

High School Syllabus

Department: Mathematics
Course Title: Algebra 1

Course #: 40401X

DESCRIPTION OF COURSE: Students will strengthen their existing math skills while broadening their understanding of algebraic concepts. Concepts covered include solving and graphing linear/quadratic equations, solving and graphing inequalities, systems of equations, rules of exponents, factoring polynomials, operations involving radical and rational expressions, and quadratic equations. Individually or in groups, students will discuss and solve problems with appropriate technology. Students will demonstrate their knowledge and understanding through cooperative learning activities, projects, class discussions, homework, Study Island, and assessments involving problem-solving skills. The Algebra 1 Keystone Exam will be administered at the end of the course. Upon completion of the Algebra 1 Keystone Exam, students will continue to master Algebra 1 concepts and begin preparation for Algebra 2.

REQUIRED TOPICS OF STUDY	SUGGESTED INTRUCTIONAL TIME	STANDARDS/ ELIGIBLE CONTENT
Foundations for Algebra	1 week	CC.2.1.8.E.1, CC.2.1.HS.F.2, A1.1.1.1.1, A1.1.1.1.2, A1.1.1.3.1, A1.1.1.2.1
Solving Equations & Inequalities	9 weeks	CC.2.2.HS.C.1, CC.2.2.HS.C.2, CC.2.2.HS.C.3, A1.1.2.1.1, A1.2.1.1.1, A1.2.1.1.2, A1.2.1.1.3, A1.2.1.2.1, A1.2.1.2.2, A1.2.2.1.1, A1.2.2.1.2, A1.2.2.1.3, A1.2.2.1.4
Graphs and Functions	3 weeks	CC.2.2.HS.C.1, CC.2.2.HS.C.2, CC.2.2.HS.C.3, CC.2.2.HS.C.4, CC.2.2.HS.C.5, CC.2.2.HS.C.6, A1.1.2.1.1, A1.2.1.1.1, A1.2.1.1.2, A1.2.1.1.3, A1.2.1.2.1, A1.2.1.2.2, A1.2.2.1.1, A1.2.2.1.2, A1.2.2.1.3, A1.2.2.1.4
Linear Functions & Their Graphs	6 weeks	CC.2.4.HS.B.3, A1.1.2.1.1, A1.1.2.1.2, A1.1.2.1.3, A1.2.1.1.1, A1.2.1.1.2, A1.2.1.1.3, A1.2.1.2.1, A1.2.1.2.2, A1.2.2.1.1, A1.2.2.1.2
Systems of Equations & Inequalities	4 weeks	CC.2.2.HS.C.1, CC.2.2.HS.C.2, CC.2.2.HS.C.3, A1.1.2.1.1, A1.2.1.1.1, A1.2.1.1.2, A1.2.1.1.3, A1.2.1.2.1, A1.2.1.2.2, A1.2.2.1.1, A1.2.2.1.2, A1.2.2.1.3, A1.2.2.1.4
Exponents	3 weeks	CC.2.2.HS.C.5, A1.2.2.1.1, A1.2.2.1.2, A1.2.2.1.3, A1.2.2.1.4, A2.1.3.1.1, A2.1.3.1.2, A2.1.3.1.3, A2.1.3.1.4, A2.2.1.1.1, A2.2.1.1.2, A2.2.1.1.3, A2.2.1.1.4, A2.2.2.1.1, A2.2.2.1.2, A2.2.2.1.3, A2.2.2.1.4, A2.2.2.2.1
Polynomials & Factoring	4 weeks	CC.2.2.HS.D.1, CC.2.2.HS.D.2, CC.2.2.HS.D.3, CC.2.2.HS.D.5, CC.2.2.HS.D.6 A1.1.1.5.1, A1.1.1.5.2, A1.1.1.5.3
Quadratic Equations & Functions	3 weeks	CC.2.2.HS.C.1, CC.2.2.HS.C.2, CC.2.2.HS.C.3, CC.2.2.HS.C.4, CC.2.2.HS.C.5, CC.2.2.HS.C.6, A1.1.2.1.1, A1.2.1.1.1, A1.2.1.1.2, A1.2.1.1.3, A1.2.1.2.1, A1.2.1.2.2, A1.2.2.1.1, A1.2.2.1.2, A1.2.2.1.3, A1.2.2.1.4
Radical Expressions & Equations	3 weeks	CC.2.1.HS, A2.2.1.1.1, A2.2.1.1.2, A2.2.3.1.1, A2.2.3.1.2
Rational Expressions & Functions	3 weeks	CC.2.2.HS.D.1, CC.2.2.HS.D.2, CC.2.2.HS.D.3, CC.2.2.HS.D.5, CC.2.2.HS.D.6 A1.1.1.5.1, A1.1.1.5.2, A1.1.1.5.3

RESOURCES: Textbook: Prentice Hall Algebra 1 2009; Internet: Study Island, pdesas.org ; Graphing Calculator TI-84

Rev.: 3/2015