

Friends Academy

Algebra I and Growth Mindset

Welcome to the wonderful world of Algebra!!!! My goal is that all students become critical thinkers, have a deeper understanding of mathematics, and develop growth mindset. Algebra skills are the foundation that you will connect to for success in future math, science, computer, economics, or business courses you can take. Algebra problems are a large portion of the tests (SAT and ACT), which are required before being admitted into a college. So, even if you aren't interested in a career in math or science, you still need to know your algebra. Also, while it is true that you "have to" learn algebra, I would also encourage you to think of all future math courses as a road to becoming a better thinker and problem solver. So set high standards for your work this year. Learn all the algebra you can!

Daily Materials Needed:

- Larson, Ron. *Algebra I*, Belmont, CA: Brooks/Cole Cengage Learning, 2007.
- Spiral Notebook, graph paper, folder
- Chromebook (daily, as it also serves as a graphing calculator)
- Calculator (TI-30XIIS)
- Pencils, a grading pen, and **dry-erase markers**



Grades: The grading scale is in accordance with the FA student handbook. It is required to earn at least an **83% in this course and pass the final exam** to move on to Geometry in the Upper School, if not, repeating Algebra as a freshman will be the course progression. The overall Algebra grade is distributed as follows:

- 50% Mastery Assessments (MAs)
 - 35% Unit Tests
 - 15% Error Analysis, performance assessments, tasks, station work
- * There is a cumulative final exam in June that accounts for 15% of the final grade.

Important note: Due to the nature of the grade being a continual grade, your semester one grade is subject to change after January 18. In keeping with the academic honesty policy, the work that any student brings to class should be his or her own, irrespective of whether it is being collected or graded.

****Regarding Honors Geometry placement, please see below.**

Mastery Assessments: There are multiple mastery assessments (MAs) over the course of the year. If a student is not satisfied with their performance, they may retake the assessment. No two MAs are exactly the same and they may increase with difficulty each try. In order to retake an MA you must complete an error analysis on your initial trial. Retakes do not open until after the next assessment is given. Mastery Assessments will close the week before each quarter ends.

Problems of the Month (POMS): Each month a set of non-routine problems will be assigned to attack and solve. The process of attacking and struggling with a non-routine problem is important to learn. There will be mid-month check-ins for progress, but it is understood that none of these will be solved with the help of anyone. Each month a class block will be set aside for students to share their approaches, struggles and thought process. Since the emphasis is placed more on process rather than the final product there will only be feedback provided and not a formal grade.

Teacher: Erin Nolan Erin_Nolan@fa.org
Room: 210 Course: Algebra Outline

Extra Practice and Support: This will be offered almost daily as an extension of the lesson and we will begin by reviewing at the beginning of class the next day. Solutions to the extra practice, completed class notes, tutorial video links, and additional Khan Academy support can all be located on the portal in their respective folders. Also included in the Khan Academy document are links to enrichment and challenge opportunities. In class, students will be assigned a working partner. Extra help is offered four times a week (M,T,R,F) from 11:06 – 11:26am in each teacher’s classroom. Please also use these resources and times if returning from absences.

Course Objectives

- The student will learn to think critically and analytically.
- The student will develop growth mindset.
- The student will achieve mastery in the use of algebraic techniques.
- The student will learn how to apply mathematics to real world applications.
- The student will gain a greater understanding of algebraic concepts needed for future mathematics work in Geometry, Algebra II & Trigonometry and Calculus.

Expectations

What I expect of you.....

1. Be on time
2. Come to class prepared with all necessary items
3. Respect yourself, your peers and your teachers
4. Participate
5. Using classroom time wisely
6. Give 100% during the **short time** we have together

What you can expect of me...

1. I will answer all questions you have about the topics we cover
2. I will be available during extra help, and before or after school by appointment.
3. I will be prepared every day to teach lessons that accomplish the math standards that need to be met.
4. I will try to make math interesting and relevant by varying activities and trying new things.

In keeping with the academic honesty policy, the work that any student brings to class should be his or her own, irrespective of whether it is being collected or graded. By signing this document you are aware of the rules, expectations that will be enforced within my classroom, as well as consequences put in place. If you have any questions or concerns please feel free to contact me. I look forward to working with each and every individual student this academic year.

Good luck and let’s have a GREAT year,
Mrs. Nolan

Student Signature

Date

Parent/Guardian Signature

Date

Once signed and shown to Mrs. Nolan, this is to be kept in your math folder/binder at all times.

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**As stated online from the Overview of the Middle School Math Enrichment Program

Placement into Honors Geometry

The term “honors” has become ambiguous among schools and can refer to two different philosophies of instruction (content acceleration, enhanced rigor, or some combination thereof). The challenges in accelerating students too quickly is the sacrifice of rigor for speed. Another challenge in exposing students to concepts too quickly is that they are not afforded the processing time to internalize and make sense of them fully (leading to rote memorization).

“Yet while I might have earned top marks...I was merely following memorized rules, plugging in numbers and dutifully crunching out answers by rote, with no real grasp of the significance of what I was doing or its usefulness in solving real world problems.”

– Jennifer Ouellette, The Calculus Diaries

At Friends Academy, we make every effort to place students in the math course in which they will find appropriate challenge and success as they develop *fluency not just literacy* of mathematical concepts. We believe that math is not a checklist of topics you get through on your way to calculus and have designed our honors program to cater to the needs of students who have demonstrated superior academic ability and are in need of greater challenge.

If an academically strong student in our core math program wishes to be considered for placement in the honors program they must meet the following requirements:

- 1) Have demonstrated consistently strong academic ability (A student)
- 2) Strong marks and motivation to improve performances on mastery assessments
- 3) Have secured the recommendation of their current math teacher
- 4) Have received strong ERB scores (7-9 independent norm stanine)
- 5) Have earned strong marks on POM sets, completed extension tasks and enrichment tasks.