## 1086-VO-1081 Kristi Karber\* (kkarber1@uco.edu) and Rebecca Miller. Convergence of the Maximum Zeros of a Class of Fibonacci-Type Polynomials.

Let a be a positive integer and let k be an arbitrary, fixed positive integer. Define a generalized Fibonacci-type polynomial sequence by  $G_{k,0}(x) = -a$ ,  $G_{k,1}(x) = x - a$  and  $G_{k,n}(x) = x^k G_{k,n-1}(x) + G_{k,n-2}(x)$  for  $n \ge 2$ . Let  $g_{k,n}$  represent the maximum real zero of  $G_{k,n}$ . We prove that the sequence  $\{g_{k,2n}\}$  is decreasing and converges to a real number  $\beta_k$ . Moreover, we prove that the sequence  $\{g_{k,2n+1}\}$  is increasing and converges to  $\beta_k$  as well. We conclude by proving that  $\{\beta_k\}$  is decreasing and converges to a. (Received September 18, 2012)