

MATH 115, FALL 2010: NUMBER THEORY

Class Meetings: MWF 10-11 in 71 Evans.

Instructor: Martin Olsson

Course Control Number: 54284.

Office and email: 879 Evans hall, 510-642-5229, molsson@math.berkeley.edu.

Regarding email: Email should be used only for administrative questions. I do not answer math questions by email.

Office hours: Friday 11-1, or by appointment.

Textbook: Niven, Zuckerman and Montgomery, *An Introduction to the Theory of Numbers*, Wiley, 5th edition.

Homework: Regular homework will be assigned. Feel free to discuss homework with your colleagues but any outside sources should be carefully acknowledged on your writeup (this includes consultations with books other than the textbook). Homework assignments and their due dates will be announced in class.

Grading: Grades will be computed as follows:

- (1) Homework assignments; Lowest two assignments will be dropped. The rest will count for 20% of your grade.
- (2) Two midterm exams which will take place on October 1 and November 5 in class. Each exam will count for 20% of your grade.
- (3) Final exam which will count for 40% of your grade. This will take place on Monday December 13, 8-11 AM; I will notify you of the location as soon as it is available.

Syllabus: Divisibility, congruences, quadratic reciprocity and quadratic forms, simple continued fractions. I intend to cover chapters 1-3 of the book, then some material on elliptic curves, Pell's equation and continued fractions, and if time permits some further selected topics.