

Title: Multi-term Linear Fractional Nabla Difference Equations with Constant Coefficients

Abstract: We shall consider a linear fractional nabla (backward) difference equation with constant coefficients. We apply a transform method to construct formal solutions. Sufficient conditions in terms of the coefficients are given so that the formal solutions are convergent and thus, solutions. Of interest, we consider fractional equations with three or more terms. As a corollary, we exhibit new summation representations of discrete exponential functions defined on the nonnegative integers.