College Prep Algebra 2 Curriculum Map

Sharockman Spring 2023

Days	Unit Name	Lesson	Objectives	Standards and Eligible Content	Resources	Assessments	Adaptations Modifications	Vocab
1-15	Equations & Inequalities	Students will use variables to write and solve linear equations and inequalities, applying both familiar and newer formulas.	Using properties to evaluate and simply expressions. Using problem solving strategies and verbal models. Solving linear and absolute value equations and inequalities.	A2.1.2.1.3	Chalkboard, Smart Board, Book, Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	Exponent Base Variable Coefficient Like Terms Linear equation Linear inequality Compound inequality Absolute Value Extraneous solution
16-30	Linear Equations & Function	Students will graph linear equations and functions, as well as data that can be described with a linear relationship.	Representing relations and functions. Graphing linear equations and inequalities in two variables. Writing linear equations and inequalities in two variables.	A2.2.2.1, 2.2.3.1.1, 2.2.3.1.2	Chalkboard, Smart Board, Book, Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	Domain & range Function Slope Rate of Change Slope-Intercept form X & Y intercept Point-slope form Best-fitting line Absolute Value Function Transformation

31-45	Linear Systems	Students will extend their ability to solve linear equations and inequalities to solving two or three of them simultaneously.	Solving systems of equations using a variety of methods Graphing systems of equations and inequalities	A2.1.2.3 A2.1.2.5	Chalkboard, Smart Board, Books Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	System of linear equations Consistent Inconsistent Independent Dependent Substitution Method Elimination Method
46-90	Quadratic Functions & Factoring	Students will model real life situations using quadratic functions such as the path of a baseball. By the end of this unit, students will be able to write, solve, and graph quadratic functions	Graphing and writing quadratic functions in several forms Solving quadratic equations using a variety of methods Performing operations with square roots and complex numbers	A2.1.2.1, A2.1.2.2, A2.1.1.1 A2.1.1.2, A2.1.1.2 A2.1.2.2, A2.1.1.1, 1.1	Chalkboard, Smart Board, Books Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	Standard of a quadratic equation Parabola Vertex form Intercept form Root of an equation Zero of a function Complex number Imaginary number Completing the square Quadratic Formula Discriminant
90-112	Polynomials & Polynomial Functions	Students will learn and apply the properties of exponents. They will learn methods to factor and solve polynomial equations. Using intercepts and other methods to graph polynomial functions, classify zeros of a function and find all real zeros.	Graphing polynomial functions. Performing operations with polynomials. Solving polynomial equations and finding zeros	A2.2.1.1, A2.2.1.4, A2.2.2.1 A2.2.1.3	Chalkboard, Smart Board, Books Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	Polynomial Synthetic Substitution Synthetic division End behavior Factor completely Quadratic Form Polynomial long division Local Maximum Local Minimum

112-135	Rational Exponents & Radical Functions	Students will learn the meaning of nth roots and rational exponents. Students will learn to determine whether the given function has an inverse that is also a function. Using rational exponents Perform function operations and finding inverse functions Graphing radical functions & solving radical equations		Chalkboard, SmartBoard, Books, Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	Nth root Index of a radical Simplest form of a radical Like radicals Power function Composition Inverse function Radical function
136-150	Keystone Prep	Students will prepare for the test through practice tests. Also complete open-ended questions thoroughly to understand the value of explaining all steps. Allow students to develop strategies to perform their best on the state test that allows them the quickest pathway to graduation.	All Algebra I Standards	Chalkboard, SmartBoard, Books, Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	See Keystone Algebra I Vocabulary list
151-180	Exponential & Logarithmic Functions	Students will learn to graph and use exponential growth and decay functions. Students will graph logarithmic functions and use the properties of logarithms to rewrite logarithmic expressions. Students will learn to solve exponential and logarithmic equations. Graph exponential and logarithmic functions. Solve exponential and logarithmic equations. Write and apply exponential and power functions.	A2.1.2.1.4, A2.1.3.1.3	Chalkboard, SmartBoard, Books, Worksheets, & Websites	Assignments & Assessment	Calculator, Extended Time, Reading Test	Exponential Function Exponential Growth Growth factor Exponential Decay Decay factor Natural Base Asymptote Common Logarithm Natural Logarithm