

READING AND WRITING IN MATHEMATICS

Each quarter there will be a reading assignment. You will read something mathematical that is both interesting and comprehensible to you. The choice of what you read will be mostly up to you. I will establish some basic guidelines and if you want to deviate significantly from them, I would ask you to speak with me personally about your intent.

The assignment will be as follows: select a mathematical “article” of approximately twenty or more pages in length. Read it carefully, more than once if necessary so you understand what it is presenting. Then write about a page (the equivalent of a double-spaced typewritten page - 250 words) in which you state clearly what the source of your reading is and explain the article, making it clear to me that you have understood the material.

You will be graded as follows: This assignment will be worth 25 points in each quarter. You will generally receive full credit if 1) you fulfill the above criteria and 2) you convince me in your written work that you have read and understood the material you have chosen and 3) you submit your work on time. The assignments will be due on the first school day that is on or following 1) October 15, 2) January 1, 3) March 15, and 4) June 1 (seniors should submit this on or before the last time they attend class with me). This work will be accepted early if you wish.

The material you read should be of an appropriate challenge based on the math course you are taking. However, it should also be on a subject that interests you, even if that is not one your course involves. The “twenty-page” criteria is simply to prevent students from selecting one-page “quickies” such as are found in The Joy of Mathematics or other books of this sort. If you wish to dip into books which have a lot of small articles on a variety of subjects, feel free to do so, but select about a dozen of them. On the other hand, should you decide to “read” (study) a very difficult proof of a sophisticated hypothesis and it only runs a page in length, there will probably be no reason why I wouldn’t encourage you to use that (but please be sure that you consult me about this first). Reading materials found on the internet are **DISCOURAGED!**

In addition to the library, other fine sources of such materials can be found in the bookshelves of our classroom and in our school library and if you are looking for a specific book or a specific subject, I can check to see if the department owns a book that would suit you. There are lots of books on subjects outside the objectives of our courses-- number theory, n-dimensional geometry, Fibonacci numbers, logic puzzles, problem-solving techniques from the masters, history of mathematical development, etc. I also have a rather nice collection of journals that I have received over the years. Some of the articles in them would make interesting manageable reading as well. Browse through the collections. I will also publish a list of some selected book titles that I think you might find enjoyable.

OVER

USING INFORMATION TECHNOLOGY

Another required assignment each quarter will involve the use of the computer in locating mathematical resources. Each quarter, you will be required to submit evidence that you have “visited” one or more “websites” related to mathematics. Again, the choice of site will be largely yours, however, the material contained at the site you choose must relate in some **direct and discernible way** to a topic we are studying in your course during the quarter for which you use it. **In addition, the website should be one which has good strong material presented in an effective manner.** There are a number of sites that provide math challenges and problems that you can submit online answers to; there are sites that will do your homework for you (especially in calculus). There are sites that will tell you more than you ever wanted to know about mathematical subjects--prime numbers, pi, etc

With the proliferation of websites at which home-made videos are available, I would include as an option GOOD videos from sites like YouTube and similar for the “website” you report on.

As with the reading assignment, you will receive full credit provided you give evidence that you have visited a site, give a complete URL for the site (written out completely on the appropriate line on the cover sheet), used the resource for its intended purpose, and gained something by the experience and you submit this on time. Due dates will be as with the reading, approximately two weeks before the end of the appropriate quarter. A print-out of one screen from the website and your brief comments about the site including why you felt it was worthwhile and how it relates to your course of study are the required submission for this assignment.