Abstract

It is proved that the real part of any zero of the polynomial $P_{N+1}(x)$ of degree N which is defined by $\alpha_{n+1}P_{n+1}(x)-\alpha_n P_{n-1}(x)-b_n P_n(x) = xc_n P_n(x)$, $P_0(x) = 0$, $P_1(x) = 1$, is negative in the case $b_n > 0$, $c_n > 0$. A consequence of this result is that the zeros of the Bessel polynomials, as well as the zeros of the generalized Bessel polynomials for $\alpha > 2$, have negative real parts. Moreover, an estimate of the real part, which can be easily found, improves a well-known inequality, in the case $\alpha > 3N - 1$.