Algebra II Foundations Curriculum

Prerequisite: Algebra 1 CP

The Algebra II Foundations Curriculum is a continuation of the Algebra I curriculum that reviews much of Algebra I but also expands on previous concepts and explores new topics. The curriculum has been developed in order to provide a foundation for attaining the knowledge and skills students require for success in future courses. The instructional units are aligned with the Pennsylvania Common Core. By the end of the Algebra II Foundations curriculum, students will meet the following standards:

Tools of Algebra:

The first unit in Algebra II Foundations reviews the basic skills from Algebra I. This section includes real numbers and number operations, algebraic expressions and models, simplifying algebraic expressions, solving linear equations, rewriting equations and formulas, problem solving using algebraic models, and analyzing and displaying data.

Linear Equations and Functions:

Topics from this unit include functions and their graphs, linear functions and function notation, slope and rate of change, quick graphs of linear equations, writing equations of lines, direct variation, and scatter plots and correlation.

Systems of Linear Equations:

This unit focuses on the various ways to solve systems of linear equations which include graphing, solving by substitution, and solving by elimination.

Inequalities and Absolute Value:

The fourth unit includes solving linear inequalities and systems of linear inequalities and introduces absolute value equations and functions.

Quadratic Functions and Factoring:

In this unit, students will review quadratic equations by factoring and will be introduced to new concepts. These include graphing quadratic equations in standard form, vertex form, and intercept form, factoring using special patterns, solving quadratic equations using both square roots and the quadratic formula, and complex numbers.

Polynomials and Polynomial Functions:

The last unit includes properties of exponents, adding, subtracting, and multiplying polynomials, factoring cubic polynomials, and polynomials of greater degree.