

Algebra I Syllabus

Ted Harpole

Course Objectives: All high school students must pass Algebra 1 in order to graduate from high school. The Algebra 1 curriculum is the standard on which the State of Tennessee Education Standards. Algebra 1 is also the course in which students gain the tools that they will need to be successful in the higher level math courses that they will be taking during the remainder of their high school career. Bearing this in mind, there are two major objectives in this course. By the end of the school year, I expect the students to be able to 1) demonstrate the thought processes required to perform with proficiency in higher-level mathematics courses, as well as everyday life, and 2) effectively communicate those thoughts using the mathematical language. Both objectives will be assessed throughout the year in the form of tests, quizzes, benchmark exams, and presentations.

Course Outline: The Algebra 1 course is divided into eleven different standards. For each standard, students will be completing work that draws from the information presented in the class, as well as the text and other outside materials. To master each standard, each student will complete of some combination of bookwork, activities, projects, and real-life applications of the math. Each day a standard with an objective along with the activities will be posted on the board. Students will be required to place in their notebook the vocabulary word for the day and its definition, Great Start problems, Cornell Notes showing the process and practice problems. This way both parents and students will know exactly what is happening in the class.

Classroom Expectations: Students will need to have the following supplies with them EACH DAY in order to be successful in Algebra

1. A binder with 4 dividers: Great Starts, Vocabulary Words, .Cornell Notes, and Practice Problems
3. -A Writing Utensil (pen, pencil, dry erase markers or crayon, etc.)
4. -A Scientific Calculator (graphing capabilities optional, but recommended).

Each class period will be structured in approximately the same way, consisting of four parts:

1. Reading the Agenda and copying the vocabulary word in your notebook. Great Start, Cornell Notes, Practice Problems, and E-Ticket. The first part of the day, which begins as soon as the student enters the class, is the Great Start. The Great Start is a set of problems and instructions that are written on the board for the student to complete at the start of class. It is either a review of concepts already learned, a preview of what the class will be learning that day, or standardized test preparation. The purpose of the Great Start is to allow the students to “shift gears” into thinking about math. Also, this is the portion of the class where I check the students’ homework.
2. After the Great Start, we then go over the Cornell Notes. This is where I model the problem and go over the process being learned. I strongly encourage the students to ask questions about any problems or process that they don’t understand.
3. I will then model the problem for the students, break it down for them, and explain it for them again. The next phase of class is the practice problems to perform the process being learned.
4. Finally, I give the students the last 5 minutes of class to solve one or two problems based on the lecture. This E-Ticket must be turned in before exiting the classroom, and allows me to check for the understanding of the notes.

Class Rules: On the very first day of school, I tell the students the class rules.

- 1, Always come with paper and pencil.
2. Do not get out of your seat without permission.
3. Only one speaks at a time.

Grading Policy:

Students will earn grades in three categories: Tests/Quizzes, Homework, and Participation. A breakdown of each category follows. Each category has its own value and standards. A student's final grade will be determined by totaling the weighted score in each category. Test will count 40%, quizzes 35%, and class work, homework, or projects 25%.

Assessments:

Students will be assessed in a variety of ways throughout the course. The most common way that the students will be assessed is through their quizzes and tests. These quizzes and tests will consist of a variety of problems from the covered during the week. One time during the week there will be a test on explaining a process covered. This will be in the form of a writing exercise.

I expect the students to understand WHY they are doing certain steps as well as the steps themselves. In order to communicate mathematically, students need to be able to explain what they are doing. To me, this is as important as the correct answer. Most Fridays, students will be given a test. The test will only cover the standards covered during the week, which will allow the student to gain more practice using the concepts taught during the week.. Occasionally, the students will also have a vocabulary quiz on math terms introduced in the lesson. By knowing the definition of key mathematical terms, the student can learn new concepts more quickly, and will be able to better comprehend questions on all of their tests. In addition, students need to acquire a mathematical vocabulary in order to effectively communicate mathematically.

Algebra I

Pacing Guide

Teacher: Harpole

Unit 1 (Aug. - Sept.)

Introduction to Functions.

Relations and Functions. (Types, Evaluating, and Transforming)

Domain and Range

Unit 2 (Sept. - Oct.)

Linear Functions.

Average Rate of Change.

Unit 3 (Oct. - Nov.)

Systems of Equations.

Linear Inequalities

Systems of Inequalities.

Unit 4 (Nov. - Dec.)

Exponential Functions.

Unit 5 (Jan.)

Operations with Polynomials.

Factoring Polynomials.

Unit 6 (Jan. - Feb. - March)

Quadratic Functions.

Unit 7 (April - May)

Data Analysis.

Statistics.

Unit Conversions.

Correlation and Causation.

Literal Equations.

Absolute Value and Piecewise Functions.