



Algebra 1

Grand Haven High School



Course Number: E20 A/B

Grade Level: 9-12

Credits : 1

Prerequisite Courses : None

Course Description

Algebra 1A builds upon knowledge to recognize and solve mathematical and real-world problems involving linear relationships and to make sense of and move fluently between the graphic, numeric, symbolic, and verbal representations of these patterns. It builds on the approach to the study of functions and representations begun in the middle grades. This is done by broadening the study of linear relationships to include piecewise functions, absolute value equations, systems of equations with two and three unknowns, formalized function notation, and linear regression and correlation.

Algebra I B builds upon knowledge of linear patterns of change and familiarity with nonlinear patterns such as exponential and quadratic. The knowledge of exponential and quadratic function families is extended and deepened by including topics such as rules of exponentiation, operations and factoring polynomials, and standard and vertex forms for quadratic equations. Students will also develop their knowledge of power functions and the applications they model. Finally, Algebra I B expands the number domain from real to complex numbers.

Algebra I is a requirement for graduation and preparation for their high school math proficiency test. A scientific calculator or a graphing calculator is required.

Course Objectives

Throughout the course, you will meet the following goals:

- * Understand the properties of the real number system
- * Use variables to represent quantities that are unknown, can change, or are dependent on other quantities
- * Write, evaluate, simplify, and manipulate algebraic expressions, equations, and inequalities
- * Model real-world phenomena with the language of algebra
- * Represent relationships between quantities symbolically and graphically and make use of both representations to solve problems
- * Communicate about reasoning mathematically and evaluate the mathematical reasoning of others

Building Behavioral Expectations

TEAM GH ... One Team, One Family, One Grand Haven. Be Kind. Always.

It is our expectation that ALL GHHS students, staff and parents will ... always give their best **EFFORT** in everything that they do, work hard to be **INCLUSIVE** of each other, show **RESPONSIBILITY** in class, the hallways, cafeteria and at events, and **WORK TOGETHER** at all times!

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Student Expectations

- * Students are expected to be active participants in their education, including completion of all assigned work, and best effort on quizzes and tests.
- * Students are expected to obtain a scientific calculator for this course. A notebook specific to math is also encouraged.

Communication

- * Students are expected to regularly monitor their progress through the Parent Internet Viewer and teacher blog sites. Parents and students are encouraged to contact teachers through email or phone with any questions or concerns.
- * The Math Lab is available before and after school, and during all lunches for additional help.

Grading Policy

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|----------------------|-----|
| * Tests | 50% |
| * Quizzes | 30% |
| * Homework/Classwork | 20% |

Scope and Sequence

First Semester:

- Chapter 1: Foundations for Algebra
- Chapter 2: Solving Equations
- Chapter 3: Solving Inequalities
- Chapter 4: Functions
- Chapter 5: Linear Functions
- Chapter 6: Systems of Linear Equations

Second Semester:

- Chapter 7: Exponents
- Chapter 8: Polynomials and Factoring
- Chapter 9: Quadratic Functions
- Chapter 10: Radicals
- Chapter 11: Rationals
- Chapter 12: Statistics

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