UNIQUENESS OF MEROMORPHIC FUNCTIONS AND WEIGHTED SET SHARING OF SMALL FUNCTIONS

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Abstract. Extending the work of Li and Huang [10], this study employs the concept of weighted sharing to investigate the uniqueness of meromorphic functions that share a set of small functions with their generalized linear difference polynomials. In particular, we analyze the uniqueness relationship between a nonzero polynomial $p(f)$ and a linear difference polynomial $L(z, f)$ when they share a set of small functions with prescribed weights. The result established herein provides a rigorous extension and generalization of the result of Li and Huang [10].