

**Math III Honors**  
2<sup>nd</sup> semester description & contract  
Instructor: Allison Cuttler

Honors math this semester will have 3 components:

1. Additional assignments to supplement course content
2. Mandatory after-school lectures to discuss those assignments (there will be approximately 5 lectures throughout the semester)
3. An independent research project (more info below)

**Notes**

- You will *not* be required to prepare for the SAT II Math Subject Test this semester. If you do decide to prepare for the subject test, I will be available **after school on Thursdays** to answer any questions and/or give “mini-lessons” on certain topics. Please let me know ahead of time if you’d like to take advantage of this so that I can plan accordingly.
- Honors is a semester-long commitment, so keep that in mind when you’re deciding whether or not it’s something you want to take on in the semester ahead.
- **If you fail to complete 2 of the supplementary assignments and/or do not meet the checkpoints for the independent research project, your grade will be lowered by a full letter grade.**

**Independent Research Project (individual or with a partner)**

I personally love math because it is SO big. There is always more to know, always a new mind-blowing idea to explore, always a real-world connection to understand more deeply. Honors math this semester is a chance for you to explore something completely new that we won’t get to cover in class. From beginning to end, you will be responsible for researching a topic, preparing a written report of your findings, and creating a product/display that communicates your newfound knowledge with the rest of the school at an Honors Exhibition.

- **Topics**

You are free to choose a topic, and I will be glad to help you come up with one that intrigues you. The possibilities are truly infinite. For example,

- Cryptography (the mathematics of code-making and code-breaking)
  - o World War II and the Enigma machine
  - o Modern cryptography & internet security
- Math behind the Rubik’s cube
- Math in engineering (How are bridges structurally sound?)
- Imaginary numbers & fractals
- Math in biology (Modeling populations of different species,...)
- Math in literature
- ...

- **Requirements**

- A written report of your findings (approximately 6-8 pages)
- Use of at least 6 resources. **At least 2 of these must be books!**
- A product or display to share your findings with the rest of the school (the specifics are up to you; the only requirement is that it be of professional quality and represent a semester’s worth of work).
- You must be present at the Honors Exhibition!

- **Project Checkpoints**

Week of Monday, January 25 Week of Monday, February 1	Individual meetings to discuss topics
Friday, February 5	Project proposal due (typed, 1-2 pages, with a list of sources you plan to use)
Week of Monday, February 22	Individual meetings before or after school. Come with a detailed outline of your paper.
Wednesday, March 24 ** This is the day before Festival del Sol, so plan ahead!!!	Draft of written report due
Week of Monday, April 12	Individual meetings before or after school to discuss drafts
Monday, April 26	Written report due
Wednesday, May 5	Honors Exhibition

**\*\* The individual meetings above are the only *required* ones, but you are encouraged to schedule additional meetings if you need to!**

**\*\* All dates are subject to change.**

Please complete the form below, cut it out, and return it no later than **Monday, January 25**.



I have discussed the above information with my parent/guardian and we clearly understand the requirements for completing Math III for honors and the consequences for failing to meet those requirements.

**I have decided that Honors Math III *is* the right choice for me.**

Student's name: \_\_\_\_\_

Parent/Guardian's name: \_\_\_\_\_

X \_\_\_\_\_  
Student's signature

\_\_\_\_\_  
Date

X \_\_\_\_\_  
Parent/Guardian's signature

\_\_\_\_\_  
Date