

Brunswick School Department

School: BHS

Department: Math

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Honors Algebra 1 - 2020-21 - Grade Level: 9

Course Description

This course covers operations on sets of whole and rational numbers and solving first and second-order equations. This course introduces students to the concepts of abstraction, where letters (variables) are used to represent numbers. The topics covered are properties of real numbers; writing and evaluating algebraic expressions; solving linear equations and inequalities; graphing linear functions with real-world problem solving; solving and graphing quadratic functions with real-world problem solving; solving systems of linear equations with inequalities in two variables; learn rules of exponents and simplifying polynomials; factoring; simplifying rational and radical expressions and solve rational equations.

Graphing calculators will be used extensively. It is recommended that students purchase a TI84 graphing calculator; or there are calculators available on loan at the BHS library.

Academic Standards *(students in Honors Algebra 1 will meet all standards and will be expected to exceed 50% of the standards)*

- HS.MATH.NAQ - NUMBERS AND QUANTITY
 - HS.MATH.NAQ.a - Evaluate numeric expressions.(DNM,PM,M)
 - HS.MATH.NAQ.b - Evaluate proportions. (DNM,PM,M)
 - HS.MATH.NAQ.c - Evaluate exponents. (DNM,PM,M)
- HS.MATH.ALG - ALGEBRA
 - HS.MATH.ALG.a - Evaluate variable expressions. (DNM,PM,M)
 - HS.MATH.ALG.b - Solve linear equations. (DNM,PM,M)
 - HS.MATH.ALG.c - Solve linear inequalities. (DNM,PM,M)
 - HS.MATH.ALG.d - Solve linear systems algebraically.(DNM,PM,M)
 - HS.MATH.ALG.e - Simplify and factor polynomials. (DNM,PM,M)
 - HS.MATH.ALG.f - Solve quadratic equations.(DNM,PM,M)
- HS.MATH.FUNC - FUNCTIONS
 - HS.MATH.FUNC.a - Understand functions.(DNM,PM,M)
 - HS.MATH.FUNC.b - Graph linear functions. (DNM,PM,M)
 - HS.MATH.FUNC.c - Write linear functions. (DNM,PM,M)
 - HS.MATH.FUNC.d - Solve systems.(DNM,PM, M)
 - HS.MATH.FUNC.e - Graph quadratic functions. (DNM,PM)

Maine Guiding Principles Click [HERE](#) to access PDF with these principals.

Student Learning Outcomes

Here are the rubrics for the 3 Power Standards:

- Numbers and Quantities Standard –
http://www.brunswick.k12.me.us/pgroves/files/2017/06/HS.NAO_.FUNC-Rubric-2017-2018.pdf
- Algebra Standard –
http://www.brunswick.k12.me.us/pgroves/files/2017/06/HS.MATH_.ALG-Rubric-2017-2018.pdf
- Functions Standard –
http://www.brunswick.k12.me.us/pgroves/files/2017/06/HS.MATH_.FUNC-Rubric-2017-2018.pdf

Resources

Textbooks – Larson Algebra 1 (Holt McDougal Larson Algebra 1) 1st Edition

My Website – For more information see my website which includes completed guided notes, solutions to problems, as well as the traditional syllabus, student guidelines, chapter assignments sheets used in past years. The specific link for Honors Algebra 1 -

- This is the specific link for Academic Algebra 1
<http://www.brunswick.k12.me.us/pgroves/honors-algebra-1/>

Materials

Supplies to bring to class –

- Headphones and personal computer device
- Textbook. Please keep the book covered (they are expensive to replace)
- Three-hole loose-leaf paper
- Several sharpen pencils with erasers
- Ruler
- TI84 graphing calculator
- Math binder. A 1½-inch three-ring binder with 5 dividers (Expectations, Notes, HW/CW, Tests/Quizzes, Standards).
 - A well-organized notebook will help you develop good study skills, provide sample problems to do HW and study for assessments. Organize each tab by section number. Put dates on all notes and handouts.
 - **When can you Clean Up your Notebook?** After each Chapter Test, you may remove class work, homework, and quizzes

Student Expectations in Class (Virtual & In-Person)

This year I am adapting a **Flipped Classroom** because **in-class time will be precious** and my goal is to use this time to ensure students understand concepts and to develop relationships. A **Flipped Classroom** is an approach where students (1) **explore new course content outside of class** (i.e. take notes, read, watch videos and do some practice problems) **at student's own pace**. (2) Then **in-class time is focused on student engagement**, answer questions, apply and elaborate on course concepts. I will use in-class sessions that are collaborative group work and use of active learning strategies, including problem sets, case studies, or structured discussion

Class time – will be discussion-based to answer questions, do group work, and foster relationships.

