

# Algebra II

## Course Description

The increasing use of quantitative methods in all disciplines has made algebra the fundamental tool for mathematical applications. Algebraic thinking is learned most effectively when it is studied in the context of applications, both mathematical and real-world. These applications reveal the power of algebra to model real problems and to generalize new situations.

Algebra is not only a theoretical tool for analyzing and describing mathematical relationships, but it is also a powerful tool for the mathematical modeling and solving of real-world problems. These problems can be found all around us: the workplace, the sciences, technology, engineering, and mathematics.

The goal of Algebra II is to build upon the concepts taught in Algebra I and Geometry while adding new concepts to the students' repertoire of mathematics. In Algebra I, students studied the concept of functions in various forms such as linear, quadratic, polynomial, and exponential. In Algebra II, students continue the study of exponential and logarithmic functions and further enlarge their catalog of function families. The topic of conic sections fuses algebra with geometry.

It is also the goal of this course to help students see the connections in the mathematics that they have already learned. Throughout Algebra I and II, students will experience mathematics generally, and algebra in particular, not only as the study of mathematical patterns and relationships, but also as a language that allows us to make sense of mathematical symbols. Moreover, students will develop an understanding that algebraic thinking is an accessible and powerful tool that can be used to model and solve real-world problems.