SOME UNIQUENESS PROBLEMS CONCERNING MEROMORPHIC FUNCTIONS

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Abstract. In this paper, we investigate some uniqueness problems for forward differences $\Delta^nf(z)$ and $\Delta_{\eta}f(z)$ of a meromorphic function $f(z)$. When $f(z)$ is an entire function with a Borel exceptional small function $a(z)$, we obtain the concrete expression of $f(z)$ under the condition that $\Delta^nf(z)$ and $\Delta_{\eta}f(z)$ share a small function $b(z)$ CM. When $f(z)$ is a meromorphic function with a small deficient function $a(z)$, we obtain the relationship between $\Delta^nf(z)$ and $\Delta_{\eta}f(z)$ who share a small function $b(z)$ and $\infty$ CM.


Keywords and phrases: Complex difference, meromorphic function, Borel exceptional function, sharing value.

REFERENCES


