ON A SUBCLASS OF MEROMORPHICALLY STARLIKE FUNCTIONS WITH FIXED INVERSE POINT

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Abstract

In this paper we introduce a new subclass of meromorphically univalent functions with fixed inverse point.

Let $\sum_{0,M(z_0)}^{*}(\alpha)$ be the class of functions of the form $f(z) = \dfrac{a_{-1}}{z} + \sum_{n=1}^{\infty} a_n z^n$, $a_n \geq 0$,

$a_{-1} > 0$ which are starlike of order α $(0 \leq \alpha < 1)$ in $|z| < 1$ and satisfy

$$f(z_0) = \frac{1}{z_0}, \ (-1 < z_0 < 1, \ z_0 \neq 1).$$

We determine coefficient estimates, distortion properties and radius of convexity for the class $\sum_{0,M(z_0)}^{*}(\alpha)$. Furthermore, we proved that the class $\sum_{0,M(z_0)}^{*}(\alpha)$ is closed under arithmetic mean and convex linear combinations.