# **Eigen Tutoring**

### www.EigenTutoring.com

**Q** Canton, MA (Per Appointments only)

Support @ EigenTutoring.com

Ahmad (781) 244-7223

# Algebra 1- Part I

### **Schedule**

(online) Every Tuesday & Thursday, 6:00 PM to 7:00 PM starting September 9<sup>th</sup>,2025 to December 18<sup>th</sup>,2025.

(Note: excluding holidays.)

Class Capacity 8-12 Students.

### **Class Description**

(Pre-requisite: Elementary Mathematics - Pre-Algebra Mathematics)

This class extends elementary mathematics principles with added emphasis on communicating mathematical ideas clearly & comprehension of word problems. It prepares students to work comfortably with variables and algebraic expressions. It introduces students to the set theory and Venn Diagrams, then extends them to the set of numbers and the binary operations to provide students with a deep understanding of algebra. Students will be comfortable working with inequalities, relations, equations, and functions. Students will develop the ability to solve real-world problems.

### **Class Objectives**

- Students are expected to become comfortable in elementary mathematics and capable of expressing logical mathematical statements using mathematical notation.
- Achieve a higher understanding of binary operations and the real number line representation of arithmetics.
- Become familiar with word mathematical problems that represent a real-world example of applied mathematics.
- · 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 algebraic expressions and simplify them.

## **Teaching Methodology**

Every week, students will receive a handout that includes notes and practice problems. The instructor replicates the same notes in a very professional and persuasive presentation on the whiteboard. Students can hand write the notes again off the white board. Otherwise, the same notes are included on the handout. After completing the note-taking part of the class, the instructor demonstrates with selected problems. Students leave every week with a set of problems considered optional Homework.

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# **Syllabus**

Textbook: Pearson Algebra 1 Common Core Edition

### Fall

WEEK	TOPIC(s)	Date
1	Review	Sep 8 <sup>th</sup>
2	Set Theory & Sets of Numbers	Sep $15^{th}$
3	Working with Venn Diagrams	Sep $22^{nd}$
4	Statistics (1)	Sep $29^{th}$
5	Statistics (2)	Oct 6 <sup>th</sup>
6	Working with Exponents	Oct $13^{th}$
7	Equations versus Inequalities	Oct $20^{th}$
8	Linear Inequality	Oct $27^{th}$
9	Absolute Value Inequality	Nov $3^{rd}$
10	Rational Inequality	Nov $10^{th}$
11	Equations: Relations versus Functions	Nov 17 <sup>th</sup>
12	Linear Function (1)	Nov $24^{th}$
13	Linear Function (2)	$Dec 1^{st}$
14	Quadratic Function (1)	$Dec 8^{th}$
15	Quadratic Function (2)	Dec $15^{th}$

## **Spring**

WEEK	TOPIC(s)	Date
17	Polynomials and Factoring (1)	Jan $12^{th}$
18	Polynomials and Factoring (2)	Jan $19^{th}$
19	Systems of Linear Equations: Substitution (1)	Jan $26^{th}$
20	Systems of Linear Equations: Substitution (2)	Feb 2 <sup>nd</sup>
21	Systems of Linear Equations: elimination (1)	Feb 9 <sup>th</sup>
22	Systems of Linear Equations: elimination (2)	Feb $16^{th}$
23	Systems of Linear In-Equalities (1)	Feb $23^{rd}$
24	Systems of Linear In-Equalities (2)	Mar 2 <sup>nd</sup>
25	Solving Equations	Mar 9 <sup>th</sup>
26	Working with Exponents	Mar $16^{th}$
27	Working with Rational Expressions	Mar $23^{rd}$
28	Working with Radical Expressions	Apr $6^{th}$
30	Geometry Review (1) - Triangles	Apr $13^{th}$
31	Geometry Review (2) - Circles	Apr $20^{th}$
32	Introduction o Trignometry	Apr $27^{th}$
33	Unit Conversion (1)	May 4 <sup>th</sup>
34	Unit Conversion (2)	May $11^{th}$
35	Comprehensive Review (1)	May $18^{th}$
36	Comprehensive Review (2)	May $25^{th}$

#### **Attendance:**

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