

High School Syllabus

Department: Mathematics
Course Title: Honors Algebra 2

Course #: 40411H

DESCRIPTION OF COURSE: Students will learn and understand the concepts of relations, functions, and graphs of linear and quadratic equations and how to apply these concepts to the real world. They will understand the many forms of factoring and how it is related to solving polynomial equations. Students will know and understand the conic sections in addition to, exponential and logarithmic functions. Individually or in small groups, students will utilize the graphing calculator to analyze, discuss, and solve problems. Achievement will be demonstrated through tests, quizzes, homework assignments, graphing calculator exercises, activity sheets, projects, and performance assessments. Students are responsible for completing a summer assignment for this course before the school year begins. Students will take the Honors Algebra 2 final exam at the end of the course.

REQUIRED TOPICS OF STUDY	SUGGESTED INSTRUCTIONAL TIME	STANDARDS/ ELIGIBLE CONTENT
Tools of Algebra	8 days	CC.2.1.HS.F.2,3,4,5 ; CC.2.2.HS.D.8,9 A1.1.1.1.1 A2.1.3.2.2
Functions, Equations, and Graphs	12 days	CC.2.2.HS.C.1,2,3,6 ; CC.2.2.HS.D.1,2 CC.2.2.HS.D.7
Linear Systems	10 days	CC.2.2.HS.C.5; CC.2.2.HS.D.10 CC.2.4.HS.B.2,3; A1.1.2.2.2 A1.1.3.2.2
Regression	4 days	CC.2.1.HS.F.5,6,7
Matrices	8 days	A1.1.1.1.1
Quadratic Equations and Functions	18 days	CC.2.1.HS.F.5,6,7; CC.2.2.HS.C.6 A1.1.1.5.2; A1.1.1.1.2; A2.1.1.1.1,2 A2.1.1.1.2,2; A2.2.1.1.4
Polynomials and Polynomial Functions	12 days	CC.2.2.HS.D.1,2,3,5,6
Radical Functions and Rational Exponents	18 days	CC.2.2.HS.C.4; A2.1.2.1.1,2,3; CC.2.1.HS.F.1,4
Graph Behavior	2 days	CC.2.2.HS.C.4; A2.1.2.1.1,2,3; CC.2.1.HS.F.1,4
Exponential and Logarithmic Functions;	15 days	CC.2.2.HS.C.5; CC.2.2.HS.D.6 A2.1.1.2.1.1,2,3,4; A2.2.2.1.1,2,3,4 A2.2.1.1.1,2,3; A2.1.2.1.1,4

REQUIRED TOPICS OF STUDY	SUGGESTED INSTRUCTIONAL TIME	STANDARDS/ ELIGIBLE CONTENT
Rational Functions	10 days	CC.2.2.HS.C.5; CC.2.2.HS.D.6 A2.1.1.2.1.1,2,3,4; A2.2.2.1.1,2,3,4 A2.2.1.1.1,2,3; A2.1.2.1.1,4
Sequences	8 days	CC.2.2.HS.C.5; CC.2.2.HS.D.6 A2.1.1.2.1.1,2,3,4; A2.2.2.1.1,2,3,4 A2.2.1.1.1,2,3; A2.1.2.1.1,4

RESOURCES: Algebra 2” Prentice Hall, 2008 edition
TI-83 Graphing Calculator is recommended

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