Syllabus for Algebra II

Welcome to MA051, MA052: Algebra II Part I and Algebra II Part II!

Please read the information in this syllabus before proceeding to the course materials.

Credits: 1 credit hour

Prerequisite: Algebra I and Geometry

Instructional Team

Teacher Contact Information
Monica Cates
mcates@jmhs.com

Our Academic Advisors are also available to help you when you need it. They are trained to provide tutoring in all subjects or answer your questions about the course or program.
Phone: 1-800-224-7234
Hours: 8:30AM – 8:30PM EST Monday-Friday

Textbook


Course Description

Algebra 2 is designed to build on algebraic and geometric concepts. Throughout the course, Common Core standards are taught and reinforced as the student learns how to apply the concepts in real-life situations. It develops advanced Algebra skills such as Algebra 2 foundations, function families, quadratic functions and complex numbers, polynomials expressions and equations, exponential and logarithmic functions, rational functions, statistics, periodic functions and trigonometry, and applying trigonometric functions.

Course Learning Objectives

Upon completion of this course, you should be able to:

- Use algebraic expressions to represent patterns, solve equations and inequalities, and solve absolute value equations. Students will also use functions to model real world situations, work with functions, and analyze transformations and characteristics of the four basic function families.
- Find the vertex and standard form of a quadratic equation, factor a quadratic expression, solve a quadratic equation, and gain an understanding of complex numbers.
- Classify, graph, and define end behavior of polynomial functions. Students will also be able to analyze the factored form of the polynomial and write polynomial function from its zeros, to solve polynomial function by graphing and factoring, to divide polynomials by long division and synthetic division, to model polynomial functions, and identify the effect of transformations of polynomial functions.
- Work with radicals as a part of a function, equation, or by themselves. Students will be able to add, subtract, multiply and divide functions, to find the composite of two functions, and to find the inverse of a relation or a function.
- Understand the relationship between exponential and logarithmic function and to be able to model exponential and logarithmic functions.
- Graph rational functions and solve rational equations
- Apply theoretical and experimental probabilities and compare data sets.
- Relate geometric measurements to trigonometry, to define radians, how to use radian measures and write and graph functions to describe periodic data.
- Verify trigonometric identity, solve trigonometric equations and to solve real-world problems involving right triangles by using trigonometric ratios

Course Lessons

The following lessons are covered in MA051: Algebra II Part I:

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Trigonometry                             |
| Lesson 4 | Chapter 13 & Chapter 14  
Lesson 3 & 4 Exam 4  
Quarter 4 Exam 5  
Final Exam 6 | Applying Trigonometric Functions         |