Homework

due on Monday, July 12

Read carefully Chapter 3. Solve problems 4, 6 to Chapter 3. Read the first chapter of the book by William Stein (linked on the course web-page). Solve problem 1.13 in this book.

Also solve the following problem.

Problem 1. Let $F_n = 2^{2^n} + 1$, for n = 0, 1, 2, ...

- a) Prove that $F_0 \cdot F_1 \cdot F_2 \cdot \ldots \cdot F_{n-1} = F_n 2$ for every $n \ge 1$.
- b) Use a) to prove that $gcd(F_m, F_n) = 1$ for m < n.
- c) Use b) to prove that the set of primes is infinite.