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Meromorphic solutions of some non-linear qq-shift difference equations

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Abstract

With the help of Nevanlinna theory, we investigate the existence of meromorphic solution of certain class of q-difference differential equations and consequently we are able to show that no transcendental meromorphic function with some conditions will satisfy such equations.

Keywords:

qq-difference differential polynomial of $f(z)f(qz)$, meromorphic function $f(z)f(qz)$, Nevanlinna theory, order of $f(z)$

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