Math 192r, Problem Set #14
(due 11/13/01)

1. Use the recurrence for $p(n)$ to compute the last digit of $p(n)$ for every n between 1 and 1000. Can you make any conjectures about the relationship between the last digit of n and the last digit of $p(n)$?

2. Let $F(0) = 1$ and recursively define $F(n) = F(n-1) + F(n-3) - F(n-6) - F(n-10) + F(n-15) + F(n-21) - - + + \ldots$ for all $n > 0$, where terms of the form $F(n-k)$ are to be ignored once $k \geq n$. There exists a set S of positive integers such that $F(n)$ equals the number of partitions of n into parts belonging to S. Find S (conjecturally).