Algebra I Honors
Course Overview and Syllabus

Course Number: MA3109H

Grade level: 9

Prerequisite Courses: None

Credits: 1.0

Course Description

This full-year honors course introduces students to linear, exponential, and quadratic functions by interpreting, analyzing, comparing, and contrasting functions that are represented numerically, tabularly, graphically, and algebraically. Technology is utilized within some lessons to further support students in identifying key features as well as displaying images of the functions. The course builds upon the basic concepts of functions to include transformations of linear and non-linear functions. Students deepen their understanding of quantitative reasoning, piecewise functions, and quadratic functions through performance tasks. The additional performance-based skills allow the honors students to apply more of the concepts taught in the course. The course concludes with students analyzing data through displays and statistical analysis.

Course Objectives

Throughout the course, you will meet the following goals:

- Apply quantitative reasoning in order to express relationships between quantities numerically, tabularly, graphically, and algebraically, understanding the limitations of each representation.

- Compare the key features of linear, exponential, and quadratic functions, and use these functions to model and solve problems.

- Use function notation as a way to describe a dependent relationship.

- Write and solve a variety of one- and two-variable equations and inequalities, and systems of one- and two-variable equations and inequalities, and interpret the solutions in context.

- Analyze visual data displays and summary statistics to draw conclusions about different types of data.

Student Expectations

This course requires the same level of commitment from you as a traditional classroom course. Students are expected to spend approximately five to seven hours per week online on:

- Interactive lessons that include a mixture of instructional videos and tasks
- Assignments in which you apply and extend learning in each lesson
- Assessments, including quizzes, tests, and cumulative exams

Communication

Your teacher will communicate with you regularly through discussions, e-mail, chat, and system announcements. You will also communicate with classmates, either via online tools or face to face, as you collaborate on projects, ask and answer questions in your peer group, and develop your speaking and listening skills.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Quiz	20%
Test	30%
Exam	20%
Assignment	20%
Projects (Performance Tasks)	10%

Scope and Sequence

When you log into Edgenuity, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

Unit 1: Representing Relationships

Unit 2: Functions

Unit 3: Linear Functions

Unit 4: Linear Equations and Inequalities

Unit 5: Systems of Equations and Inequalities

Unit 6: Nonlinear Functions

Unit 7: Exponential Functions

Unit 8: Polynomial Expressions

Unit 9: Quadratic Functions

Unit 10: Quadratic Equations

Unit 11: Trends in Data

Unit 12: Data Analysis