

Abstract

We show, among other things, that, for $n = 0, 1$, the negative of the square of a purely imaginary zero of $J_\nu^{(n)}(x)$ is unimodal on $(n - 2, n - 1)$. One of the important tools in the proof is the Mittag-Leffler partial fractions expansion of $J_{\nu+1}(z)/J_\nu(z)$.