

Algebra I

Course Curriculum

FALL SESSION (SEP - DEC) - 12 Classes	
Units	Topics
Unit 1A	<i>Chapter 1: Our Number System - Sets, Operations, and Properties</i> <ul style="list-style-type: none"> ● Sets and Set Notation ● The Number Line and Graphing Sets ● Operations and Properties of Rational Numbers ● Addition of Rationals
Unit 1B	<i>Chapter 1: Our Number System - Sets, Operations, and Properties (continued)</i> <ul style="list-style-type: none"> ● Subtraction of Rationals ● Multiplication and Division of Rationals ● Order of Operations ● The Closure Property
Unit 1C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 1D	<i>Chapter 2: Evaluating Expressions and Solving Equations</i> <ul style="list-style-type: none"> ● What Are Expressions, Equations, and Inequalities? ● Evaluating Expressions ● Equations – A Balancing Act! ● Steps for Solving Equations
Unit 1E	<i>Chapter 2: Evaluating Expressions and Solving Equations (continued)</i> <ul style="list-style-type: none"> ● Solving Simple Equations Using the Additive Inverse ● Solving Simple Equations Using the Multiplicative Inverse ● Solving Two-Step Equations ● Moving Variables to the Same Side ● Putting All the Steps Together
Unit 1F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 2A	<i>Chapter 2: Evaluating Expressions and Solving Equations (continued)</i> <ul style="list-style-type: none"> ● Equations With Decimals and Fractions ● Calculator Basic

	<ul style="list-style-type: none"> Working With Formulas <p>Chapter 3: From Words to Algebra - Translating and Solving Word Problems</p> <ul style="list-style-type: none"> Translating Expressions and Equations Strategies for Solving Word Problems
Unit 2B	<p>Chapter 3: From Words to Algebra - Translating and Solving Word Problems (continued)</p> <ul style="list-style-type: none"> Diagramming Geometry Word Problems Word Problems About Missing Numbers Consecutive Integer Problems Coin Problems Age Problems
Unit 2C	Homework Review, 1 on 1 with Teacher, Bi-Weekly Test
Unit 2D	<p>Chapter 4: From Words to Algebra - More Word Problems</p> <ul style="list-style-type: none"> Percent and Ratio Problems Percent Increase and Decrease Relative Error and Percent Error Mixture Problems
Unit 2E	<p>Chapter 4: From Words to Algebra - More Word Problems (continued)</p> <ul style="list-style-type: none"> Motion Problems Distance Problems Toward and Away Problems Chase Problems Work Problems
Unit 2F	Homework Review, 1 on 1 with Teacher, Bi-Weekly Test
WINTER SESSIONS (JAN - MAR) - 12 Classes	
Unit 3A	<p>Chapter 5: Inequalities, Compound Inequalities, and Absolute Value</p> <ul style="list-style-type: none"> Understanding How to Solve Inequalities Solving Inequality Word Problems Solving Compound Inequalities
Unit 3B	<p>Chapter 5: Inequalities, Compound Inequalities, and Absolute Value (continued)</p> <ul style="list-style-type: none"> Solving Absolute Value Equations Absolute Value Inequalities

Unit 3C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 3D	<i>Chapter 6: Polynomials</i> <ul style="list-style-type: none"> • What Is a Polynomial? • Addition of Polynomials • Subtraction of Polynomials • Exponents and Multiplication of Monomials • Multiplication of a Polynomial by a Monomial
Unit 3E	<i>Chapter 6: Polynomials (continued)</i> <ul style="list-style-type: none"> • Multiplication of Binomials • Special Products • Division of Monomials • Understanding Negative Exponents • Dividing Polynomials by Monomials
Unit 3F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 4A	<i>Chapter 7: Factoring</i> <ul style="list-style-type: none"> • The Greatest Common Factor • Factoring Rules • Factoring Trinomials With a Leading Coefficient
Unit 4B	<i>Chapter 7: Factoring (continued)</i> <ul style="list-style-type: none"> • Solving Quadratic Equations • Word Problems With Quadratic Equations • Quadratic Equations and the Pythagorean Theorem
Unit 4C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 4D	<i>Chapter 8: Working With Radicals</i> <ul style="list-style-type: none"> • Simplifying Square Roots • Adding and Subtracting Square Roots • Multiplying Square Roots
Unit 4E	<i>Chapter 8: Working With Radicals (continued)</i> <ul style="list-style-type: none"> • Dividing Square Roots • The Quadratic Formula
Unit 4F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
SPRING SESSION (APR - JUN) - 12 Classes	
Unit 5A	<i>Chapter 9: Linear Functions</i> <ul style="list-style-type: none"> • What Is a Function?

	<ul style="list-style-type: none"> • Linear Functions • What Is Slope? • Zero Slope and Undefined Slope
Unit 5B	<i>Chapter 9: Linear Functions (continued)</i> <ul style="list-style-type: none"> • Writing Equations for Linear Functions • Point-Slope Formula • Graphing Linear Functions on a Calculator
Unit 5C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 5D	<i>Chapter 9: Linear Functions (continued)</i> <ul style="list-style-type: none"> • Scatterplots • Types of Correlations • Linear Function Applications
Unit 5E	<i>Chapter 10: Systems of Equations and Inequalities</i> <ul style="list-style-type: none"> • Method 1 – Graphing • Method 2 – Elimination • Method 3 – Substitution
Unit 5F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 6A	<i>Chapter 10: Systems of Equations and Inequalities (continued)</i> <ul style="list-style-type: none"> • Using Systems to Solve Real-Life Problems • Graphing Inequalities • Systems of Inequalities
Unit 6B	<i>Chapter 11: Other Types of Functions</i> <ul style="list-style-type: none"> • Absolute Value Functions • Quadratic Functions • Vertex Form of a Quadratic Function • Applications of Parabolas
Unit 6C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 6D	<i>Chapter 11: Other Types of Functions (continued)</i> <ul style="list-style-type: none"> • Exponential Functions • Exponential Growth and Decay • Thinking About Patterns – A Helpful Guide • Graphing a System of Functions
Unit 6E	<i>Chapter 12: Working With Algebraic Fractions</i> <ul style="list-style-type: none"> • Multiplying and Dividing Algebraic Fractions • Adding and Subtracting Algebraic Fractions

	<ul style="list-style-type: none">• Solving Equations With Algebraic Fractions• Revisiting Work Problems
Unit 6F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>