



# WESTSIDE HIGH SCHOOL

## ALGEBRA I 2023-2024 COURSE OVERVIEW



### 2023-2024 Course Syllabus

<b>Module 1: Searching for Patterns</b>	3.3 Using Linear Combinations to Solve a System of Linear Equations
<b>Topic 1: Quantities and Relationships</b>	3.4 Graphing Inequalities in Two Variables
1.1 Understanding Quantities and Their Relationships	3.5 Systems of Linear Inequalities
1.2 Analyzing and Sorting Graphs	3.6 Solving Systems of Equations and Inequalities
1.3 Recognizing Functions and Function Families	<b>Module 3: Investigating Growth and Decay</b>
1.4 Recognizing Functions by Characteristics	<b>Topic 1: Introduction to Exponential Functions</b>
<b>Topic 2: Sequences</b>	1.1 Properties of Powers with Integer Exponents
2.1 Recognizing Patterns and Sequences	1.2 Analyzing Properties of Powers
2.2 Arithmetic and Geometric Sequences	1.3 Geometric Sequences and Exponential Functions
2.3 Determining Recursive and Explicit Expressions from Contexts	1.4 Rational Exponents and Graphs of Exponential Functions
2.4 Modeling Using Sequences	<b>Topic 2: Using Exponential Equations</b>
<b>Topic 3: Linear Regressions</b>	2.1 Exponential Equations of Growth and Decay
3.1 Least Squares Regression	2.2 Interpreting Parameters in Context
3.2 Correlation	2.3 Modeling Using Exponential Functions
<b>Module 2: Exploring Constant Change</b>	2.4 Choosing a Function to Model Data
<b>Topic 1: Linear Functions</b>	<b>Module 4: Maximizing and Minimizing</b>
1.1 Making Connections Between Arithmetic Sequences and Linear Functions	<b>Topic 1: Introduction to Quadratic Functions</b>
1.2 Point-Slope Form of a Line	1.1 Exploring Quadratic Functions
1.3 Using Linear Equations	1.2 Key Characteristics of Quadratic Functions
1.4 Making Sense of Different Representations of a Linear Function	1.3 Quadratic Function Transformations
1.5 Transforming Linear Functions	1.4 Transformations of Quadratic Functions
1.6 Vertical and Horizontal Transformations of Linear Functions	1.5 Comparing Functions Using Key Characteristics and Average Rate of Change
1.7 Determining Slopes of Perpendicular Lines	<b>Topic 2: Solving Quadratic Equations</b>
1.8 Comparing Linear Functions in Different Forms	2.1 Adding, Subtracting, and Multiplying Polynomials
<b>Topic 2: Linear Equations and Inequalities</b>	2.2 Polynomial Division
2.1 Solving Linear Equations	2.3 Representing Solutions to Quadratic Equations
2.2 Literal Equations	2.4 Solutions to Quadratic Equations in Vertex Form
2.3 Modeling Linear Inequalities	2.5 Factoring and Completing the Square
<b>Topic 3: Systems of Equations and Inequalities</b>	2.6 The Quadratic Formula
3.1 Using Substitution to Solve Linear Systems	2.7 Using Quadratic Functions to Model Data
3.2 Using Graphing to Solve Systems of Equations	