

AN UPPER BOUND OF A DERIVATIVE FOR SOME CLASS OF POLYNOMIALS

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Abstract. In [S. Kumar and R. Lal, Generalizations of some polynomial inequalities, *Int. Electron. J. Pure Appl. Math.*, **3**, 2 (2011), 111–117.], Kumar and Lal provided an upper bound of a derivative for polynomial degree n having some of zeros at the origin and rest of zeros lying on or outside the boundary of a prescribed disk. In this paper, we present an upper bound of a derivative for polynomials $p(z) = (z - z_m)^{t_m} (z - z_{m-1})^{t_{m-1}} \cdots (z - z_0)^{t_0} \left(a_0 + \sum_{v=\mu}^{n-(t_m+\cdots+t_0)} a_v z^v \right)$ of degree n having zeros z_0, \dots, z_m with $|z_j| < 1$ for $0 \leq j \leq m$ and the remaining $n - (t_m + \cdots + t_0)$ zeros are outside $\{z : |z| < k\}$ where $k \geq 1$.

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