Math 312, Section 102
Homework #2
due Tuesday, September 25, 2001 at the beginning of class

I. Rosen, Section 1.4, p. 34, #8

II. Rosen, Section 1.4, p. 35, #16

III. (a) Convert $(26535)_9$ from base 9 to decimal notation.
(b) Convert $(14159)_{10}$ from decimal to base 3 notation.
(c) Convert $(123456789ABCDEF0)_{16}$ from hexadecimal to base 4 notation.

IV. Rosen, Section 2.1, p. 45, #16

V. Rosen, Section 3.1, p. 77, #13

VI. Using the Sieve of Eratosthenes, what is the least number of crossing-off steps you would have to perform to produce a list of all the prime numbers less than 5,000? What would be the last number you circled? How many multiples of that number would be crossed off (for the first time) during the last crossing-off step?