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B D Haile and **L M Hall*** (lmhall@umr.edu), 1870 Miner Circle, University of Missouri - Rolla, Rolla, MO 65409-0020. *Problems in the development of series solutions for dynamic equations on time scales*. Preliminary report.

In order to solve dynamic equations on time scales using series, functions that are analagous to powers of the idependent variable are needed. However, in the time scale calculus, there are different ways to represent such functions, and, for different time scales, these representations are not exactly the same, even though their forms become the same when the time scale is the real numbers. We study connections between some of these representations, and use the results to develop series methods for dynamic equations. (Received September 26, 2005)