

1023-51-1058

Nick Dowdall and **Kevin Meek*** (xboogerx@hotmail.com), 694-1 Industrial Dr., Tallahassee, FL 32310, and **Pablo Solis**. *The Kauffman-Harary Conjecture, Turk's Head Knots and Pell Primes.*

The Kauffman-Harary Conjecture (KHC) has been shown to be vacuously true over all Turk's head Knots with iteration greater than two in a previous talk entitled (Turk's Head Knots and the Kauffman-Harary Conjecture). In this talk we prove that the (KHC) holds over the two iteration case as well. Utilizing theorems from graph and knot theory, we show yet another surprising number theoretic connection between these knots and a known integer sequence. We give a constructive proof that (KHC) is vacuous unless the representative knot determinant is a Pell prime, in which case the Kauffman-Harary Conjecture is valid. Thus, settling (KHC) over all Turk's Head Knots. This talk assumes familiarity with linear algebra and simple number theoretic ideas such as modular arithmetic. (Received September 24, 2006)