1023-92-1544 Wendy Jacqueline Hernandez-Padilla* (wendy.hernandez@ttu.edu), Dept of Mathematics and Statistics, Texas Tech University, P.O.Box 41042, Lubbock, TX 79409, and Lih-Ing Wu Roeger (lih-ing.roeger.@ttu.edu), Dept of Mathematics and Statistics, Texas Tech University, P.O.Box 41042, Lubbock, TX 79409. A Discrete Competition Model Using a Numerical Method. Preliminary report.

Mathematical models are used to represent phenomena in the biological, ecological, and physical sciences, to name a few. Difference equations are appropriate when organisms have discrete, nonoverlapping generations. The Lotka-Volterra system can be used as a continuous competition model. The differential equations can then be transformed into difference equations using a numerical scheme. This talk will summarize an investigation into the stability of the discrete case of the competition model. (Received September 26, 2006)