



Chickasaw High School

Mrs. Kristin Kendrick

2019-2020 Course Syllabus

Adv Algebra 1 - 8th Grade

Course Overview:

The Algebra I course builds on foundational mathematics content learned by students in Grades K-8 by expanding mathematics understanding to provide students with a strong mathematics education. Content is designed to engage students in a variety of mathematical experiences that include the use of reasoning and problem-solving skills, which may be applied to life situations beyond the classroom setting. This course serves as the cornerstone for all high school mathematics courses; therefore, all subsequent mathematics courses require student mastery of the Algebra I content standards.

Students will:

I. NUMBER AND QUANTITY

- A. The Real Number System
 - 1. Extend the properties of exponents to rational exponents.
 - 2. Use properties of rational and irrational numbers.
- B. Quantities
 - 1. Reason quantitatively and use units to solve problems.

II. ALGEBRA

- A. Seeing Structure in Expressions
 - 1. Interpret the structure of expressions.
 - 2. Write expressions in equivalent forms to solve problems. (Quadratic and exponential.)
- B. Arithmetic With Polynomials and Rational Expressions
 - 1. Perform arithmetic operations on polynomials. (Linear and quadratic.)
 - 2. Rewrite rational expressions. (Linear and quadratic denominators.)
- C. Creating Equations
 - 1. Create equations that describe numbers or relationships. (Linear, quadratic, and exponential (integer inputs only))
- D. Reasoning With Equations and Inequalities
 - 1. Understand solving equations as a process of reasoning and explain the reasoning. (Master linear; learn as general principle.)
 - 2. Solve equations and inequalities in one variable. (Linear inequalities; literal that are linear in the variables being solved for; quadratics with real solutions.)
 - 3. Solve systems of equations. (Linear-linear and linear-quadratic.)
 - 4. Represent and solve equations and inequalities graphically. (Linear and exponential; learn as general principle.)

III. FUNCTIONS

- A. Interpreting Functions
 - 1. Understand the concept of a function and use function notation. (Learn as general principle; focus on linear and exponential and on arithmetic and geometric sequences.)
 - 2. Interpret functions that arise in applications in terms of the context. (Linear, exponential, and quadratic.)
 - 3. Analyze functions using different representations. (Linear, exponential, quadratic, absolute value, step, and an awareness of piecewise-defined.)
- B. Building Functions
 - 1. Build a function that models a relationship between two quantities.
 - 2. Build new functions from existing functions. (Linear, exponential, quadratic, and absolute value.)
- C. Linear, Quadratic, and Exponential Models
 - 1. Construct and compare linear, quadratic, and exponential models and solve problems.
 - 2. Interpret expressions for functions in terms of the situation they model. (Linear and exponential of form $f(x) = b^x + k$.)

IV. STATISTICS AND PROBABILITY

- A. Interpreting Categorical and Quantitative Data
 - 1. Summarize, represent, and interpret data on a single count or measurement variable.
 - 2. Summarize, represent, and interpret data on two categorical and quantitative variables. (Linear focus, discuss general principle.)
 - 3. Interpret linear models
- B. Conditional Probability and the Rules of Probability
 - 1. Understand independence and conditional probability and use them to interpret data. (Link to data from simulations or experiments.)

Materials:

Pencils
Composition Notebook

Notebook Paper
Graph Paper

Grading Determination / Scale:

60%	Summative- Test, Unit Assessment, Major Projects
40%	Formative- Quizzes/Classwork
100%	Class Grade

Classroom Guidelines for Success:

1. Be Prepared
2. Be Respectful
3. Have Integrity
4. Be Determined
5. Strive for Excellence

Classroom Policies:

1. Treat yourself, others, and school properties with respect.
2. Be prompt and prepared.
3. Follow directions and listen attentively.
4. Practice self-control.
5. Use academic and appropriate language.
6. Read instructions/directions before asking questions.
7. Return materials as you found them.
8. Personal Electronic Devices will not be used while in the classroom. (NO CELL PHONES)

In order to be respectful of your teacher, your fellow classmates, and yourself, several things must happen: Take yourself seriously: Follow directions, ask questions when you have them, come to class prepared, seek help when you need it, and **give your best effort**. This will undoubtedly lead to your success in our class.

Allow others to learn: Remember that you are not the only one here to learn. When using school property, think about the other students that need to use the equipment for their education. Our school and classroom is a safe learning community where everyone deserves the opportunity to learn.

Use academic language: In class and at school, we are a community of student scholars. When we are at home, sometimes we use a different language. When we are with our friends, sometimes we use a different language. When we are in our learning community, we use **academic or scholarly language**. When we are asking questions or disagreeing with a fellow classmate, we use specific respectful language. Most communication will occur using technology, we will use academic language. The chat feature will be used for collaboration on group projects, not socialization.

Academic Honesty: Students must not cheat (take information from a fellow student) or plagiarize (steal information from printed or sound sources without giving credit to the sources). These infractions are serious and will result in a zero for any assignment in which cheating is discovered and may result in disciplinary action. The assignment CANNOT be made up if cheating has occurred.

Parents, communication via email is the best way to get a quick response to any questions that you may have.

Mrs. Kendrick

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After reading all sections of the Course Syllabus with your parent(s), please initial where indicated and sign below and return to class. This counts as a class participation grade.

Parent or Guardian Signature
Parent/Guardian Information:

Student Signature

Date

Parent/Guardian(s): _____

Best Way to Contact: Call Text Email Written Communication

Contact Information: Phone _____ Alternernate Number _____

Email Address: _____

Comments/Concerns: _____

What do I need to know about your student? _____