- **Remote student expectations** – So I can engage with remote students and integrate them into the class, they will be asked to have **video on** and **audio muted**. They can use the chat to ask questions and I will call on them.
- Sessions will NOT be recorded.
- To check for understanding, some classwork (about 5 problems) will be collected and submitted to Google Classroom in PDF form.
- **Students that are late or miss class will be responsible** for working with their IP Team or meet with me during Office Hours to get caught up.

Independent Practice (IP) – Expect about 30-40 minutes/day for on-weeks; and about 45-60 minutes for off-week. These times also include team meetings and participation in discussion boards.

- **IP** – will be (1) **pre-work** assignments (I will create videos for students to complete guided notes that will be collected in Google Classroom); (2) **engagement in-class**, (3) **IP Team discussions**, and (4) **participation in Google Classroom Discussion Boards (DBs)**.
- **Late IP** – will receive a 20 point per class late penalty
- **IP Teams** – The concept is to set up Teams monthly with students from each group (1-4) to facilitate different students working together to help each other with IP and discuss concepts covered. Teams will be expected to meet at least 30 minutes per week with a rotating team leader (ABC order). The leader will post team questions/learnings to the Google Classroom discussion board.
- **Google Classroom Discussion Board (DB)** – To facilitate group discussion, I am creating a discussion board in Google Classroom.
 - The IP Team leader will post questions/learnings.
 - Then students will be asked to engage in the DB with a minimum of 1-2 comprehensive responses.

Asynchronous time (Thursday's) – Expect about 40 minutes of IP or an Assessment.

Student Expectations in Class (Virtual & In-Person) CONTINUED

Assessments – will be short (less than 40 minutes) and occur more frequently. Assessments will be open-notes with a time limit.

- They will be scheduled during Asynchronous (TH) times.
 - a. My plan is to schedule them during the assigned synchronous time slot or 1-2pm. Students will be responsible for contacting me 24 hours in advance if they will have a conflict.
- Assessment will be posted in Google Classroom with a Google Meets link. When students take assessments, they will also be signed into a Google Meeting with their video on and audio muted. They will be able to ask clarification questions in the chat.
- Assessments will be announced in Google Classroom on Mondays. There will be 2 types of assessments. (1) Traditional assessments; and (2) Standard assessments.
 - 1) Traditional assessments will NOT allow retakes
 - 2) Standard assessments. Students will be allowed to make up them up. Students will be responsible for doing test corrections and then meeting with me to ensure they understand the standard before taking a Make Up. The “Retake Procedure” will be posted on my website (and Google Classroom).

CDC requirements – masks at all times, maintain 3-6ft distance, & wipe down desks/touch areas before leaving the classroom. **My classroom flow will be counterclockwise** (enter on the right side, pick up your papers, and fill the seats starting on the opposite side of the room.)

Attendance will be taken – required for all synchronous classes. See BHS attendance policy.

Work Submission

Google Classroom – All assignments and assessments will be posted and collected here.

- **Work MUST be turned in PDF form.** There are several phone apps to create PDFs (Genius Scan, CamScanner-PDF, etc.)

Grade Breakdown Independent Practice (IP) 10% vs Assessments 90%

PowerSchool – All grades will be posted here within 48 hours.

Communication

Communication – If parents (or students) have any questions, please email me. I will respond within 48-hours (M-F) between 8am-3pm. Let me know if you would like to set up a Google Meet or Zoom meeting with a few suggested times between 8 am-11:30 am (M-F).

Extra Help – M-Tu.-W-F 1pm-2pm. Please email me to set up a Google Meets session.

Stay safe and happy, Paula Groves (pgroves@brunswicksd.org)