

## Russian Math Tutors Algebra I Summer Cap

Algebra is often called a gatekeeper course because it opens the door to all other areas of study in mathematics.

This course provides a comprehensive teaching of the fundamental aspects of problem-solving. Major topics of study include: evaluation of algebraic equations, exponent rules and manipulation, polynomials, solving and graphing linear equations, solving and graphing two variable inequalities, solving systems of equations, radicals, word problems, solving and graphing quadratic equations, and factoring.

## Units of Instruction

1. Algebra Basics
2. Multi-step Equations and Inequalities
3. Relations & Functions
4. Linear Relations
5. Systems of Equations & Inequalities
6. Exponent Rules
7. Polynomials & Factoring
8. Quadratic Equations

## Methodology

Algebra I students will be instructed in a variety of methods, including, but not limited to:

- Direct instruction
- Class discussion
- Group work
- Individual work
- Note-taking and organizational skills
- Discovery-based instruction