

6-8 Math

Adding and Subtracting Polynomials

Lesson Objective: The student will add and subtract polynomials.

Subobjective 1: The student will add polynomials.

Subobjective 2: The student will subtract polynomials.

Adding and Subtracting Fractions with Unlike Denominators

Lesson Objective: The student will add and subtract fractions and mixed numbers with unlike denominators.

Subobjective 1: The student will illustrate how to find the lowest common denominator (LCD) through the use of multiples.

Subobjective 2: The student will use multiplication and addition skills to determine the lowest common denominator.

Subobjective 3: The student will use steps to correctly add and subtract fractions and mixed numbers with unlike denominators.

Addition and Subtraction Properties of Exponents

Lesson Objective: The student will apply the addition and subtraction laws of exponents to monomials.

Subobjective 1: The student will apply addition and subtraction laws of exponents to monomials.

Subobjective 2: The student will apply the basic rules of exponents (addition, subtraction, multiplication, and division) to monomials.

Area and Circumference of Circles

Lesson Objective: The student will solve problems involving the area and circumference of circles.

Subobjective 1: The student will review the vocabulary terms associated with circles.

Subobjective 2: The student will identify the difference between area and circumference.

Subobjective 3: The student will solve area and perimeter problems with compound shapes.

Area and Perimeter of Polygons

Lesson Objective: The student will solve problems involving the area and perimeter of parallelograms, triangles, and trapezoids.

Subobjective 1: The student will review the types of polygons and the dimensions used to find area and perimeter.

Subobjective 2: The student will identify the difference between area and perimeter.

Subobjective 3: The student will solve area and perimeter problems with compound shapes.

Conversions and Measurement

Lesson Objective: The student will convert time, volume, length, and mass within the customary measurement system.

Subobjective 1: The student will analyze charts to understand conversions between types of measurement.

Subobjective 2: The student will select correct operations for computation and utilize labels for conversions.

Subobjective 3: The student will convert customary units in real world problems.

Creating and Interpreting a Function Table

Lesson Objective: The student will complete, create and interpret a function table.

Subobjective 1: The student will create and complete a function table using a given rule with two operations.

Subobjective 2: The student will interpret and write an algebraic rule for a two-operation function table.

Dividing Decimals Computational Fluency

Lesson Objective: The student will develop, analyze, demonstrate, and justify, with and without appropriate technology, computational fluency for decimals.

Subobjective 1: The student will divide decimals by any number.

Dividing Fractions with Unlike Denominators

Lesson Objective: The student will apply a series of steps to divide fractions with unlike denominators.

Subobjective 1: The student will review how to simplify a fraction to its lowest term.

Subobjective 2: The student will identify the steps of dividing fractions.

Subobjective 3: The student will identify the steps of reducing fractions prior to dividing them.

Divisibility Rules

Lesson Objective: The student will apply the divisibility rules for 2, 3, 4, 6, and 9.

Subobjective 1: The student will define the divisibility rules for 2, 3, 4, 6, and 9.

Subobjective 2: The student will apply divisibility rules to solve problems.

Division Properties of Exponents

Lesson Objective: The student will divide exponents using the division properties of exponents.

Subobjective 1: The student will correctly divide exponents which have the same base.

Subobjective 2: The student will correctly divide a problem in scientific notation.

Subobjective 3: The student will correctly raise a quotient, or fraction, to a power.

Subobjective 4: The student will correctly simplify expressions.

Fractions, Decimals, and Percents

Lesson Objective: The student will demonstrate fluency in working with fractions, decimals, and percents by creating and interpreting visual representations and performing conversions.

Subobjective 1: The student will demonstrate an understanding of fractions, decimals, and percents.

Subobjective 2: The student will convert fractions, decimals, and percents.

Subobjective 3: The student will solve real world problems involving fractions, decimals, and percents.

GCF and LCM

Lesson Objective: The student will review how to find the GCF and LCM.

Subobjective 1: The student find the GCF of two numbers.

Subobjective 2: The student will find the LCM of two numbers.

Mean, Median, Mode, and Range

Lesson Objective: The student will determine the mean, median, mode, and range.

Subobjective 1: The student will explain what mean, median, mode, and range show.

Multi-step Problems

Lesson Objective: The student will solve, with and without appropriate technology, multi-step problems using a variety of methods.

Subobjective 1: The student will identify how to solve problems with manipulatives.

Subobjective 2: The student will identify how to solve problems with mental math and graphic organizers.

Multiplying Fractions with Unlike Denominators

Lesson Objective: The student will apply a series of steps to multiply fractions with unlike denominators.

Subobjective 1: The student will identify how to simplify a fraction to its lowest term.

Subobjective 2: The student will identify the steps of multiplying fractions.

Subobjective 3: The student will identify the steps of reducing fractions prior to multiplying them.

Order of Operations

Lesson Objective: The student will describe the Order of Operations' steps using PEMDAS.

