

Pre-Algebra Plus Concepts

Lesson 1

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.

Lesson 2

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.

Lesson 3

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

Lesson 4

Classifying Real Numbers

- ✔ Classify a number as rational or irrational
- ✔ Classify real numbers

Lesson 5

Plot Real Numbers

- ✔ Plot rational numbers on a number line
- ✔ Approximate irrational numbers on a number line
- ✔ Compare rational and irrational numbers using greater than or less than

Lesson 6

Square Roots

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

Lesson 7

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

Lesson 8

Problem Solving

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

Lesson 9

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.

Lesson 10

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.

Lesson 11

Evaluating Expressions

- ✔ Simplify using order of operations, including expressions containing absolute value and exponents.
- ✔ Simplify an expression with terms to the second or third power (e.g., 3^2 , 3^3).
- ✔ Evaluate an expression using substitution.
- ✔ Use substitution. This includes checking a solution to a single variable equation.

Lesson 12

Solving 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.

Lesson 13

Inequalities

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

Lesson 14

Proportions

- ☑ Use proportions to solve problems.

Lesson 15

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.

Lesson 16

Unit Rates

- ☑ Compute a unit rate
- ☑ Determine a unit rate from a graph on the coordinate plane
- ☑ Apply the unit rate to predict values from a graph and/or a scenario

Lesson 17

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.

Lesson 18

Transformations on the Coordinate Plane

- ☑ Reflect a figure over the x - and/or y -axis on the coordinate plane
- ☑ Translate a figure on the coordinate plane

Lesson 19

Patterns in Linear Scatter Plots

- ☑ Determine the correlation of a linear scatter plot
- ☑ Describe the correlation meaning in context

Lesson 20

Dot Plots

- ☑ Construct a dot plot with appropriate labels and scales
- ☑ Calculate the mean, median, mode, and range from a dot plot

Lesson 21

Box Plots

- ☑ Given a set of data, construct a box plot with appropriate labels
- ☑ Determine the five-number summary from a box plot

Lesson 22

Histograms and Bar Graphs

- ☑ Construct a histogram with appropriate labels and scales
- ☑ Construct a bar graph with appropriate labels and scales
- ☑ Determine if data is categorical or quantitative