

2019-2020 ACADEMIC ALGEBRA II

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(see CALENDAR on website for HW assignments and quiz/test dates)

Course content: Algebra II is sometimes considered a ‘gateway’ course in mathematics, meaning it is really a bridge between Algebra I and *future* math study. If it were up to me, I’d call the course Pre-Pre-Cal. Building on the wonderful work you did in Algebra I & Geometry (last year? Two years ago?) we’ll use those skills and go on to some things like working with radicals, logarithms and exponential functions, imaginary and complex numbers, and maybe even conic sections. If you plan to continue studying math (Pre-Calculus and/or Calculus) you will see these topics again, in more depth. (Hence: “gateway”)

This course is about EQUATIONS and FUNCTIONS!! How to solve them, (*sometimes* how to efficiently use calculators to help solve them), how to know things about them just by looking at them, how to predict what their graphs look like, what makes them work and *not* work, and what impacts them (among other things).

We will use formulas, graphing calculators (buy one if you can!!), brains, friends, the book, and pencils! We will also use a host of Algebra I skills like graphing, factoring, multiplying binomials, simplifying radicals, working with algebraic fractions, and more (see the first night’s homework). We’ll do some Algebra I brush-up, but if you’re really rusty on those skills, see me!

Some Algebra II topics are very dense (meaning ‘heavy with ideas,’ not dense like ... well, never mind), and we’ll hit some individual problems that might take 10 or 15 minutes to complete. (Remember this moment!) Do you have stick-to-it-iveness?? (Ans: “Yes, I do!”) Be ready to dig through some tough stuff!

Finally, we will be spending time doing some prep work for the SAT exam. Because many of you will be taking that exam in the spring, and because some Algebra II topics appear on that exam, it will be good to get your feet wet with the style of questions asked, the topics covered, and some insight into how the testers try to distract you! (The SAT is about 60% Algebra and “Advanced Topics” – think: Alg II)

Every student taking Academic Algebra II is expected to have a graphing calculator. If you do not want to purchase your own (TI-84+ or TI-Inspire recommended), there are a limited number of calculators that may be borrowed for the school year from the library. I’ll have some available during class, but generally they can’t be taken home. FYI: This calculator is allowed on one part of the Math SAT Test!!

Website (URL above): Homework assignments and summative quiz and test dates will be posted on the calendar on my website (add /calendar after the URL above). As the year progresses, other helpful materials will be added, as well.

Course Schedule: *Schedule is tentative due to snow/late start days, testing, class meetings, extra practice needed, etc.*

Quarter 1

Chapter 1: Introduction to Functions

Section 1-6 to 1-9

- Chapter 1 Quiz

Chapter 2: Linear Functions

2-1; 2-3 to 2-9

- Quizzes/Chapter Test

Quarter 2

Chapter 3: Linear Systems

Sections 3-1 to 3-3; 3-6 (?)

- Quiz/Chapter Test

Chapter 5: Quadratic Functions

Sections 5-1 to 5-6

- Quizzes/Chapter Test

Quarter 3

Chapter 6: Polynomial Functions

Sections 6-1 to 6-5; 6-7

- Quizzes/Chapter Test

Chapter 7: Exponential & Logarithmic Functions

Sections 7.1 to 7.6

- Quizzes/Chapter Test

Quarter 4

Chapter 8: Rational and Radical Functions (cont'd)

Sections 8.2 to 8.5 (not inequalities) to 8-8

- Quizzes/Chapter Test

Chapter 9: Properties & Attributes of Functions

Sections 9-2 & 9-4

- Quiz

Maybe Chapter 10: Conic Sections

Sections 10-1; 10-2 (10-3 time permits)

☺ Then, happy summer!! ☺

Materials For Class

1. A pencil. Then you can erase. Believe me, it is in YOUR interest to have your HW, quiz and test work legible!
2. Some kind of notebook/binder for class notes, handouts, returned tests, etc. I'll 3-hole punch everything. (Um, 99% of the time!)
3. GRAPHING CALCULATOR – A graphing calculator will be *very* helpful on some of the HW assignments, and will be allowed on some tests and parts of tests. All work will still need to be shown.
4. Textbook - **PLEASE COVER** (Amazon has it listed for \$81!!!)

