

Math 38b - Number Theory

Fall 2007

Instructor: Prof. Ivan Horozov
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Office: Goldsmith 205
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Class schedule: Mon, Wed, Thu 12.10p.m. – 13.00p.m.
Office hours: Mon, Wed, Thu.
Textbook: A Friendly Introduction to Number Theory by J.H.Silverman,
Second edition (ISBN 0-13-030954-0)

Syllabus

Chapters 1 to 13
Chapters 16 to 18
Chapter 22 to 24 /if time permits/

Class announcements: The LATTE system will be used for communication with the entire class including reminders for the weekly assignments.

Homework and projects:

Homework will be assigned and collected every week, graded and returned to you regularly. At the end of the course /the last two weeks/ a project will be assigned to each of the students for an independent study. One should prepare and present a topic from the book.

suggested directions for solving problems:

- there are many directions and many solutions to a given problem;
- do many examples;
- find a pattern and describe this pattern in words;
- think of geometric interpretation such as counting points in a geometric shape
- think of algebraic interpretation such as multiplication division, factorization and use of formulas

programming:

- one can consider many examples by writing a computer program;
- one can also try to implement an existing algorithm (such as finding the greatest common divisor of two integers);
- for implementation of an algorithm the following is important:
 - input and output should be clearly stated;
 - the computer algorithm should be explained;
 - there should be an "error" message if the algorithm does not lead to an answer (for example if there is a division by zero)

Relax! You do not have to consider all these direction for a given problem. For each problem consider a few of the suggested directions.

Grading formula:

Your grade will be based on the homework and the project. All the homework make 80% of your grade, the project - 20%.

Students with disabilities: If you are student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in 38b, please see me as soon as possible.

Please, do not hesitate to send/ask me any questions that you have.