

**Southern Regional High School**  
Manahawkin, New Jersey  
**Course Syllabus**

**Department:** Math

**Course:** Algebra I Advanced

Marking Period 1

Topics/Units to be covered:

- Grading policy/classroom expectations
- Simplifying expressions using order of operations, the distributive law, and collecting like terms
- Evaluating variable expressions
- Equation Solving (Multi Step, Multiple Variables, Fractions & Decimals, Absolute Value)
- Functions
- Literal Equations
- Solving and Graphing One-Variable Simple and Compound Inequalities
- Equation of a Line (Slope, Slope Intercept, Point-Slope, Standard Form)
- 1<sup>st</sup> Quarterly

Marking Period 2

Topics/Units to be covered:

- Graphing Lines in Slope/Intercept, Point Slope, & Standard Form
- Graphing Inequalities on the Coordinate Plane
- Correlation & Line of Best Fit
- Solving Systems by Graphing, Substitution, Elimination
- Solving Real World Problems using Systems
- Systems of Inequalities
- 2<sup>nd</sup> Quarterly

Marking Period 3

Topics/Units to be covered:

- Laws/Properties of Exponents
- Scientific notation
- Determining & Graphing Exponential Functions
- Exponential Growth & Decay
- Polynomial Terms, Classification, & Degree
- Operations on Polynomials
- Factoring Polynomials (GCF, a Trinomial into 2 Binomials, Difference of Two Squares)
- Radicals: Simplifying & Operations
- 3<sup>rd</sup> Quarterly

Marking Period 4

Topics/Units to be covered:

- Solving Quadratics using Radicals, Factoring, and The Quadratic Formula
- Experimental & Theoretical Probability
- Compound Probabilities: “AND” and “OR”
- Fundamental Counting Principle
- Combinations & Permutations
- Data Displays: H
- Measures of Central Tendency
- Matrices
- Final Exam