

Mathematics: Grade 9–12

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
- Analyze change in various contexts

Geometry

- Analyzes 2- and 3- dimensional geometric shapes
- Develops mathematical arguments about geometric relationships
- Describes spatial relationships using coordinate geometry
- Applies transformations
- Uses symmetry to analyze mathematical situations
- Uses visualization/spatial reasoning/geometric modeling to solve problems

Measurement

- Understands measurable attributes of objects
- Understands units, systems, and processes of measurement
- Applies techniques, tools, and formulas to determine measurements

Data Analysis and Probability

- Formulates questions that can be addressed with data
- Collects, organizes, and displays relevant data to answer them
- Selects and uses statistical methods to analyze data
- Develops and evaluates data based inferences/predictions
- Understands and 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.