Algebra 1 Syllabus + Course Content

Student Responsibilities:

- ★ Ask questions to deepen understanding
- ★ Engage in your learning
  - Take notes
  - Complete all assignments
- ★ Interact with your teacher and your classmates
  - Attend Office Hours during common lunch, especially if you are absent and need to make up any work.
- ★ Open your mind to new ways of thinking
- ★ Use what you have learned in prior math classes to acquire new knowledge

Grading:

- ★ 20% Classwork (Participation)
  - Daily Lesson Quiz
  - Quizizz
  - Gimkit
  - Desmos Activities
  - Handouts
- ★ 20% Homework
  - Odd Numbered problems for assigned page on the due date
  - Even Numbered problems for the assigned page the day after it is due.
  - Speak with the teacher about extended time due to absences/extenuating circumstances.
- ★ 60% Assessments (Tests, Quizzes, etc.)

Materials and Access:

- ★ Google Classroom
  - NumWorks virtual Graphing Calculator
  - Desmos virtual Calculators (Scientific/Graphing)
  - Savvas Envision digital Student Materials
  - Quizizz Assignments
  - Student.Desmos.com
  - IXL.com
  - Gimkit.com
- ★ Printed Notes & Homework Packet

Topic 1 Solving Equations and Inequalities

1-1 Operations on Real Numbers
1-2 Solving Linear Equations
1-3 Solving Equations with Variables on Both Sides
1-4 Literal Equations and Formulas
1-5 Solving Inequalities in One Variable

Topic 2 Linear Equations

2-1 Slope-Intercept Form
2-2 Point-Slope Form

2-3 Standard Form

Topic 3 Linear Functions

3-1 Domain and Range of Functions
3-2 Linear Functions
3-3 Transforming Linear Functions
3-4 Arithmetic Sequences
3-5 Scatter Plots and Lines of Fit
3-6 Analyzing Lines of Fit

Topic 4 Systems of Linear Equations and Inequalities

4-1 Solving Systems of Equations by Graphing
4-2 Solving Systems of Equations by Substitution
4-3 Solving Systems of Equations by Elimination
4-4 Linear Inequalities in Two Variables
4-5 Systems of Linear Inequalities

Topic 7 Polynomials and Factoring

7-1 Adding and Subtracting Polynomials
7-2 Multiplying Polynomials
7-3 Multiplying Special Cases
7-4 Factoring Polynomials
7-5 Factoring $x^2 + bx + c$
7-6 Factoring $ax^2 + bx + c$

Topics 8 & 9 Quadratic Functions

8-1 Key Features of Graphs of Quadratic Functions
8-2 Quadratic Functions in Vertex Form
8-3 Quadratic Functions in Standard Form
8-4 Modeling with Quadratic Functions
9-1 Solving Quadratic Equations Using Graphs and Tables
9-2 Solving Quadratic Equations by Factoring
6-2 Radical Expressions
9-3 Solving Quadratic Equations Using Square Roots
9-4 Completing the Square
9-5 The Quadratic Formula and the Discriminant

Topic 10 Working with Functions

5-1 The Absolute Value Function
5-2 Piecewise-Defined Functions
5-3 Step Functions
6-3 Exponential Functions
6-4 Exponential Growth and Decay
6-5 Geometric Sequences
10-1 The Square Root Function
10-2 The Cube Root Function
10-3 Analyzing Functions Graphically

Topic 11 Statistics

11-1 Analyzing Data Displays
11-2 Comparing Data Sets
11-3 Interpreting the Shapes of Data Displays

11-4 Standard Deviation
11-5 Two-Way Frequency Tables