

Perfect and Other Numbers

The goal of the presentation is to discuss numbers with special properties. Specifically perfect numbers as well as others. Your presentation should include

- A discussion of the perfect numbers. Including Euclid's and Euler's results.
- The definition of a Mersenne prime and their connection to perfect numbers (are there an infinite number of perfect numbers?)
- Properties of odd perfect number (if they exist)
- A discussion of at least one of
 - Abundant Numbers
 - Multiply Perfect Numbers
 - Weird Numbers
 - Sociable Numbers

In addition your presentation should include at least one thing not on the above list.

At the end of your presentation the class will be asked one of the following questions.

- How many odd perfect numbers are known to exist?
- What is the relation between Mersenne primes and perfect numbers?

- What is the definition of a perfect number?

A good starting point for your research is

http://en.wikipedia.org/wiki/Perfect_number

If you have any questions regarding the presentation feel free to e-mail your TA or Dr. Ackerman