Percent, Ration, and Rate

Lesson Objective: The student will estimate and mathematically manipulate percent, rate, ratio, and geometric problems with and without technology.

Subobjective 1: The student will solve percent problems involving increases and decreases using estimation, mathematical manipulation, and technology.

Subobjective 2: The student will solve problems involving ratios and rates using mathematical manipulation and technology.

Subobjective 3: The student will solve problems involving scale drawings and missing lengths of similar figures using estimation, mathematical manipulation, and technology.

Perimeter, Area, and Volume

Lesson Objective: The student will study the characteristics of perimeter, area, and volume.

Subobjective 1: The student will discover the connection between linear units and perimeter, square units and area, and cubed units and volume.

Subobjective 2: The student will calculate the perimeter, area, and volume of various shapes.

Polygons, Similar, and Congruent

Lesson Objective: The student will identify polygons and similar and congruent figures.

Subobjective 1: The student will name a polygon by the number of its sides.

Subobjective 2: The student will identify a polygon by naming the letters of its vertices.

Subobjective 3: The student will identify regular and irregular polygons.

Subobjective 4: The student will identify similar and congruent figures by comparing their corresponding parts.

Prime Factorization

Lesson Objective: The student will learn how to find prime factorization.

Subobjective 1: The student will review prime and composite numbers.

Subobjective 2: The student will write prime factorization with and without exponents.

Subobjective 3: The student will use prime factorization of two numbers to find the greatest common factor and least common multiple.

Properties of Polygons

Lesson Objective: The student will name polygons and identify the characteristics of polygons.

Subobjective 1: The student will label a triangle, quadrilateral, pentagon, hexagon, heptagon, octagon, nonagon, decagon, and dodecagon.

Subobjective 2: The student will identify polygons as concave or convex.

Subobjective 3: The student will identify polygons as regular or irregular.

Ratios and Proportions

Lesson Objective: The student will recognize ratios and proportions.

Subobjective 1: The student will express a ratio in three different ways.

Subobjective 2: The student will determine if two ratios are equal using multiplication and division.

Subobjective 3: The student will determine if two ratios are a proportion using cross-multiplication.

Subobjective 4: The student will solve proportions.

Real Numbers

Lesson Objective: The student will compare, order, locate, and define real numbers with justification for their answers.

Subobjective 1: The student will compare real numbers, including irrational numbers, using the terms "greater than," "less than," or "equal to."

Subobjective 2: The student will order real numbers, including irrational numbers, on a number line.

Subobjective 3: The student will classify numbers in the real number system as rational, irrational, integers, whole numbers, and natural numbers.

Subobjective 4: The student will demonstrate a knowledge of the technology skills for a TI-84 graphing calculator associated with these objectives.

Scientific Notation

Lesson Objective: The student will read, write, compare, and solve problems in scientific notation, with and without technology, and be able to convert numbers between scientific notation and standard notation.

Subobjective 1: The student will convert large numbers from standard notation to scientific notation.

Subobjective 2: The student will convert large numbers from scientific notation to standard notation.

Subobjective 3: The student will convert numbers between 0 and 1 from standard notation to scientific notation.

Subobjective 4: The student will convert numbers between 1 and 10 from scientific notation to standard notation.

Subobjective 5: The student will solve problems involving numbers in scientific notation.

Solving Simple Equations with All Integers

Lesson Objective: The student will solve one-step and two-step equations.

Subobjective 1: The student will solve a one-step equation using positive and negative numbers and positive fractions.

Subobjective 2: The student will solve a two-step equation using positive and negative numbers, as well as positive fractions.

Square Roots and Perfect Squares

Lesson Objective: The student will recognize and identify square roots and perfect squares.

Subobjective 1: The student will recognize and identify square roots and perfect squares.

Subobjective 2: The student will define and review the following vocabulary words: square root, square root symbol, perfect square, and perfect square root.

Statistics and Probability

Lesson Objective: The student will recognize that choices in data collection and representation affect their interpretation and use.

Subobjective 1: The student will generate questions to collect data and organize data using graphic organizers, such as frequency charts, tables, Venn Diagrams, etc.

Subobjective 2: The student will formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within a population.

Subobjective 3: The student will describe how a set of data collected to answer a statistical question has a distribution which can be described by its center and spread.

Subobjective 4: The student will recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

Tax, Tip, and Discounts

Lesson Objective: The student will use percentages to calculate tax, tip, and discount in real world scenarios.

Subobjective 1: The student will practice calculating tax, tip, and discount in multiple ways.

Subobjective 2: The student will understand situations in which tax, tip, and discount must be applied in the real world.

Zero and Negative Exponents

Lesson Objective: The student will simplify expressions with zero and negative exponents and evaluate exponential expressions.

Subobjective 1: The student will identify the base and exponent in an expression.

Subobjective 2: The student will simplify expressions with positive exponents and when raising negative numbers to a power.

Subobjective 3: The student will simplify expressions with zero and negative exponents.