47011 Theory of Numbers (3)

Knowledge

The students should be able to define divisibility, prime numbers, and congruences. The students should be able to state and prove the Division Algorithm, the Fundamental Theorem of Arithmetic, and Fermat's little theorem. Should recognize basic number theoretic functions.

Comprehension

The students should be able to compute the greatest common divisor using the Euclidean Algorithm. They should be able to prove divisibility using a number of different means including induction and congruence.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to classify problems in number theory.

Synthesis

Should combine their skills from Algebra, Calculus I, and Calculus II to solve the problems in Number Theory.

Evaluation

Should be able to judge among various methods to solve given problems in number theory.

Class Activities

To solve problems and prove Theorems in class.

Out of class Activities

To submit every week home assignments.