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ON THE DIFFERENCE OF INITIAL LOGARITHMIC COEFFICIENTS FOR THE CLASS OF UNIVALENT FUNCTIONS

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Abstract: In this paper we give estimates of the differences $|\gamma_3|-|\gamma_2|$ and $|\gamma_4|-|\gamma_3|$ for the class of functions f univalent in the unit disc and normalized by $f(0) = f'(0) - 1 = 0$. Here, γ_2, γ_3 and γ_4 are the initial logarithmic coefficients of the function f.

Keywords and Phrases: Univalent, Grunsky coefficients, logarithmic coefficients, difference.

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1. Introduction and Preliminaries

As usual, let $\mathcal{A}$ be the class of functions f that are analytic in the open unit disc $\mathbb{D} = \{z : |z| < 1\}$ of the form

$$f(z) = z + a_2 z^2 + a_3 z^3 + \cdots , \tag{1}$$

and let $\mathcal{S}$ be the subclass of $\mathcal{A}$ consisting of functions that are univalent in $\mathbb{D}$.