Algebra 1 Pacing Guide

Algebra I emphasizes linear and quadratic expressions, equations, and functions. This course also introduces students to polynomial and exponential functions with domains in the integers. Students explore the structures of and interpret functions and other mathematical models. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically.

Quarter 1

Seeing Structure in Expressions
  -Interpret the structure of expressions.
  -Write expressions in equivalent forms to solve problems.
Arithmetic with Polynomials and Rational Expressions
  -Perform arithmetic operations on polynomials.
Creating Equations
  -Create equations that describe numbers or relationships.
Reasoning with Equations and Inequalities
  -Understand solving equations as a process of reasoning and explain the reasoning.
  -Solve equations and inequalities in one variable.
  -Represent and solve equations and inequalities graphically.

Quarter 2

Interpreting Functions
  -Understand the concept of a function and use function notation
  -Interpret functions that arise in applications in terms of the context.
Interpreting Categorical and Quantitative Data
  -Interpret linear models.

Quarter 3

Quantities
  -Reason quantitatively and use units to solve problems.
Arithmetic with Polynomials and Rational Expressions
  -Understand the relationship between zeros and factors of polynomials.
Reasoning with Equations and Inequalities
  -Solve systems of equations.
Interpreting Functions
  -Analyze functions using different representations.
Building Functions
  -Build a function that models a relationship between two quantities.
  -Build new functions from existing functions.

Quarter 4

Linear, Quadratic, and Exponential Models
  -Construct and compare linear, quadratic, and exponential models and solve problems.
  -Interpret expressions for functions in terms of the situation they model.

Interpreting Categorical and Quantitative Data
- -Summarize, represent, and interpret data on a single count or measurement variable.
- -Summarize, represent, and interpret data on two categorical and quantitative variables.

*The advanced section of this course will go further in depth and further apply each of these topics to real life situations. The advanced sections will also complete more rigorous assignments, as well as a higher number of assignments.