

Algebra

Objective Description

Create and solve number sentences using common operations

Determine or generate the input/output rule from tables of numbers

Find the unknown numbers in whole-number addition, subtraction, multiplication, and division situations

Relate functions to real-world situations

Solve simple number sentences using concrete objects and trial and error

Use letters, boxes, or other symbols to stand for any number in simple expressions or equations

Use symbols to model equations, inequalities, and expressions

Use terms all, some, or none

Use the associative and commutative properties to simplify calculations

Use variables to represent unknowns

Geometry

Objective Description

Describe the relationships among points, lines, line segments, and rays

Identify and draw line segments

Identify congruence and construct congruent plane and solid geometric figures

Identify the properties of a triangle and a pyramid and the relationships between them

Identify, describe, and compare geometric figures in the real world

Locate points on a grid

Identify symmetry and construct symmetrical plane and solid geometric figures

Identify, describe, and draw parallel line segments

Identify, describe, and draw perpendicular line segments

Identify and describe properties of plane geometric figures

Identify and describe properties of solid geometric figures

Identify geometric properties that can be measured

Estimate angle measures

Sort geometric figures

Combine and separate geometric figures to create new geometric figures

Mathematical Processes

Objective Description

Solve problems by looking for a pattern

Solve simple logic problems

Ascribe a meaning to the solution in the context of the problem

Make connections between one mathematical problem and another

Identify relevant, missing, and extraneous information

Reason and support thinking using numbers, objects, pictures, technology, and words

Solve problems by working backwards

Solve problems by selecting the most appropriate method of calculation

Use a variety of methods to determine the solution(s)

Use the relationships among mathematical concepts as the basis for learning additional concepts

Solve problems using charts and tables

Solve problems using operations

Identify the relationships among graphical/numerical/physical/algebraic models and concepts

Explain how to solve a problem

Verify solutions

Measurement

Objective Description

Convert measurements

Solve real-world problems involving time

Understand measurable attributes of plane and solid geometric figures

Solve real-world problems involving capacity

Solve real-world problems involving weight/mass

Solve real-world problems involving money

Solve real-world problems involving perimeter

Use formulas to solve perimeter problems

Measure area using customary and metric units

Explore the relationship between perimeter and area

Estimate measures of volume

Measure perimeter using customary and metric units

Demonstrate an understanding of volume

Add, subtract, or compare measurements

Measure volume using customary and metric units

Numeration

Objective Description

Explore prime and composite numbers

Read whole numbers

Relate fractions to decimals

Round whole numbers

Apply place value concepts

Identify and represent equivalent fractions

Compare fractions

Make and test conjectures about properties of decimals

Explore decimals using a variety of representations

Represent equivalent forms of the same number

Explore concepts of factors

Solve problems with decimals

Develop a sense of the magnitude of decimals

Explore concepts of number lines

Explore fractions and mixed numbers using a variety of representations

Operations

Objective Description

Estimate division solutions

Solve multiplication problems with decimals

Use skip counting to solve multiplication problems

Show evidence that whole number computational results are correct and that estimates are reasonable

Solve addition problems with triple-digit numbers

Select and apply multiplication algorithms

Solve division problems with whole numbers with and without remainders

Solve subtraction problems with whole numbers

Solve subtraction problems with fractions

Solve addition problems with fractions

Solve subtraction problems with decimals

Use methods of estimation appropriate to a given situation

Use the commutative property of multiplication

Select and perform computational procedures to solve problems with whole numbers

Use the associative property of multiplication

Statistics & Probability

Objective Description

Analyze data

Read and interpret line graphs

Read and interpret line plots

Translate between displays of data

Explore graphs in which icons represent more than a single unit or intervals greater than one

Formulate and solve problems involving the collection, organization, and analysis of data

Make inferences and form hypotheses based on data

Identify events as certain or impossible

Draw conclusions from data

Collect and analyze data related to real-world situations

Represent probabilities as decimals, fractions, proportions, or ratios

Read and interpret charts and tables

Predict the most-, least-, and equally likely outcomes of an experiment and compare actual results

Formulate questions from data

Describe the concept of probability in relationship to chance and likelihood