

General Information

Course Overview: The topics covered in Math Academy I include a mix from Geometry, Algebra II, PreCalculus, and Statistics courses, but taught more rigorously, in more depth, and at a faster pace. The concepts and methods form a mathematical foundation that is essential in nearly all college math courses. They are also used extensively in other disciplines such as science and finance.

Course Level: Math Academy I is offered as a rigorous option for freshmen intending on taking Math Academy II as a sophomore and IB Math HL as a junior and senior. Although Math Academy does cover more content than a traditional math course, the crucial differences are the additional rigor, pace, and challenge. In particular, in Math Academy:

- Topics are studied in more depth and with more rigor.
- There are projects to explore concepts and applications.
- There is a greater emphasis on applying concepts, as opposed to focusing more on applying procedures.
- Students are expected to be unintimidated by self-directed learning and by homework problems that are not straightforward.
- Students are assumed to be fully fluent in algebraic manipulation, fractions, decimals, and other elementary and middle school topics.

Math Academy is an excellent opportunity for students who have been well prepared for its rigors. However, students who are pushed into the high school honors level prematurely often have a miserable experience that can result in a newfound dislike of math.

Dedication: Math Academy I is specifically designed for dedicated and motivated students. Those who do not take the course seriously, in terms of behavior or effort, bring the rest of the class down and should not be in an honors class. In light of this, students' semester grades can be no higher than one letter grade above their homework grade for the semester. For example, a student who turns in no homework can receive a maximum grade of D in the course.

Calculator: A graphing calculator is required. New TI-84 Plus CE calculators are available for around \$100 on Amazon, and cheaper options are also available by considering used or older models. Other brands of graphing calculators are also available, but are not recommended. Please contact me if acquiring a graphing calculator prior to September 1 may present a financial hardship for your family.

Assignments

Online Quizzes: Each section has a four-question multiple-choice quiz, based directly on the online notes, to be taken before class. Online quizzes can be resubmitted until a perfect score is achieved.

Classwork: A set of problems aligned with each section of notes is done together as a class. In addition, a few points are given periodically for things such as class preparation and in-class practice problems.

Homework: There is homework for each section. The primary purpose of the assignments is not to practice skills, but rather to be aware where weak points in conceptual or procedural understanding may lie. Therefore, there is little to no redundancy within assignments. Students should not be concerned if there are a small number of problems they are unsure of in an assignment, but should seek help from classmates or others before the due date if there are many problems they do not understand. Homework is graded on completeness of work shown, including proper notation, and on corrections made in class, but not on accuracy.

Quizzes: To help students stay on top of the material, there is a mini-quiz after each section, usually the following day. The material is reviewed explicitly beforehand.

Projects: Projects range from abstract mathematics to mathematical application and data collection. Students can choose to work alone or in small groups.

Reviews: Reviews are done in self-selected groups of four. Each group gets four different versions of the review that are very similar except for being different levels of difficulty, allowing each student to choose one that is at the level that would most help him or her prepare for the test. Reviews also serve as study guides, and students often take it upon themselves later to print a different version at home to practice.

Tests: Tests cover both conceptual and procedural aspects of the content. A portion of the points missed on chapter tests can be regained by submitting careful explanations of how to do the missed problems correctly. Test explanations can be turned in until the day before the next test.

Things to make life easier

Notes and Book: All class notes and most other course materials are available online at ewyner.com. All assignments except tests are open-notes and open-book. Electronic devices may be used, without sound, at all times except during tests.

Extensions: Students who feel they may need extra time to turn in an assignment, because they will be absent when it is due or for any other reason, can have me sign an extension request form before the assignment is due to change the due date to a different date before the test. In some circumstances, a new due date on or after the test date may be granted. Extensions must be requested in person and are not granted once an assignment is due, so please plan ahead.

Free C: Students may request a "Free C" on any nontest assignment once per grading period. When the assignment is due, it can be turned in normally, or the Free C form can be turned in in its place for a score of 70%. The Free C form must be signed by me before the assignment's due date.

Score Increases: All quizzes can be retaken until the day before the test. Test scores can be increased by doing test explanations, in which students carefully explain how to do the problems originally done incorrectly.

Study Sessions: At any point, a group of 4 to 12 students can arrange a formal teacher-led study session, given availability.

Absences and Late Work

Unplanned absences such as illness: To receive full credit, turn in all late work at least one day before the test. Parents will receive an email at the end of each chapter to confirm that the absences were unplanned.

Planned absences such as sports, school activities, vacation, or medical appointment: To prevent falling behind, students should check in before the days of absence. They can choose to complete assignments, including quizzes and tests, before they leave, or they can request an extension (see above).

For all absences: It is important not to fall behind. Other than quizzes and tests, all course content and assignments are available online. Online quizzes should still be completed on time. Other than online quizzes, students may have extra time for assignments that were turned in when they gone, but not for assignments collected after they return, including quizzes and tests. Late work that is not excused will still receive most of its points as long as it is turned in before the test. No assignments other than projects will be graded if turned in after the test has been handed out.

Signatures

We have read and understood this course information sheet. In particular, we are aware that students who are not highly proficient in algebraic manipulation or who are not comfortable with self-directed learning will have a better experience taking a traditional math course than Math Academy I.

Parent

Name: _____

Signature: _____

Student

Name: _____

Signature: _____

Please return this entire page. It is available online for later reference.