

HORACE MANN SUMMER SCHOOL

ALGEBRA I

Textbook: *Algebra, Structure and Method, Book 1*

Course: The summer begins with a review of material studied in the HM Math 7 course. Topics such as graphing, systems of equations, exponents, polynomials, factoring and its applications, irrational numbers, and quadratic equations are studied in great detail this year. Word problems continue to be an integral part of this summer's study of algebra. The course strives to reach different types of learners by focusing on multiple representations of algebra. Students will be expected to justify, solve, graph, represent, and apply the skills learned in the course.

Materials: You should have the following items to bring to class:

- Assignment book
- Spiral notebook with pockets or medium size binder
- Folder for class notes, handouts, and homework
- Graph paper
- Pencils, erasers, and ruler
- TI 83 or 84 (regular or plus model) graphing calculator

Topics Covered:

Introduction to Algebra

Working with Real Numbers

Solving Equations

Linear Words Problems

Graphing Linear Equations and System of Linear Equations

Polynomials

Factoring Polynomials

Algebraic Fractions

Introduction to Functions

Systems of Linear Equations

Inequalities

Graphing Inequalities and System of Inequalities

Rational and Irrational Numbers

Quadratic Functions