

VALUE DISTRIBUTION OF A DIFFERENTIAL MONOMIAL

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ABSTRACT. In this paper we discuss the value distribution of a differential monomial generated by a transcendental meromorphic function and generalize the results of Lahiri, Dewan [8] and Kit-Wing Yu [11]. Also we obtain the result which is an analogue to the result of Bergweiler [1].

REFERENCES

- [1] W. Bergweiler: *On the product of a meromorphic function and its derivative*, Bull. Hong Kong Math. Soc., **1**(1997), 97-101.
- [2] W. Bergweiler and A. Eremenko: *On the singularities of the inverse to a meromorphic function of finite order*, Rev. Mat. Iberoam., **11**(1995), 355-373.
- [3] S.S. Bhoosnurmath and Renukadevi S. Dyavanal: *Value distribution of meromorphic functions satisfying certain type of differential equations*, Int. J. Anal. Appl., **7**(2013), No. 62, 3063-3067.
- [4] W. Doeringer: *Exceptional values of differential polynomials*, Pacific J. Math., **98**(1982), 55-62.
- [5] A.A. Goldberg and I.V. Ostrovskii: *Value Distribution of Meromorphic Functions*, American Mathematical Society, Providence, 2008 (TMM 236).
- [6] W.K. Hayman: *Picard values of meromorphic functions and their derivatives*, Ann. of Math. (2), **70**(1959), 9-42.
- [7] W.K. Hayman: *Meromorphic Functions*, The Clarendon Press, Oxford, 1964.
- [8] I. Lahiri and S. Dewan: *Value distribution of the product of a meromorphic function and its derivative*, Kodai Math. J., **26**(2003), 95-100.
- [9] I. Lahiri: *Value distribution of certain differential polynomials*, Int. J. Math. Math. Sci., **28**(2001), 83-91.
- [10] A.P. Singh: *On order of homogeneous differential polynomials*, Indian J. Pure Appl. Math., **16**(1985), 791-795.
- [11] K.-W. Yu: *A note on the product of meromorphic functions and its derivatives*, Kodai Math. J., **24**(2001), 339-343.
- [12] C.C. Yang and H.X. Yi: *Uniqueness Theory of Meromorphic Functions*, Kluwer Academic Publishers, Dordrecht, 2003.

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