# Advanced Math Concepts
# 1st Grading Period

## Power Objectives:

- **Create equations that describe numbers and relationships. (P.O. # 5)**
- **Understand, represent and solve equations and inequalities graphically. Use this understanding as a process of reasoning and explain the reasoning. (P.O. # 6)**

## Academic Vocabulary:

- quadratic equations
- completing the square
- quadratic formula
- graphing
- area formulas
- volume formulas
- sign chart
- absolute value
- polynomial inequalities
- rational inequalities
- interval notation

# Solving Equations & Inequalities

## Enduring Understandings:

- The solutions to inequalities involve a set of numbers instead of a single number solution.
- There are many methods used to solve equations and having a working knowledge of these methods will allow them to apply problem solving strategies and critical thinking in a variety of ways.
- Scientists, businesses, and other entities talk in mathematical language, and knowing how to speak and converse in this language is vital to understanding how and why the math behind the problem works.

## Essential Questions:

- Why is a graphical representation of the solution to inequalities useful?
- Why do I need to know how to solve different type of math problems both algebraically and graphically?
- Why is knowing how to converse and read mathematical language and terminology important in understanding the bigger picture of how the math supports to problems?