Eigen Tutoring

www.EigenTutoring.com

📍 Canton, MA (Per Appointments only)

✉ Support@EigenTutoring.com

☎ Ahmad (781) 244-7223

Algebra 2- Part I

Schedule

(online) Every Tuesday & Thursday, 7:15 PM to 8:15 PM starting September 9th,2025 to December 18th,2025.
(Note: excluding holidays.)
👤 Class Capacity 8-12 Students.

Algebra II - Class Description

(Pre-requisite: Algebra I)
This class extends Algebra I principles with added emphasis on abstract reasoning. It prepares students to work comfortably with factors, rationals, radicals, exponents, logarithms, irrational numbers, and imaginary numbers. It reviews linear, rational, and absolute value inequalities. Then, it teaches students the five must-know definitions of a function. Those definitions include the formula, graph, domain, range, and ordered pairs. The polynomials (linear, quadratic, and higher degree polynomials), the rational, the absolute value, the exponential, and the logarithmic functions are explained in depth. In addition, an introduction to statistics and probability is offered.

Note: Algebra II is organized into 2 parts. Each part corresponds to an academic semester. The parts must be taken in sequence to satisfy the description above. Please refer to the syllabus of each part for more details.

Algebra II - Class Objectives

Students are expected to;

- Become experts in elementary mathematics through extensive practice and in-class demonstrations, build cumulative algebraic skills that prepare them to navigate more advanced classes without difficulties, and become self-directed learners.
- Achieve a higher level of understanding of abstract algebra concepts.
- Become familiar with mathematical notations and skillful in writing logical mathematical statements.
- Strengthen the capability to re-write word problems into mathematical expressions and vice versa.
- Emphasize the understanding of inequalities and the methods of their solution.
- Build a strong methodology to work with functions by emphasizing the five must-know definitions for every function in the curriculum. This strategy is applicable and practical.

Teaching Methodology

Our approach is a hybrid of the traditional old-fashioned note taking technique and the modern peer-to-peer engagement. The note-taking creates a linkage between the physical notes and the student's memory. It improves organization of thoughts and creates a traceable path to accountability. By note-taking; Students create a reference of their own. On the other hand, the modern engagement technique prepares students to communicate over problems, use their mathematical terminology to describe real-life mathematical situations and enhances their problem solving skills. Student will be encouraged to work together and share ideas.

Disclaimer

Eigen Tutoring is not a credited educational institute. Ahmad Nofal is not a certified teacher. Students enrolled in classes may not claim credit for their enrollment and may not request letters of recommendation. All Eigen Tutoring products are designed as additional support material. Our products/classes do not replace the mainstream school enrollments. Eigen Tutoring/ Ahmad Nofal does not claim compliance with the standards of the board of education or any supervisory agency.

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Syllabus

Textbook(s) & Required Material:
Algebra 2 by Elayn Martin-Gay (2015 edition) - ISBN 978-0134093888
Algebra 2 by Peason (Common Core edition) - ISBN 978-0133186024
TI-84 Plus CE Calculator.

Part I

WEEK	TOPIC(s)
1	Relations, Equations & Inequalities
2	Linear Inequalities
3	Absolute Value Inequalities
4	Rational Inequalities
5	Linear Function (1)
6	Linear Function (2)
7	System of Linear Equations
8	System of Linear Inequalities
9	Quadratic Functions (1)
10	Quadratic Functions (2)
11	Higher Degree Polynomials (1)
12	Higher Degree Polynomials (2)
13	Absolute Value Function
14	Exponential Function
15	Applications of Exponential Function

Part II

WEEK	TOPIC(s)
1	Applications of Exponential Function
2	Logarithmic Function
3	Piece-Wise Function
4	Sequences & Series (1)
5	Sequences & Series (1)
6	Review of Sets & Venn Diagrams
7	Introduction to Probability
8	Probability (1)
9	Probability (2)
10	Statistics (1)
11	Statistics (2)
12	Trigonometry
13	Trigonometry
14	Conic Sections (1)
15	Conic Sections (2)

Attendance:

Students are expected to attend every scheduled lesson. Make ups are not offered.