1004-39-149   **Paul W. Eloe*** (`Paul.Eloe@notes.udayton.edu`), Department of Mathematics, University of Dayton, Dayton, OH 45469-2316. *A Linear Difference Equation of Fractional Order.*

A linear difference equation of fractional order with constant coefficients is defined. A transform method is employed to solve the equation. The transform method is employed to discuss the linear independence of solutions. The transform method is the Laplace transform method on time scales. This is not the better known z-transform. (Received January 23, 2005)