Nicholas E. Dowdall* (nickdowdall@yahoo.com), Thomas Mattman, Kevin Meek and Pablo Solis. Colorability of Knots and the Kauffman-Harary Conjecture.

The Kauffman Harary Conjecture (KHC) makes predictions in low dimensional topology regarding alternating knots and their colorability. This talk will introduce the audience to the concepts necessary for understanding the Kauffman-Harary Conjecture and lay the foundation for a proof that the (KHC) holds over one large class of knots referred to as Turk's Heads. As an example, we will give a proof using three stranded Turk's Head Knots and demonstrate a surprising connection between the characteristic polynomials of these knots and the Fibonacci and Lucas numbers. Finally, we claim that (KHC) is vacuous over all Turk's Head Knots with more than two iterations. This will be proven in a subsequent talk entitled (Turk's Head Knots and the Kauffman-Harary Conjecture). This talk will assume familiarity with linear algebra. (Received September 24, 2006)