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)