

Uniqueness theorems of entire and meromorphic functions sharing small function ¹

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Abstract

In this paper, we deal with some uniqueness theorems of two transcendental meromorphic functions with their non-linear differential polynomials sharing a small function. These results in this paper improve those given by of Fang and Hong [M.L.Fang and W.Hong, A unicity theorem for entire functions concerning differential polynomials, Indian J.Pure Appl.Math.32.(2001),No.9,1343-1348.], I.Lahiri and N.Mandal [I.Lahiri and N. Mandal, Uniqueness of nonlinear differential polynomials sharing simple and double 1-points, International Journal of Mathematics and Mathematical Sciences, vol.2005 (2005), no.12, pp.1933-1942.].

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