

Abstract

The positive function $\varrho(\nu)$, where $\pm i\varrho(\nu)$ are the imaginary zeros of the second derivative of the Bessel function $J_\nu(z)$ of the first kind and order $\nu > -1$, increases for $0 < \nu \leq 0.4526$ and decreases for $0.5 \leq \nu < 1$. This is in full agreement with the numerical results given by M. K. Kerimov and S. L. Skorokhodov (*U.S.S.R. Comput. Math. Math. Phys.* **25**, No. 6 (1985),101-107).