

Algebra 2B Course Description

Course Description

Algebra 2B is the second semester of an advanced Algebra course needed for college preparation, which meets state and NCTM (National Council of Teachers of Mathematics) Standards. The emphasis in this Algebra 2B course is on student success by way of varied learning styles using applications, activities, discoveries, and, of course, technology.

Before beginning this course, you should have taken the Orientation course. This course contains information that will help you be successful in all of your courses.

Course Outline

Unit 1 - Conic Sections:

- Intro to Conic Sections
- Graphing Circles
- Graphing Ellipses
- Discovering Parabolas
- Discovering Hyperbolas

Unit 2 - Rational Relations:

- Simplifying Complex Fractions
- Operations on Rational Expressions
- Simplifying Complex Fractions
- Vertical and Horizontal Asymptotes
- Solving Rational Equations
- Polynomial Functions
- Finding Zeros of Polynomial Functions
- Graphing Polynomial Functions

Unit 3 - Exponential and Logarithmic Relations:

- Positive, Negative, and Fractional Exponents
- Simplifying Exponential Expressions
- Graphing Exponential Functions
- Exponential and Logarithmic Notation
- Common and Natural Logarithms
- Solving Exponential Equations Using Logarithms

Unit 4 - Sequences, Series, Probability, and Statistics:

- Arithmetic Sequences and Series
- Summation Notation

- Geometric Sequences and Series
- Fundamental Counting Principle
- Permutations and Combinations
- Probability, Statistics, and Presenting Data