Danville Area School District
Course Overview and Scope and Sequence

Course Title: Honors Algebra II
Content Area: Mathematics
Grade Level:
Date Developed: June 2023

COURSE OVERVIEW:
ANCHOR STANDARDS: A2.2.1.1 Analyze and/or use patterns or relations. A2.1.1.1 Represent and/or use imaginary numbers in equivalent forms (e.g., square roots and exponents). A2.1.1.2 Apply the order of operations in computation and in problem solving situations. A2.1.3.1 Write and/or solve nonlinear equations using various methods. A2.1.2.2 Simplify expressions involving polynomials. A2.2.2.1 Create, interpret, and/or use polynomial, exponential, and/or logarithmic functions and their equations, graphs, or tables. A2.2.2.2 Describe and/or determine families of functions. A2.1.2.1 Use exponents, roots, and/or absolute values to represent equivalent forms or to solve problems A2.1.3.2 Describe and/or determine change.
KEY COURSE TEXT AND MATERIALS: Textbook Simplifying Expressions Worksheet Linear Application Worksheet Absolute Value Equation Worksheet Function Worksheet

Writing Linear Equations Worksheet
Application Worksheet
Systems Worksheet
Linear Programming Worksheet
Axis of Symmetry
Standard Form
Imaginary unit
Dividing Polynomials Worksheet
Polynomial Functions Worksheet
Graphing Worksheet
Factoring Worksheet
Remainder and Factor Thm Packet
Pascal's Triangle Worksheet
Review Packet
Exam
Radical Worksheet
Exponent Worksheet
Solving Equations Worksheet
Composition Worksheet
Review Worksheet
Exponential Functions Worksheet
Log Properties Worksheet
Log Equations Worksheet
Application Packet
Review
Rational Graphing Packet 1
Rational Graphing Packet 2
Rational Equations Worksheet

KEY ASSESSMENTS:
Diagnostic:

Formative: Summative:

SCOPE AND SEQUENCE				
Unit	STANDARDS	ASSESSMENT	MATERIALS	TIMEFRAME
Unit 1: Equations and Inequalities		Quiz on expressions and equations. Quiz on Absolute value and inequalities.	Textbook Simplifying Expressions Worksheet Linear Application Worksheet Absolute Value Equation Worksheet	15 Days
Unit 2: Linear Relations and Functions	A2.2.1.1	Linear Models Quiz Graphing absolute value and piecewise functions Quiz	Textbook Function Worksheet Writing Linear Equations Worksheet Application Worksheet Absolute Value Graphing Worksheet	11 Days
Unit 3: Systems of Equations and Inequalities	A2.2.1.1	Systems Quiz Linear Programming Quiz Exam	Textbook Systems Worksheet	14 Days

			Linear Programming Worksheet	
Unit 4: Quadratic Functions and Relations	A2.1.1.1 A2.1.1.2 A2.1.3.1 A2.1.2.2 A2.2.1.1	Graphing Quiz Factoring Quiz Complex/ Completing the Square Quiz Quadratic Formula Quiz Exam	Textbook Factoring Worksheet Radical Worksheet Completing the Square Worksheet Quadratic Word Problems Worksheet Review Packet	25 Days
Unit 5: Polynomial and Polynomial Functions	A2.1.2.2 A2.1.3.1 A2.1.2.2 A2.2.1.1 A2.2.2.1 A2.2.2.2	Polynomial Quiz Graphing Quiz Remainder and Factor Thm Quiz Pascal's Triangle Quiz	Dividing Polynomials Worksheet Polynomial Functions Worksheet Graphing Worksheet Factoring Worksheet Remainder and Factor Thm Packet Pascal's Triangle Worksheet Review Packet Exam	24 Days

Unit 6: Inverses and Radical Functions and Relations	A2.1.3.1 A2.1.1.1 A2.2.1.1 A2.2.2.1 A2.2.2.2	Operation and Conjugate Quiz Exponent Quiz Equation Quiz Composition and Inverse Quiz Graphing Quiz Exam	Textbook Radical Worksheet Exponent Worksheet Solving Equations Worksheet Composition Worksheet Review Worksheet Graphing Worksheet Review Packet	33 Days
Unit 7: Exponential and Logarithmic Functions and Relations	A2.1.2.1 A2.1.3.1 A2.2.1.1 A2.2.2.1 A2.2.2.2	Exponential Graphing Quiz Log Properties Quiz Log Equations Quiz Exam	Textbook Exponential Functions Worksheet Log Properties Worksheet Log Equations Worksheet Application Packet Review	23 Days
Unit 8: Rational Functions and Relations	A2.1.3.2 A2.1.2.2 A2.2.1.1 A2.2.2.1	Adding/Subtracting/ Multiplying/Dividing Rational Expressions Quiz Graphing Rational Equations Quiz	Textbook Rational Graphing Packet 1 Rational Graphing Packet 2 Rational Equations Worksheet	25 Days

		Solving Rational Equations Quiz Exam	Review	