

1046-39-153

H Sedaghat* (hsedagha@vcu.edu), Department of Mathematics, Virginia Commonwealth University, Box 842014, Richmond, VA 23284-2014. *On reduction of order of difference equations.*

We discuss a procedure that factors a difference equation of order $k > 1$ into two difference equations of lower orders m and $k - m$. The solutions of the k -th order equation can be obtained from the solutions of this system of two equations. We apply this factorization procedure to large classes of difference equations, including a class (separable equations) that contains the linear non-homogeneous equations. For more details see <http://arxiv.org/abs/0804.3579> (Received August 07, 2008)