

Starlike cases of the generalized goodman conjecture

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Abstract

We consider functions f that are meromorphic and univalent in the unit disc D with a simple pole at the point $p \in (0, 1)$ and normalized by $f(0) = f'(0) - 1 = 0$. A function g is called subordinated under such a function f , if there exists a function ω holomorphic in D , $\omega(D) \subset \bar{D}$, such that $g(z) = f(z\omega(z))$, $z \in D$, and we use the abbreviation $g < f$ to indicate this relationship between two functions. We conjectured that for $g < f$, the inequalities are valid. Here f is as above and the expansion is valid in some neighbourhood of the origin. In the present article, we prove that this is true for two classes of functions f for which $C \setminus f(D)$ is starlike. © 2013 Pleiades Publishing, Ltd.

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Keywords

Starlike meromorphic function, subordination