
ON PARTIAL SUMS OF THE MODIFIED TRICOMI FUNCTION

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ABSTRACT

The aim of the present investigation is to establish lower bounds for the modified Tricomi function and for its sequences of partial sums. The modified Tricomi function is an important special function that appears in several areas of mathematical analysis, particularly in the study of analytic functions and geometric function theory. Since partial sums provide finite approximations of analytic functions, examining their behavior is essential for understanding whether important geometric properties are preserved under truncation. In this paper, we derive lower estimates for both the modified Tricomi function and its corresponding partial sums within the unit disk. Furthermore, we investigate a lower bound for the real part of the ratio of the derivative of the modified Tricomi function to the derivative of its sequence of partial sums. The obtained results contribute to the study of partial sums and provide useful refinements of related inequalities in analytic function theory.

Keywords Tricomi function · Partial sums · Analytic functions

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