Student Evaluation

Grading:

10% of each quarter's grade: Homework, Homework Quizzes & Notebook Quizzes

- Homework: graded on a scale of 0 to 10, with 10 points being given for homework that is thoroughly completed, *with work shown*. Late HW will not be accepted (an excused absence will not cause late HW). Free Advice: **DO YOUR HOMEWORK ON TIME!** And preferably the evening after class. Algebra II is one of those classes where things can slide *very* quickly. Having good instincts for math is great, but at this level, hands-on, minds-on HW is a **MUST!** If you start to get behind, catching up can be *very* difficult! HW not coming in → phone call home.
 - Homework Quizzes: graded on a scale of 0 to 10. Given at the start of class, generally in lieu of collecting HW. A HW Quiz will (likely) be 5 questions designed to determine if the basic concepts from the previous class' lesson have been mastered and if the HW was completed. *You may refer to both notes and HW during a HW quiz (no textbook allowed).*
 - Notebook Quizzes: graded on a scale of 0 to 40 or 50-ish. A sort of scavenger hunt through all your materials for a given chapter. These will be given the class before each chapter test and will be time-limited. You may refer to your notebook and HW's during a Notebook Quiz; referring to textbook is not allowed.
 - No retakes are allowed on HW Quizzes and Notebook Quizzes. If you are excused absent on a HW Quiz day, the HW due that day may be accepted in lieu of a HW Quiz when turned in at the start of the next class. If you are excused absent on a Notebook Quiz day, we'll need to find a time for you to take that quiz. If you are unexcused late to class on a HW Quiz or Notebook Quiz day, you may have reduced time or no time to complete the quiz. (See following note.)
 - The lowest 2 grades in this category will be dropped each quarter, excepting Notebook Quizzes.
- 90% of quarter grade: Summative Assessments (Quizzes, Tests, projects)
- Generally, one or two summative quizzes and one chapter test will be given for each chapter or unit covered.
 - You may retake one summative assessment each quarter. Your 'ticket' to a retake is to (1) complete and turn in the retake form and (2) schedule time with me after school, during Flex, or during period 3/4 Black so we can make a plan and/or do some practice toward your success on the retake. All HW assignments must be completed prior to a retake. Your new assessment score will be the average of your original score taken once and your retake score taken twice. These *three* numbers will be averaged for your new score. *This means your final score could go down by more than just a straight average of your two scores!* (That's why we must meet first and make a plan.) Retakes must be completed within 3 Black Days following the return of the unsatisfactory summative quiz or test.

➤ Absences

- If you are absent, the HW is due at the *start* of the *next* class. Again, be sure *all* work is shown for full credit. If you are absent on a day prior to an assessment, you will still take that assessment on the scheduled day. If you are absent on the day of an assessment, plan to take that assessment on the following day, during class time.

Extra Help

Feel free to drop by my office (Room 105) before or after school on Black Days or during 7/8 Black, or check in during a black-day Flex (room 220). However, I'd recommend making a appointment, if possible, so you don't come in early or miss a ride home, only to find that I'm in a meeting, with another student, etc.

Also, you can drop me an email (address above and available on my website).

**** Finally, you may wish to bookmark this textbook companion site:

https://go.hrw.com/gopages/ma/alg2_07.html

If you hover over the "Homework Help" link, you can select the current chapter/section and view one or more videos on that topic. Click on the video icon next to the problem on which you are working:



Closing Thoughts

Finally, welcome to 2019-2020! It's always exciting to start a new year, but also a challenge to transition out of a very different routine and back into school. I know many of you have a number of things going on in and out of school so let's keep the lines of communication open! If you have any concerns, questions or suggestions, please let me know. I cannot fix, attempt to fix, or address something if I don't know about it.

Classroom (and life) Expectations

1. Be safe.
2. Be respectful.
3. Be responsible.
4. Be kind.
5. Cell phones and other devices "off and out of sight." (p 19 – Student Handbook – BHS website)