

Algebra II 500 curriculum map 2023/2024

Unit 1: Equations and Inequalities

- Solving linear equations and inequalities
- Graphing linear equations and inequalities
- Systems of linear equations and inequalities

Unit 2: Functions and Graphs

- Introduction to functions
- Function notation and evaluation
- Transformations of functions
- Graphing quadratic functions
- Solving quadratic equations

Unit 3: Exponents and Logarithms

- Laws of exponents
- Scientific notation
- Simplifying and evaluating expressions with exponents
- Solving exponential equations
- Introduction to logarithms
- Logarithmic properties and equations

Unit 4: Polynomial Functions

- Polynomial basics
- Polynomial long division
- Synthetic division
- Factoring polynomials
- The Remainder and Factor Theorems

Unit 5: Rational Functions

- Rational expressions and equations
- Simplifying rational expressions
- Multiplying and dividing rational expressions
- Adding and subtracting rational expressions

- Solving rational equations

Unit 6: Radical Functions

- Simplifying radical expressions
- Operations with radical expressions
- Solving radical equations
- Rational exponents and radical functions

Unit 7: Complex Numbers

- Imaginary numbers
- Complex numbers and operations
- Complex solutions to quadratic equations

Unit 8: Trigonometric Functions

- The unit circle
- Radian and degree measure
- Trigonometric functions and values
- Graphing trigonometric functions
- Trigonometric identities

Unit 9: Analytic Geometry

- Distance formula
- Midpoint formula
- Introduction to conic sections (circles, parabolas, ellipses, hyperbolas)

Unit 10: Sequences and Series

- Arithmetic sequences and series
- Geometric sequences and series
- The Binomial Theorem

Unit 11: Data Analysis and Probability

- Statistical measures (mean, median, mode, range)
- Frequency distributions and histograms
- Probability basics

- Permutations and combinations

This curriculum map provides a comprehensive overview of the topics typically covered in an Algebra II 500 course. However, the specific content and order may vary.