



# Honors Algebra I

## 1<sup>st</sup> Grading Period (8 days)

### Power Objective:

- Solve linear equations and inequalities. (P.O. #1)

### Academic Vocabulary: [See below for more vocabulary.](#)

- conversion factor
- cross products
- cross products property
- division property of equality
- equivalent equations
- formula
- identity
- inverse operations
- isolate
- literal equation
- multiplication property of equality
- percent error
- percent change
- percent decrease
- percent increase
- proportion
- rate
- ration relative error
- scale

## Solve Linear Equations

### Enduring Understandings:

- Any algebraic equation can be represented using symbols in an infinite number of ways, where each representation has the same solution.
- Properties of numbers and equality can transform an equation into equivalent simpler equations. This process is used to find solutions.
- Proportionality involves a relationship in which the ratio of two quantities remains constant as the corresponding values of the quantities change. In a proportional relationship there are an infinite number of ratios equality to this constant ratio.
- [See below for more enduring understandings.](#)

### Essential Questions:

- Can equations that appear to be different be equivalent?
- How can you solve equations?
- What kinds of relationships can proportions represent?

### **Enduring Understandings:**

- Quantities are used to form expressions, and equations. An expression refers to a quantity but does not make a statement about it. An equation is a statement about the quantities it mentions. Using variables in place of numbers in equations allows the statement or relationships among numbers that are unknown or unspecified.
- A single quantity may be represented by many different expressions. The facts about a quantity may be expressed by many different equations.
- Solving an equation is the process of rewriting the equation to make what it says about its variables as simple as possible. Properties of numbers and equality can be used to transform an equation into equivalent, simpler equations in order to find solutions. Useful information about equations can be found by analyzing graphs or tables. The numbers and types of solutions vary predictably, based on the type of equation.

### **Academic Vocabulary:**

- scale drawing
- scale model
- subtraction property of equality
- unit analysis