1023-54-807 **Pablo R Solis*** (psolis@mit.edu). *Turk's Head Knots and the Kauffman-Harary Conjecture.*

This talk will go into specific detail of the vacuous nature of the (KHC) over Turk's Head Knots building on ideas from a previous talk entitled (Colorability of Knots and the Kauffman-Harary Conjecture). Using theorems concerning symmetric polynomials, we will demonstrate a connection between the characteristic polynomials of these knots and the Delannoy numbers. We will then exploit this connection to show that the representative determinants of these knots can never be a prime integer. This in turn proves that the (KHC) is vacuous for all Turk's Heads past two iterations. Finally we claim that the (KHC) holds for the two-iteration case which is then proved in a subsequent talk entitled (The Kauffman-Harary Conjecture, Turk's Head Knots and Pell Primes). This talk assumes familiarity with linear algebra and abstract algebra at the undergraduate level. (Received September 24, 2006)