1077-39-1500 **Candace M. Kent*** (`cmkent@vcu.edu`), Dept. of Mathematics & Applied Mathematics, Virginia Commonwealth University, P.O. Box 842014, Richmond, VA 23284-2014, and **Witold Kosmala** (`kosmalaw@bellsouth.net`), Dept. of Mathematics, Appalachian State University, Boone, NC 28608. *On the Nature of Solutions of the Difference Equation $x_{n+1} = x_n x_{n-3} - 1$.*

We investigate the long-term behavior of solutions of the difference equation $x_{n+1} = x_n x_{n-3} - 1$, $n = 0, 1, \ldots$, where the initial conditions $x_{-3}, x_{-2}, x_{-1}, x_0$ are real numbers. In particular, we look at the periodicity and asymptotic periodicity of solutions, as well as the existence of unbounded solutions. (Received September 20, 2011)