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## Note On Bernstein's Inequality For The Third Derivative Of A Polynomial

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**Abstract:** Given a polynomial  $p(z) = \sum_{j=0}^n a_j z^j$ , we give the best possible constant  $c_3(n)$  such that  $\|p'''\| + c_3(n)|a_0| \leq n(n-1)(n-2)\|p\|$ , where  $\|\cdot\|$  is the maximum norm on the unit circle  $\{z : |z| = 1\}$ . Most of the computations are done with a computer.



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