Essay Assignment

Due: Beginning of class, on Wednesday, November 23, 2011. **No late assignments will be accepted.** If you can't make it on time on that Wednesday, consider turning in your essay early.

Format: At least 3 pages long, typed.

Assignment: Based on research online or in the library, write an essay on one of the following topics listed below. Please indicate in your essay which topic you selected. When quoting someone else, be sure to include the name of the author and the title of book or article you quote from. Essays will be graded for both content and writing (i.e. spelling, grammar, etc.)

You may write about one of the following topics.

1. Three different proofs of the Pythagorean Theorem. Present the complete proofs, and include the authors.
2. Art and Mathematics. Use examples from art or architecture to demonstrate how mathematics is used in art.
3. The Fibonacci Sequence.
4. The history of modern mathematics. You may focus on a particular time interval, or topics, or subject within mathematics.
5.   What is Number Theory? Give a short description of the subject, including its history and current focus.
6. What is Set Theory? Give a short description of the subject, including its history and current focus.
7. Open questions in mathematics today.
8. How to compute mortgage payments. Select a home (or condo) for purchase. This can be done on the internet or through advertising from a real estate agency or local publication.
    * Include the price.
    * Use a mortgage calculator (using internet) to determine what your cost would be with a 5% down payment and a 30 year fixed mortgage. List the closing costs: points and down payment.
    * List the monthly costs: monthly mortgage payment, and monthly tax payment.
    * You do NOT have to print out all supporting documents such as payment tables from internet web sites.