

Pre-AP Pre-Calculus Course Overview

Trimester A

Unit 1: Fundamentals

- Exponents and radicals
- Algebraic Expressions
- Fractional Expressions
- Equations
- Inequalities
- Coordinate Geometry
- Lines

Unit 2: Functions

- What is a function?
- Graphs of functions
- Variation
- Average rate of change: increasing and decreasing functions
- Transformations of functions
- Extreme values of functions
- Combining functions
- One-to-one functions and their inverses
- Fitting lines to data

Unit 3: Polynomial Functions

- Polynomial functions and their graphs
- Dividing polynomials
- Real zeros of polynomials
- Complex numbers
- Complex zeros and the Fundamental Theorem of Algebra

Unit 4: Rational Functions

- Solving
- Asymptotes
- Graphing

Unit 5: Exponential and Logarithmic Functions

- Exponential Functions
- Logarithmic Functions
- Laws of Logarithms
- Exponential and Logarithmic equations
- Modeling
- Fitting Exponential and Power functions