Math 491, Problem Set #11 (due 10/21/03)

1. Let c_n be the number of domino tilings of a 3-by-2n cylinder, obtained by gluing together the left and right sides (of length 3) of a 3-by-2n rectangle. Express the generating function $c_1x + c_2x^2 + c_3x^3 + \ldots$ as a rational function of x.