1051-39-169 **Chris Ahrendt*** (s-cahrend1@math.unl.edu), University of Nebraska-Lincoln, 203 Avery Hall - Dept. of Mathematics, P.O. Box 880130, Lincoln, NE 68588-0130. *Some Basic Properties of the Laplace Transform on Time Scales.*

We first discuss several properties of the generalized exponential function which will allow us to explore some of the fundamental properties of the Laplace transform on time scales. We then give a description of the region in the complex plane for which the improper integral in the definition of the Laplace transform converges, and how this region is affected by the time scale in question. Conditions under which the Laplace transform of a power series can be computed term-by-term are given. Regressivity and its relationship to the Laplace transform is examined. (Received August 24, 2009)