

Generating functions for some special polynomials including Poisson-Charlier, Hermite type, Milne-Thompson type and the other polynomials

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Abstract

The aim of this paper is to modify generating functions for the Milne-Thomson polynomials, the Poisson-Charlier polynomials and the Hermite polynomials. We investigate and study some properties of these generating functions and their functional equations associated with some special analytic functions. We also give some remark and observation on orthogonality properties of these polynomials especially, it is well-known that the Poisson-Charlier polynomials which are orthogonal with respect to the Poisson distribution...

Keywords: Generating function, Functional equation, orthogonal polynomials, Milne-Thomson polynomials, Poisson-Charlier polynomials, the Hermite polynomials, special functions, special numbers, L^AT_EX

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