

## Algebra I Syllabus

**Textbook:** Pre-Algebra 7<sup>th</sup> Edition

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### **Course Description:**

This course includes subjects that are an introduction to algebra. It is the bridge from basic mathematics to pre- algebraic calculations. Topics include a review of whole numbers, introduction to algebra, fractions and mixed numbers, solving equations, decimals, percent, measurement, and Exponents and Polynomials.

**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 70. Mid-Term and Final Exams will be counted twice in grade averaging.

## **Whole Numbers**

[Unit 1.1 Place, Value, and Names of Numbers](#)

[Unit 1.2.pdf - Addition with Whole Numbers, and Perimeter](#)

[Unit 1.3.pdf Rounding Numbers and Estimating Answers](#)

[Unit 1.4.pdf Subtracting with Whole Numbers](#)

[Unit 1.5.pdf Multiplication with Whole Numbers](#)

[Unit 1.6.pdf Division with Whole Numbers](#)

[Unit 1.7.pdf Exponents, Order of Operations, and Averages](#)

[Unit 1.8.pdf Area and Volume](#)

[\*\*Pre- Algebra Unit 1.1 Whole Numbers Quiz\*\*](#)

## **Introduction to Algebra**

[Unit 2.1 Positive and Negative Numbers](#)

[Unit 2.2 Addition with Negative Numbers](#)

[Unit 2.3 Subtraction with Negative Numbers](#)

[Unit 2.4 Multiplication with Negative Numbers](#)

[Unit 2.5 Division with Negative Numbers](#)

[Unit 2.6 Simplifying Algebraic Expressions](#)

[\*\*Pre-Algebra Unit 2 Introduction to Algebra Quiz\*\*](#)

## **Fractions and Mixed Numbers**

[Unit 3.1 The Meaning and Properties of Fractions](#)

[Unit 3.2 Prime Numbers, Factors, and Reducing to Lowest Terms](#)

[Unit 3.3 Multiplication with Fractions, and the Area of a Triangle.](#)

[Unit 3.4 Division with Fractions](#)

[Unit 3.5 Addition and Subtraction with Fractions](#)

[Unit 3.6 Mixed- Number Notation](#)

[Unit 3.7 Multiplication and Division with Mixed Numbers](#)

[Unit 3.8 Addition and Subtraction with Mixed Numbers](#)

[\*\*Pre-Algebra Unit 3 Fractions and Mixed Numbers Quiz\*\*](#)

## **Solving Equations**

[Unit 4.1 The Distributive Property and Algebraic Expressions](#)

[Unit 4.2 The Addition Property of Equality](#)

[Unit 4.3 The Multiplication of Equality](#)

[Unit 4.4 Linear Equations in One Variable](#)

[Unit 4.5 Applications](#)

[Unit 4.6 Evaluating Formulas](#)

[Unit 4.7 Paired Data and Equations in Two Variables](#)

[Unit 4.8 The Rectangular Coordinate System](#)

[Unit 4.9 Graphing Straight Lines](#)

## **Pre- Algebra Unit 4 Solving Equations**

### **Decimals**

[Unit 5.1 Decimal Notation and Place Value](#)

[Unit 5.2 Addition and Subtraction with Decimals](#)

[Unit 5.3 Multiplication with Decimals; Circumference and Area of a Circle](#)

[Unit 5.4 Division with Decimals](#)

[Unit 5.5 Fraction with Decimals](#)

[Unit 5.6 Equations Containing Decimals](#)

[Unit 5.7 Square Roots and the Pythagorean Theorem](#)

[Unit 5.8 Simplifying Square Roots](#)

[Unit 5.9 Adding and Subtracting Roots](#)

## **Pre-Algebra Unit 5 Decimals Quiz**

### **Ratio and Proportion**

[Unit 6.1 Ratios](#)

[Unit 6.2 Rates and Unit Pricing](#)

[Unit 6.3 Proportions](#)

[Unit 6.4 Applications of Proportions](#)

[Unit 6.5 Similar Figures](#)

## **Pre-Algebra Unit 6 Ratio and Proportion Quiz**

## **Percent**

[Unit 7.1 Percents, Decimal and Fractions](#)

[Unit 7.2 Basic Percent Problems](#)

[Unit 7.3 General Applications of Percent](#)

[Unit 7.4 Sales Tax and Commissions](#)

[Unit 7.5 Percent Increase or Decrease, and Discount](#)

[Unit 7.6 Interest](#)

[Unit 7.7 Pie Charts](#)

[\*\*Pre-Algebra Unit 7 Percent Quiz\*\*](#)

## **Measurement**

[Unit 8.1 Unit Analysis I: Length](#)

[Unit 8.2 Unit Analysis II: Volume](#)

[Unit 8.3 Unit Analysis III: Weight](#)

[Unit 8.4 Converting Between the Two Systems and Temperature](#)

[Unit 8.5 Operations with Time and Mixed Units](#)

[\*\*Pre-Algebra Unit 8 Measurement Quiz\*\*](#)

## **Exponents and Polynomials**

[Unit 9.1 Multiplication Properties of Exponents](#)

[Unit 9.2 Adding and Subtracting Polynomials](#)

[Unit 9.3 Multiplying Polynomials: An Introduction](#)

[Unit 9.4 Negative Exponents](#)

[Unit 9.5 Scientific Notation](#)

[Unit 9.6 Multiplication and Division with Scientific Notation](#)

[\*\*Pre-Algebra Unit 9 Exponents and Polynomials Quiz\*\*](#)