

Grade 8 - Algebra 1 Syllabus

2026-2027

Teachers:

Lori Bishop

bishopl@region-12.org

Room: C22/C24

Course Description:

This course is a full year Algebra course exploring all High School Algebra I standards. Students are expected to take initiative by spending additional time, beyond homework completion, to study. This class in mathematics requires students to demonstrate fluent understanding of concepts and procedures, communicate reasoning, and effectively solve problems, model and analyze data. Students who successfully complete this course, will have mastered all Algebra I math common core state standards and will be ready to continue to Geometry upon successful completion. The materials for this course, and for this syllabus, come from Engage New York/Eureka Math, published by Great Minds, Inc. **Please Note: This syllabus will be updated as needed to reflect changes.**
Last Update: August 2026.

Students will be given a math workbook which is expected to be written in and used daily.

If the workbook is lost or damaged, students will be held responsible for the replacement costs.

Standards for Mathematical Practice:

The Standards for Mathematical Practice describe varieties of expertise that Shepaug mathematics educators seek to develop in their students. These practices will be incorporated and focused in each unit throughout the year. Students are expected to work both independently and collaboratively to demonstrate proficiency in the mathematical practices shown below.

- ❖ Make sense of problems and persevere in solving them
- ❖ Reason abstractly and quantitatively
- ❖ Construct viable arguments and critique the reasoning of others
- ❖ Model with mathematics
- ❖ Use appropriate tools strategically
- ❖ Attend to precision
- ❖ Look for and make use of structure
- ❖ Look for and express regularity in repeated reasoning

Course Outline/ Major Units Of Study

Course descriptions are taken from Eureka Math² Algebra I, © 2022 GREAT MINDS PBC

Course Overview - Modeling with Functions

In Algebra I, students progress from studying expressions and equations in one variable to equations in two variables to functions. Students recognize that functions can be used to model many real-world situations. Given an expression that defines a function, students produce equivalent expressions to reveal key features of functions and their graphs. They represent functions using equations, tables, and graphs. Students use linear, quadratic, and exponential functions to model contexts.

Unit 0 - Opening Task - Guatemalan Sinkhole Project

Students work collaboratively to apply prior knowledge of mathematics and other disciplines, along with related research, to fill a sinkhole that occurred in Guatemala in 2010. Teams present their solutions to the class, justifying their choices of material while explaining their mathematical calculations. Students are expected to provide peer feedback to demonstrate their knowledge and deepen their understanding.

Unit 1 - Patterns, Properties, and Polynomials

Unit 2 - Equations and Inequalities

Unit 3 - Literal Equations

Unit 4 - Solving Inequalities

Unit 5 - Univariate Data

Unit 6 - Linear Equations in Two Variables and Functions

Unit 7 - Systems of Equations

Unit 8 - Linear Inequalities

Unit 9 - Exponential Functions

Unit 10 - Quadratics (Factoring)

Assessments:

- Each unit has assessments that focus on academic vocabulary, solving mathematical examples and word problems, and interpreting visual representations. Assessments are given on a regular basis to measure discrete skills and also application of skills.
- Projects/Activities/Performance Tasks that require students to apply their knowledge to model and solve given real world scenarios may be assigned. Students may need to utilize cross-curricular knowledge and at times, extended research, to accomplish the given tasks.

Assessments and Grading

Each marking period grade is 22% of the overall grade, and the final exam is 12% of the overall grade. Each marking period grade will be determined by the types of assessments listed below.

- **Formative**: Can include: homework, classwork, participation, exit/entrance slips, problem sets, etc., and will count as 20% of your marking period grade. **Homework** is an essential part of any mathematics class to practice skills learned in class, promote analytical thinking, provide feedback for both student and teacher, and to prepare for the next class.

Late homework assignments will only be accepted (at the teacher's discretion) prior to the associated Quiz or Test.

- **Summative (80%)**
Can include: mini projects, quizzes, investigations, labs, graded worksheets, Unit/Chapter Tests, Performance Tasks, and Large Projects.

Grades for Summative Assessments

PowerSchool grades for assessments as follows (+ and - added for work above, below, or between descriptors)

Grade	Descriptors
A	Met learning target expectations - Methods/Explanations consistently demonstrate conceptual understanding with thoroughness and detail
B	Met learning target expectations - Consists of minor precision errors - Methods/Explanations Inconsistent in thoroughness and detail
C	Approaching/close to meeting learning target expectations
D	Beginning/starting on the path to meeting learning target expectations
F	Did not meet learning expectations

Grades for Assignments (Formative Assessments)

PowerSchool grades for assignments as follows (+ and - added for work above, below, or between descriptors)

