

MR1244959 (94h:41025) 41A17**Gardner, Robert B.** [[Gardner, Robert Bentley](#)] (1-ETNS);**Govil, Narendra K.** (1-ABRN)**Inequalities concerning the L^p norm of a polynomial and its derivative. (English summary)***J. Math. Anal. Appl.* **179** (1993), *no. 1*, 208–213.

It was conjectured by Erdős and proved by Lax that Bernstein's inequality for polynomials of degree at most n can be strengthened to $\max_{|z|=1} |P'_n(z)| \leq (n/2) \max_{|z|=1} |P_n(z)|$ if all the zeros of the polynomial are outside the unit circle. The corresponding inequality in L^p was proved by de Bruijn. In the present paper the authors introduce lower bounds (not smaller than 1) for the zeros and obtain an inequality corresponding to de Bruijn's. Their proof is based on earlier results of Q. I. Rahman, Labelle and Gardner.

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