Math 491, Problem Set #16
(due 11/20/03)

1. (a) How many lattice paths from $(0,0)$ to (m,n) remain the same when you rotate them by 180 degrees about $(\frac{m}{2}, \frac{n}{2})$? Prove your answer.

2. (a) How many lattice paths from $(0,0)$ to (n,n) remain the same when you flip them across the diagonal joining $(n,0)$ and $(0,n)$? Prove your answer.

   (b) What is the sum of the q-weights of these lattice paths? Conjecture an answer.

   (c) Why is there no part (b) for question 1?