

## Algebra I Syllabus

**Textbook: Algebra: Beginning and Intermediate 6<sup>th</sup> Edition**

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### Course Description:

This course is the foundation for high school mathematics courses. It is the bridge from the concrete to the abstract study of mathematics. Topics include simplifying expressions, evaluating and solving equations and inequalities, and graphing linear and quadratic functions and relations. Live video demonstrations.

**Attendance login requirements:** Students must log into class at the scheduled class time and remain until class ends. Student must attend class 165 days per year.

**Homework:** Homework assignments will be given at the discretion of the instructor.

**Class Participation:** All class participation will be online. Instructor will give written feedback on progress and acceptable work directly to student online.

Course Grade Policy:

90-100 average = A

80-89 average = B

70-79 average = c

60-69 average =D

Below 60 = F

**Tests/Exams:** There will be a quiz after each unit of study. You will have two opportunities to pass the test with a grade of 60. Mid-Term and Final Exams will be counted twice in grade averaging.

## **Semester 1**

### **Chapter 1 Real Numbers and Variable Expressions**

[Unit 1-1 Introduction to Integers](#)

[Unit 1-2 Operations with Integers](#)

[Unit 1-3 Rational Numbers](#)

[Unit 1-4 Exponents and the Order of Operations Agreement](#)

[Unit 1-5 Variable Expressions](#)

[Unit 1-6 Translating Variable Expressions into Verbal Expressions](#)

### **Chapter 1 Quiz**

### **Chapter 2 Solving Equations and Inequalities**

[Unit 2-1 Introduction to Equations](#)

[Unit 2-2 General Equations](#)

[Unit 2-3 Value Mixture and Uniform Motions Problem](#)

[Unit 2-4 Geometry Problems](#)

[Unit 2-5 Mark Up and Discount Problems](#)

[Unit 2-6 Applications: Problems Involving Percents](#)

[Unit 2-7 Inequalities in one Variable](#)

### **Chapter 2 Quiz**

## **Chapter 3**

### **Linear Functions and Inequalities in two Variables**

[Unit 3-1 The Rectangular Coordinate System](#)

[Unit 3-2 Introduction to Functions](#)

[Unit 3-3 Linear Functions](#)

[Unit 3-4 Slope of a Straight Line](#)

[Unit 3-5 Finding Equations of Lines](#)

[Unit 3-6 Parallel and Perpendicular Lines](#)

[Unit 3-7 Inequalities in Two Variables](#)

[Chapter 3 Quiz](#)

[\*\*Mid-Term Exam\*\*](#)

## **Semester II**

### **Chapter 4**

#### **System of Equations**

[Unit 4-1 Solving Systems of Linear Equations by Graphing and by the Substitution Method](#)

[Unit 4-2 Solving the Systems of Linear Equations by the Addition Method](#)

[Unit 4-3 Solving System of Equations by Using Determinants and by Using Matrices](#)

[Unit 4-4 Application Problems](#)

[Unit 4-5 Solving Systems of Linear Inequalities](#)

[\*\*Chapter 4 Quiz\*\*](#)

## **Chapter 5** **Polynomials**

[Unit 5-1 Introduction to Polynomials](#)

[Unit 5-2 Multiplication of Monomials](#)

[Unit 5-3 Multiplication of Polynomials](#)

[Unit 5-4 Integer Exponents and Scientific Notation](#)

[Unit 5-5 Division of Polynomials](#)

[Chapter 5 Quiz](#)

## **Chapter 6** **Factoring**

[Unit 6-1 Common Factors](#)

[Unit 6-2 Factoring Polynomials of the Form  \$x^2+bx+c\$](#)

[Unit 6-3 Factoring Polynomials of the Form  \$ax^2+bx+c\$](#)

[Unit 6-4 Special Factoring](#)

[Unit 6-5 Factor Polynomials Completely](#)

[Unit 6-6 Solving Equations](#)

[Chapter 6 Quiz](#)

[Final Exam](#)

