

Mathematics: Grade 6

Number and Operations

- Understands numbers and number systems
- Understands meanings and relationships of operations
- Computes fluently and makes estimates

Algebra

- Understands patterns, relations, and functions
- Analyzes mathematical situations and structures
- Uses models to understand quantitative relationships

Geometry

- Describes spatial relationships using coordinate geometry
- Uses symmetry to analyze mathematical situations
- Uses spatial reasoning and geometric modeling to solve problems

Measurement

- Understands measurement attributes/processes
- Applies appropriate measurement techniques

Data Analysis and Probability

- Formulates questions
- Collects, organizes, and displays relevant data
- Evaluates inferences and predictions based on data
- Applies basic concepts of probability

The process strands, **problem solving, reasoning and proof, communications, connections, and representation**, are interwoven and interdependent with the content strands.

Essential to Know:

- Uses arithmetic operations to solve problems
- Explains number theory concepts to solve problems
- Analyzes patterns/relations with tables/graphs/words
- Describes/performs transformations on two-dimensional shapes
- Identifies relationships among points/lines/planes
- Explains relationships between perimeter/area/circumference/area of circle
- Uses formulas to find perimeter/circumference/area
- Identifies rate as form of measurement
- Creates/justifies appropriate graphical representation of data
- Understands/applies fundamental concepts of probability