

ON VALUE DISTRIBUTION OF FUNCTIONS MEROMORPHIC IN THE WHOLE PLANE

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We make two kinds of decompositions of functions meromorphic in the whole plane into two classes: One is the class of meromorphic functions of the first kind in the sense of Yosida (resp. of the first kind in the sense of Gavrillov) and the other is the class of meromorphic functions of the second kind in the sense of Yosida (resp. of the second kind in the sense of Gavrillov). Using these decompositions, we prove a result about the growth of the characteristic functions and some results about value distribution, of meromorphic functions of the first kind in the sense of Yosida (resp. of the first kind in the sense of Gavrillov).

1. Introduction. Noshiro [6] decomposed the class of normal meromorphic functions in the unit disc into two categories: Normal meromorphic functions of the first category and those of the second category. Then, Tse [8] generalized this idea to general meromorphic functions in the unit disc and decomposed all functions meromorphic in the unit disc into two classes: One is the class of meromorphic functions of the first kind and the other is the class of meromorphic functions of the second kind. Using this decomposition, he proved some interesting results about value distribution of meromorphic functions in the unit disc.

On the other hand, Yosida [10] defined a class of meromorphic functions in the whole plane, called it the class (A) and divided this class into two categories: Meromorphic functions of the first category and those of the second category. Then, Gavrillov [2] divided the class W_1 of Julia's exceptional functions into two subclasses: The class W_1^0 and the class of functions not belonging to W_1^0 . Using each of these notions, they proved some interesting results.

In this paper, by making a consideration parallel to Tse's, we generalize both Yosida's decomposition and Gavrillov's decomposition to general meromorphic functions in the whole plane and according to each generalization we make two kinds of decompositions of functions meromorphic in the whole plane into two classes. Using these decompositions, we prove some results about value distribution of meromorphic functions in the whole plane.

I wish to express my thanks to the referee of this paper for his kind remarks.