RADII PROBLEMS FOR THE FUNCTION $az^2 J''_\nu(z) + bz J'_\nu(z) + cJ_\nu(z)$

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Abstract. In this paper, for three different normalizations of the function

$$N_\nu(z) = az^2 J''_\nu(z) + bz J'_\nu(z) + cJ_\nu(z),$$

where $J_\nu$ is Bessel functions of the first kind of order $\nu$, the radius of parabolic starlikeness and uniform convexity are determined. We also give some simple results according to special cases of the parameters.


Keywords and phrases: Bessel functions, parabolic starlike function, uniformly convex function, radius, zeros of Bessel functions.

REFERENCES