

South Hadley High School
"A Tradition of Excellence"

We pledge to create a challenging and supportive academic community in which each member strives to develop his/her potential, to become a life-long learner, and to act as a responsible citizen in a diverse and global society.

Algebra 1 Syllabus

Course Description / Prerequisites
#3200 Algebra 1 (6 credits Full Year) Prerequisite: Minimum of C in Eighth Grade CMP Algebra is the language through which most of mathematics is communicated. Algebraic concepts developed in previous grades are extended with emphasis placed early upon functions, graphing, and mathematical modeling of problems. Topics of study include: solving and graphing linear and quadratic equations, solving inequalities in one variable, data analysis, operations with polynomials, and solving systems of equations. Exponential functions are also introduced, time permitting. *It is assumed that all students enrolled in Algebra 1 are proficient in performing the four basic operations on integers, decimals, and fractions.
Course Objectives / Outcomes / Expectations/ Topics
Unit One – Expressions and Equations (Chapters 1, 2, 3) The student will <ul style="list-style-type: none">❖ Use variables to represent data❖ Write, evaluate, and simplify variable expressions❖ Solve linear equations❖ Perform operations with real numbers❖ Display and analyze statistical data Unit Two – Linear Functions (Chapters 4, 5, 6, 7) The student will <ul style="list-style-type: none">❖ Examine data to determine if a linear relationship exists❖ Represent a linear relationship as points on a coordinate plane and as an equation representing a line❖ Analyze and explain how the equation of a line and its graph are related❖ Solve systems of linear equations Unit Three – Polynomials and Nonlinear Functions (Chapters 8, 9, 10) The student will <ul style="list-style-type: none">❖ Perform operations on monomials and polynomials❖ Factor polynomials❖ Solve quadratic equations by factoring, completing the square, or using the quadratic formula❖ Graph quadratic equations by finding the vertex and using symmetry❖ Analyze and explain how the equation of a parabola and its graph are related❖ Explore exponential functions (time permitting)
South Hadley High School's Learning Expectations
<ul style="list-style-type: none">❖ E2: Define, analyze, and solve complex problems and communicate results.❖ E4: Demonstrate personal, social and civic responsibility.❖ E5: Acquire, apply, integrate, analyze, and synthesize knowledge.
Text and Resources Required
Text: <u>Algebra 1</u> – Glencoe McGraw-Hill, 2005 Scientific calculator, notebook, pencil
Course Assessments
Grade based on: Tests, Quizzes, Homework, Classwork, and Project Linear Function Project – 2 nd or 3 rd quarter (one test grade) Mid-Year Exam (1/18 th of final grade) Final Exam (1/18 th of final grade)