

Readiness & Review for Algebra 1: Principles of Secondary Mathematics

Problem Solving

- ✓ Plan and persevere in math.
- ✓ Correct mistakes.
- ✓ Create a problem-solving plan for equations.

Number Relationships

- ✓ Find the least common multiple (LCM) of a set of numbers.
- ✓ Find the greatest common factor (GCF) of a set of numbers.
- ✓ Name all factors of a number.

Fractions

- ✓ Write a fraction in simplest form.
- ✓ Write mixed numbers as improper fractions.
- ✓ Perform all operations on fractions, including mixed numbers: adding, subtracting, multiplying, dividing, and raising to a power.

Square Roots

- ✓ Simplify square roots containing perfect square numbers.
- ✓ Estimate a square root on a number line.

Order of Operations

- ✓ Simplify using order of operations, including expressions containing absolute value and exponents.
- ✓ Simplify an expression with terms to the second or third power.

Evaluating Expressions/ Substitution

- ✓ Simplify using order of operations, including expressions containing absolute value and exponents.
- ✓ Simplify an expression with terms to the second or third power.
- ✓ Evaluate an expression using substitution.
- ✓ Use substitution. This includes checking a solution to a single variable equation.

Solving Equations

- ✓ Solve one- and two-step equations containing variables and integer coefficients.
- ✓ Solve one- and two-step equations containing variables and fractions (coefficients and/or constant terms).
- ✓ Use substitution. This includes checking a solution to a single variable equation.

Proportions

- ✓ Use proportions to solve problems.

Math Vocabulary

- ✓ Write a one-variable equation from a word problem and solve it.
- ✓ Create an equation from a word problem.
- ✓ Use vocabulary such as sum, difference, quotient, product, and other words that determine operations.

Writing Equations

- ✓ Solve one- and two-step equations containing variables and integer coefficients.
- ✓ Solve one- and two-step equations containing variables and fractions (coefficients and/or constant terms).
- ✓ Use substitution. This includes checking a solution to a single variable equation.

Solving Problems with Formulas

- ✓ Determine the correct formula to solve.
- ✓ Apply the following formulas for area: triangle, square, rectangle, trapezoid, and circle.
- ✓ Apply the following formulas for perimeter: triangle, square, rectangle, trapezoid, and circle.
- ✓ Apply the following formulas for volume: prism, cone, pyramid, sphere, and cylinder.
- ✓ Label a solution with the correct units.

Inequalities

- ✓ Solve one- and two-step inequalities, including inequalities with fractional coefficients.
- ✓ Graph single variable inequalities on a number line.

The Coordinate Plane

- ✓ Name each quadrant and axis of the coordinate plane.
- ✓ Plot ordered pairs (x, y) in any quadrant of the coordinate plane.
- ✓ Determine the horizontal or vertical distance between ordered pairs (points) on the coordinate plane.

Table of Values

- ✓ Given an equation with two variables, use the substitution property to find a missing variable.
- ✓ Complete a table by solving for the missing values.