

Coefficient bounds in the class of functions associated with q -function theory

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Abstract

In this paper, we use the concept of q -calculus in geometric function theory. For some α , $\alpha \in [0,1)$, we consider normalized analytic functions f such that $f'(z)/{}_qf(z)$ lies in half-plane $\{w: \mathop{\mathrm{Re}}\nolimits w > \alpha\}$ for all z , $|z| < 1$. Here ${}_qf$ is the Jackson q -derivative operator well-known in the q -calculus theory. The paper is devoted to the coefficient problems of such functions for real and for complex numbers q . Coefficient bounds are of particular interest, because of them some geometrical properties of the function can be obtained.

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