

Algebra 1 Course Syllabus

Coach J. Brewer

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Conference times are available by appointment.

The following topics are covered in Algebra 1:

- Together, irrational numbers and rational numbers complete the real number system, representing all points on the number line, while there exist numbers beyond the real numbers called complex numbers.
- Expressions can be rewritten in equivalent forms by using algebraic properties, including properties of addition, multiplication, and exponentiation, to make different characteristics or features visible.
- Finding solutions to an equation, inequality, or system of equations or inequalities requires the checking of candidate solutions, whether generated analytically or graphically, to ensure that solutions are found and that those found are not extraneous.
- The structure of an equation or inequality (including, but not limited to, one-variable linear and quadratic equations, inequalities, and systems of linear equations in two variables) can be purposefully analyzed (with and without technology) to determine an efficient strategy to find a solution, if one exists, and then to justify the solution.
- Expressions, equations, and inequalities can be used to analyze and make predictions, both within mathematics and as mathematics is applied in different contexts – in particular, contexts that arise in relation to linear, quadratic, and exponential situations.
- Functions shift the emphasis from a point by-point relationship between two variables (input/output) to considering an entire set of ordered pairs (where each first element is paired with exactly one second element) as an entity with its own features and characteristics.
- Graphs can be used to obtain exact or approximate solutions of equations, inequalities, and systems of equations and inequalities – including systems of linear equations in two variables and systems of linear and quadratic equations (given or obtained by using technology).
- Functions can be described by using a variety of representations: mapping diagrams, function notation (e.g., $f(x) = x^2$), recursive definitions, tables, and graphs.
- Functions that are members of the same family have distinguishing attributes (structure) common to all functions within that family.
- Functions can be represented graphically and key features of the graphs, including zeros, intercepts, and, when relevant, rate of change and maximum/minimum values, can be associated with and interpreted in terms of the equivalent symbolic representation.
- Functions model a wide variety of real situations and can help students understand the processes of making and changing assumptions, assigning variables, and finding solutions to contextual problems.
- Mathematical and statistical reasoning about data can be used to evaluate conclusions and assess risks.
- Making and defending informed, data based decisions is a characteristic of a quantitatively literate person.
- Data arise from a context and come in two types: quantitative (continuous or discrete) and categorical. Technology can be used to “clean” and organize data, including very large data sets, into a useful and manageable structure—a first step in any analysis of data.

- The association between two categorical variables is typically represented by using two-way tables and segmented bar graphs.
- Data analysis techniques can be used to develop models of contextual situations and to generate and evaluate possible solutions to real problems involving those contexts.
- Two events are independent if the occurrence of one event does not affect the probability of the other event. Determining whether two events are independent can be used for finding and understanding probabilities.
- Conditional probabilities – that is, those probabilities that are “conditioned” by some known information – can be computed from data organized in contingency tables. Conditions or assumptions may affect the computation of a probability.

All of these have subtopics that must be covered. This is a general list of the topics covered in Algebra 1. In addition to these, we will review selected topics from 8th grade math and Geometry that are needed to complete this course.

Attendance is very important to successfully complete this course.

Do not get behind. If you need help, it is in your best interest to ask questions immediately. (I will always give opportunities to ask questions!)

Complete your assignments on time. If you make mistakes when you make a good-faith effort to complete an assignment on time, I will usually give you time to correct the assignment before taking it for a grade. NOTES and ASSIGNMENTS will be posted on Google Classroom (parents can request viewing access).

TEXTBOOK: Online access to EnVision Algebra 1. (District-provided materials accessible through students’ Clever account.) A physical book is available upon request from the library. Other materials: Teacher-developed worksheets and assignments using All Things Algebra. Online materials: MathNation, or other state and district approved online materials utilized for remediation and or review.

Supplies

- Casio fx-300ES Plus (scientific calculator)
- Binder
- plenty of notebook paper for the year
- pencils to last the entire year
- one subject notebook (with three holes to go in binder)
- School issued Chromebook

Expectations

- Be on time. (tardies to class will be marked in PowerSchool)
- Be respectful. (includes all school personnel and fellow students)
- Be responsible. (bring needed materials and use class time appropriately)
- Phones and other electronic devices (smart watches, earbuds, AI glasses, etc) are not allowed to be used or in a student's possession during the school day.
 - Cell phone/device violations will be handled according to LCS Code of Conduct
- The Code of Conduct should be followed at all times.

Consequences

- 1st offense--Verbal Warning
- 2nd offense--Student/Teacher conference
- 3rd offense--Student/Teacher conference with possible loss of privilege and/or Honor Code AND contact parent/guardian
- 4th offense--Office referral
- The expectations and consequences outlined in the Code of Conduct will be followed.

***Note that major offenses (ex. Fighting, disruptive outbursts, or behavior that causes concern for the safety of others, etc.) will be automatically referred to the office. Phone/electronic device violations will also be immediately reported to the office.**

J. Brewer – Algebra 1 Syllabus receipt

Please sign and return the SEPARATE signature page.

- I have received a copy of the syllabus and contact information for this teacher was listed.
 - I understand that I, the student, am responsible for coming to class prepared and following the Code of Conduct for Lawrence County Schools.
 - I understand makeup work is the responsibility of me, the student, and that I have three days to complete makeup work. Any absence on a test day must be EXCUSED in order to make up the test.
 - I understand that grades will be calculated in the following manner: Percent calculated by dividing points earned by points available (Range of 5-30 points for Daily assignments, classwork, quizzes, etc.) (Range of 50-100 points for Tests or Projects)
-

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Student signature_____Date_____

Parent signature _____Date_____

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