

Math Quest 1

Exploring integers on the number line

- Building number lines

- Modeling elevation, temperature, and time with number lines

- Modeling addition on the number line

- Modeling subtraction on the number line

- Adding and subtracting large numbers

Modeling problems algebraically

- Variables and expressions

- The chip model

- Solving equations

- Solving equations on the number line

- Graphing on a coordinate plane

Math Quest 2

Patterns, graphs, and tables

- Graphing on the coordinate plane

Functions and graphs

- Adding and subtracting integers (review)

- Multiplication of integers

- Functions

Exploring fractions

- Modeling fractions

- Adding and subtracting fractions

- Multiplying fractions

- equations with fractions

Math Quest 3

Area and Perimeter Relationships

- Comparing Measurements of Rectangles

- Comparing Measurements of Right Triangles

Lines, Slopes, and Intercepts

- Relating Coordinates of Points

- Equations of Lines

- Slopes and Intercepts

- Line Applications

Multiplying Fractions and Revisiting Slopes

- Patterns and sequences

- Detecting and describing change

- Ratios and proportions

Math Quest 4

Counting

- Learn the basics of set theory
- Use different ways to describe a set
- Find the union, intersection, and complement of sets
- Draw a Venn Diagram to represent sets
- Find the sample space of an experiment

Rule of Product and Rule of Sum

- Use tree diagrams and tables to model problems
- Derive the rule of product and rule of sum

Permutations and Combinations

- Count the number of outcomes of an experiment
- Define a k-combination
- Compare combinations to permutations

Probability and Sampling

- Simple and compound events
- Mutually exclusive events
- Successive events

Math Quest 5

Logical Reasoning

- Questioning Techniques
- Strategies
- Divisibility

Number Theory

- Primes & Numbers of Divisors
- Divisibility
- Congruence
- Greatest common divisor and least common multiple

Algebra

- Sequences
- Summations
- Variable Manipulation
- Ratio and rate applications

Counting

- Rule of sum and rule of product
- Permutations and combinations
- Probability

Geometry

- Areas of Triangles & Quadrilaterals
- Right triangles
- Scaling and similarity