials.
 - E. Simplify expressions involving multiplication using the rules of exponents.
 - F. Multiply monomials and polynomials.
 - G. Simplify expressions involving division using the rules of exponents.
 - H. Divide monomials.
 - I. Divide a polynomial by a monomial.