



**GRADES K-8**



**GRADES 9-12**



**ADULT EDUCATION**

**SYLLABUS**

**COMPLETE INTERACTIVE FLEXIBLE LEARNING SYSTEM**

**Algebra by Chapter**

MathMedia Algebra Series by Chapter is a comprehensive, standards-based full year Algebra 1 and first semester Algebra 2 course. It follows the traditional high school Algebra curriculum used in high quality Algebra textbooks. It meets the National Common Core Standards for high school Algebra.

**Chapter 1  
 Basic Algebra Concepts**

- (1) Real Numbers
  - (2) Expressions
  - (2A) Order Of Operations
  - (3) Properties
  - (3C) Horizontal/Vertical Lines
  - (4) Sums & Differences
  - (5) Products
  - (6) Quotients
  - (7) Solving Equations
  - (8) Words to Symbols
  - (9) PROBLEM SOLVING SUB-MENU
    - Number Problems
    - Anatomy of a Word Problem
    - Mixture Problems
    - Coin Problems
    - Finance Problems
    - Motion Problems
    - Geometry Problems
- CHAPTER 1 TEST

**Chapter 3  
 Linear Functions in Two Variables**

- (1) Open Sentences
  - (2) Graphs
  - (3) SLOPE SUB-MENU
    - (3A) Slope
    - (3B) Standard Form
    - (3C) Horizontal/Vertical Lines
  - (4) EQUATIONS SUB-MENU
    - (4A) Point-Slope Form
    - (4B) Slope-Intercept Form
    - (4C) Parallel & Perpendicular
    - (4D) Write Equation from info
  - (5) Systems of Linear Equations
  - (6) Problem Solving
  - (7) Linear Inequalities
  - (8) Functions
  - (9) Linear Functions
  - (10) Relations
- Vocabulary  
 CHAPTER 3 TEST

**Chapter 5  
 Rational Expressions (Fractions)**

- (00) Fraction Facts
  - (01) Monomials & Exponents
  - (02A) Zero Power
  - (02B) Negative Powers
  - (03) Scientific Notation
  - (04) Simplifying Expressions
  - (05A) Products (Review)
  - (05B) Quotients (Review)
  - (05C) Products & Quotients
  - (06A) Sums (Review)
  - (06B) Differences (Review)
  - (06C) Sums & Differences
  - (07) Complex Fractions
  - (08) Fractional Coefficients
  - (09) Fractional Equations
- Graphing  
 Problem Solving  
 CHAPTER 5 TEST

**Chapter 2  
 Inequalities & Open Sentences in One Variable**

- (1) Solving Inequalities
  - (2) Solving Combined Inequalities
  - (3) Problem Solving
  - (4) Absolute Value
  - (5) Graphic Solutions
    - "Extra for Experts"
    - Symbolic Logic
- CHAPTER 2 TEST

**Chapter 4  
 Polynomials: Products & Factors**

- (01) Intro to Polynomials
  - (02) USING EXPONENTS SUB-MENU
    - (02A) EXPONENTS-Definitions
    - (02B) EXPONENTS-Multiplication
    - (02C) EXPONENTS-Division
    - (02D) EXPONENTS-Power of Power
    - (02E) EXPONENTS-Challenge
  - (03) Multiplying Polynomials
  - (04) Prime Factoring
  - (05) FACTORING POLYNOMIALS SUB-MENU
    - (05A) Common Monomial Factor
    - (05B) Common Binomial Factors
    - (05C) Difference of Squares
    - (05D) Factoring Cubes
    - (05E) Factor by Grouping
  - (06) Factoring Quadratics
  - (07) Polynomial Equations
  - (08) Problem Solving
  - (09) Polynomial Inequalities
- CHAPTER 4 TEST

**Chapter 6  
 Roots, Radicals and Complex Numbers**

- (01) Roots and Radicals
  - (02) Properties of Radicals
  - (03) Sums of Radicals
  - (04) Binomials
  - (05) Radical Equations
  - (06) Rational and Irrational
  - (07) Imaginary Numbers
  - (08) Complex Numbers
  - (09) Problem Solving
- CHAPTER 6 TEST

## Algebra by Chapter (continued)

### Chapter 7 Quadratic Equations

- (01) Completing the Square
- (02) The Quadratic Formula
- (03) The Discriminant
- (04) Solving Quadratics
- (05) Graphing Quadratics
- (06) Analyze Quadratics
- (07) Sum and Product Rules
- (08) Problem Solving
- CHAPTER 7 TEST

### Chapter 8 Variation & Advanced Polynomials

- (00) What is a Proportion?
- (01) Direct Variation
- (02) Inverse Variation
- (03) Long Division
- (04) Synthetic Division
- (05) Remainder Theorem
- (06) Factor and Rational Root Theorems
- (07) Conjugate Theorem Descartes' Rule of Signs
- (08) Problem Solving
- CHAPTER 8 TEST

### LEARNING FEATURES

- Easy to Use
- On Demand Audio
- Plenty of Practice Screens
- Quizzes for each learning section
- Pre-Tests, Post-Tests
- Score reporting to included database
- Bookmarking

### PREREQUISITES

Algebra Basics (Pre-Algebra)

### DELIVERY METHODS

- Online Subscription for all devices
- Downloadable for Windows
- CD for Windows