Lesson Book 4

Absolute values Negative numbers
American vs. Metric systems Number lines

Averages Operations and operands
Combinatorics Pattern recognition
Commutativity Percentages
Deduction Plotting points

Division Powers of ten; exponents
Equations Problem solving methods
Estimation Roman numerals

Geometry: Etymology, lines, polygons, triangles, rectangles, perimeter, area Rounding Integers Sequences

Logic Sets
Long multiplication Speaking three- and four-digit numbers

Maps The Distributive Law
Measures: Liquid volume, height, Time (seconds, minutes, hours,

weight, and heat fractional)

Money change and arithmetic Verbal problem solving

Natural numbers Writing numbers

Lesson Book 5

2-D Geometry: Using the protractor, Inequalities

radius, angles, drawing Laws: Associative, Commutative,

3-D Geometry: Cuboids, volume, vertex and vertices; sides and faces, edges

Absolute value

Distributive

Long division

Long multiplication

Addition: Estimation, large numbers

Averages

Magic squares

Math mysteries

Massures: Temperature, tiv

Bar charts Measures: Temperature, time Calculation shortcuts Mental math

Combinatorics Modular numbers
Compass directions Number puzzles
Composite numbers Number theory

Data: Charts, Series, Median, Mode,
Averages

Decimal numbers

Odometer
Patterns
Playing cards

Divisors Powers of ten
Equation writing Prime numbers

Factors and Factor diagrams

Probability

Problem solving

Functions Problem solving

Geometry: Lines, segments, rays, Rounding

diameters, chords Scaling
Graphing Sequences

Sets: Venn Diagrams, unions, intersects,

set multiplication

Solving for the unknown

Sorting zip codes Train schedules Using the calculator

Lesson Book 6

2-D Geometry: Quadrilaterals,

Diagonals and intersections, Area of triangles, rectangles, and circles, Maps, Triangle congruence, Line segment

notation, Kites, Collinear points and triangles, Angle bisection using the

drawing compass, Equidistant points, Planes, Circles and spheres, Triangle and

line construction, Drawing angles, Sum of the angles in a triangle, Directions

using angles, Arcs, Circle circumference

and π , Center of a square

3-D Geometry: Cube and other views,

Concave and convex solids, Vertex angles, Surface area, Shape Nets,

Volume, Mass, Degrees, Shape

equivalence

Accounting: Assets, Liabilities and net

worth, Balance Sheet Addition: Decimals Axis and line symmetry Bar graphs and percentages

Bases

Combinations and permutations

Concave vs. convex Curve length estimation

Decimal numbers

Direction

Domain and range

Equations: Sides, addition, simultaneous

Estimation

Euclid's algorithm

Factors

Geometric proofs

Graphs: Functions, Graphing y=x², Factors, Plotting points with negative coordinates, Intercepts, Curves, Plotting

points

Greatest common divisor

Hypotenuse Line symmetry Linear algebra Linear scales

Measuring a circle's circumference

Money and decimals

Negative numbers: Addition, subtraction, multiplication Negative of a negative Nets and surface area

Permutations and combinations Playing cards: Counting points

Polygons and diagonals Powers and exponents

Probability: Adding, Summing to one,

Two Events, Universe
Problem-solving strategies
Proof by contradiction
Pythagorean Theorem
Rational numbers
Redefining the circle

Relatively prime Rounding base 12 Rounding metric units

Scale Sets

Solving for unknowns

Speed

Square roots

Subtraction revisited

Sum of the angles in a rectangle

Supplementary angles Symmetry around a point

Temperature scales
The balance sheet

Time: 24-hour time, Time zones Units and Unit conversions

Fractions Lesson Book

Arithmetic: Addition, subtraction, multiplication, and division Common denominators

Commutativity

Converting: Decimals to fractions, fractions into numbers, fractions to

percentages

Dividing wholes into parts

Equations with more than two fractions

Equivalence

Equivalence rules dividing both numerator and denominator

Etymology **Families**

Fractions in geometry

Hour fractions Inverse numbers Inverse of an inverse

Least common denominator Least common multiple Liquid measure fractions Money and fractions

Negative fractions

Number line and inequalities Numerator and denominator

Pie charts Prime factors

Proper and improper fractions

Reducing fractions

Reduction

Replacing integers with whole fractions

Sequences

Writing fractions