Math 491, Problem Set #2
(due 9/16/03)

1. Find necessary and sufficient conditions for the infinite product $f_1 f_2 f_3 \cdots$ to converge in the ring of formal power series. Be sure to take proper care of degenerate cases, e.g., where one of the f_n's actually is 0. A detailed proof is not required.

2. By comparing the expansions of $1/(1-x-x^2)$ and $1/(1-x-y)$, derive a formula for the Fibonacci numbers as sums of binomial coefficients.

Please be sure to write down how many hours you spent working on each of the two problems in the assignment, and to write down whom you worked with. You should do this for ALL your assignments for this course.