

1023-39-441

Ferhan M Atici and **Paul W Eloë*** (Paul.Eloe@notes.udayton.edu). *Fractional q -calculus on a time scale.*

The study of fractional q -calculus in this paper serves as a bridge between the fractional q -calculus in the literature and the fractional q -calculus on a time scale $T = q^{N_0} \cup \{0\}$ with $0 < q < 1$. By use of time scale calculus notation, we find the proof of many results more straight forward. We develop some properties of q -laplace transform. Then we use these properties to solve fractional q -difference equations. (Received September 13, 2006)