

ALGEBRA PART I  
GRADES 9-10  
(2 Semesters)

COURSE OVERVIEW:

This course represents the beginning of a comprehensive program in first-year algebra that is designed to be studied over a two-year period. It has been developed for the college-bound student whose basic arithmetic skills are adequate but who is not equipped with the background in mathematics to qualify him/her for a one-year algebra course. Algebra Part I not only reviews and applies basic arithmetic, but also emphasizes algebraic concepts and skills along with certain topics that prepare the student for a possible later course in geometry.

UNITS OF INSTRUCTION:

Real Numbers, Numerical & Algebraic Expressions, Solving Linear Equations and Inequalities, Graphing Linear Equations and Inequalities, Coordinate Plane, Writing Equations of Line, Data Collection

STUDENT OUTCOMES:

1. Represent equivalent forms of numbers and operate on various types of numbers. (8A)
2. Simplify and operation on numerical and algebraic expressions. (8B)
3. Solve and graph linear equations. (8D)
4. Solve and graph linear inequalities, including compound inequalities. (7A,8D)
5. Graph on the coordinate plane and calculate areas and perimeters of geometric shapes. (9A)  
Write equations of lines given various characteristics of the line. (9B)
6. Represent and interpret data using various graphical models. (10A)
7. This course addresses the follow state standards: 6A, 6B, 6C, 6D, 7A, 7C, 8A, 8B, 8D, 10A, 10B, and 10C.

MAJOR LEARNING EXPERIENCES TO ACHIEVE OUTCOMES:

1. Exploration of mathematical concepts through individual, small group, and whole class lab investigations.
2. Discussions of mathematical concepts to further develop and increase understanding.
3. Summarize and apply learning to problem situations.
4. Assess mastery level using both formal and alternative assessments.

ADOPTED TEXT OR PRINCIPAL MATERIALS USED:

Larson, Roland, Timothy Kanold, and Lee Stiff. *Algebra I: An Integrated Approach*. D.C. Heath/McDougal Littell, 1998.

(05/17/00)