Grade	Descriptors
A	Student completed homework on time with all methods shown including explanations.
B	Student completed most of the homework examples with all methods/explanations shown
C	Student completed a majority of the homework examples with some methods shown - Student either did not complete most of the problems or did not show method on many of the problems
D	Student attempted some of the homework with some methods and explanations shown.
MIS	Student did not attempt assignment

Make-Up Work Due to Excused Absence

1. The student must schedule make-up work directly with the teacher on the day he/she returns to school.
2. Incomplete work after one calendar week will result in a grade of MIS unless extended, alternate dates have been assigned by the teacher (e.g., a laboratory experiment).
3. If a long-term project was assigned earlier in the marking period, the project is due on the pre-assigned date or the date the student returns to school. (If a *long term* excused absence occurs prior to the due date of the project, please see item number 5.)
4. In the event of a pre-arranged absence to go on a field trip, the student must speak with the teacher before the absence; homework is expected on the return day.
5. Students should always consult the teacher's website to see if there is homework they can do while at home and before returning.
6. In the event of a longer excused absence, the student and parent must consult with the guidance counselor who will help to arrange a make-up schedule which must then be followed. The counselor may call for a parent-teacher meeting to help with this process.
7. For the school's policy regarding make-up work for vacation days taken during the school year, please see the *Academic and Grading Policy* folder shared on the Shepaug website under the *Academics* tab. Please note: vacation days are not considered an excused absence.

Submission of Late Work

Students must make every effort to submit work on time. Late work impacts the entire class since teachers cannot discuss answers/ideas until all work is submitted. In addition, students who hand in their work late have additional time and opportunity that has not been afforded to other students. As a general rule, late work, *excluding* homework assignments, will be penalized $\frac{1}{3}$ of a grade for each day late, up to five school days. The acceptance of late homework is at the teacher's discretion. Since teachers often review the homework answers in class, it is not possible to accept homework after answers are given. Teachers will share their homework practices with each class. Please note: If a student is in the building on a specific day, he/she has an obligation to submit a pre-assigned project/assignment to the appropriate teacher(s).

Late arrival or early dismissal is not an acceptable excuse for late submission or a pre-assigned project/assignment. In addition, if a student reports to the nurse instead of a class, he/she has an obligation to submit any pre-assigned project/assignment to the appropriate teacher(s). **If a student arrives late to school, leaves early, or reports to the nurse instead of a class, he/she must submit pre-assigned project/assignment to the appropriate teacher(s) or the work will be considered late.**

Mathematics Department Academic Commitment Evaluation:

Several criteria are used by the Mathematics Department Faculty in making the determination as to whether or not a student demonstrates "strong commitment". A rating of "strong commitment" is an honor requiring substantial demonstration of effort. Students receiving this distinction will demonstrate most of the following:

- 1) Regular class attendance; punctuality
- 2) Regular preparation for class - reading assignments completed; prepared with textbook, pencil, notebook, calculator and written assignment
- 3) Regular and timely completion of all class work, homework, projects, and papers
- 4) Honor responsibilities to learning of the entire group
- 5) Keeping an organized and complete notebook which includes written assignments, class notes, vocabulary, and record of progress (i.e. quizzes, tests, projects, performance assessment tasks)
- 6) Strong effort on all class work, discussions, homework, quizzes, tests and extra credit
- 7) Peer teaching, tutoring - helping others to learn mathematics in class or at other times
- 8) Seeking extra help when needed - from classroom teacher, other mathematics teachers, students **and** most of all,
- 9) **Exhibits a strong effort above and beyond the norm.**

Classroom Expectations:

Accountable Talk: Accountable talk is expected during each class. Students are expected to explain mathematical thinking in order to demonstrate depth of knowledge as well as ensure that misconceptions are corrected.

Notebooks and Binders: Notebooks and binders will include class notes, examples, handouts, homework, tests, and quizzes. A three ring binder is required (1 $\frac{1}{2}$ inch wide), as well as a separate notebook (spiral or composition are both acceptable). You will need to refer to your notes from class. Good note taking is a skill to be learned and constantly refined. Please save all notes, as you will need them to prepare for all assessments. Additionally, the final exam is cumulative, therefore a copy of notes is important for the end of the year.

Extra Help: Extra help is available during:

- Extended Spartan Periods
- SMART Academy (Tuesdays and Thursdays after school from 2:30 - 4:00 PM)
- Additional time by appointment

Materials Needed: Composition or Spiral Notebook, 3- ring binder (1 ½ inch), pencil(s) with erasers, highlighters, and a scientific calculator.

Classroom Behavior:

- ❖ Be to class on time - in your seat and ready to work BEFORE the bell.
- ❖ Be respectful of others. Participate, ask questions and LISTEN when others are speaking.
- ❖ Work completed must be brought to class daily.

See the online guidebook (www.region-12.org) and/or teacher website for additional course information.