

BOUNDS FOR THE ZEROS OF A CLASS OF LACUNARY-TYPE POLYNOMIALS

A. AZIZ AND N. A. RATHER

Abstract. In this paper, we present certain results concerning the location of the zeros of lacunary-type polynomials which generalize and refine some known Cauchy type bounds for the zeros of polynomials.

Mathematics subject classification (2010): 30C10, 30C15.

Keywords and phrases: Zeros, lacunary polynomials.

REFERENCES

- [1] A. L. CAUCHY, *Exercices de mathématiques*, IV Annee de Bure Freses, 1829.
- [2] A. JOYAL, G. LABELLE AND Q. I. RAHMAN, *On the location of the zeros of polynomials*, Bull. Canad. Math., **10** (1967), 53–63.
- [3] E. LANDAU, *Ueber den Picardschen Satz*, Vierteljahrsschrift Naturforsch. Gesellschaft Zürich, **51** (1906), 252–318.
- [4] E. LANDAU, *Sur quelques généralisations du théorème de M. Picard*, Ann. Ecole Norm. **24**, 3 (1907), 179–201.
- [5] O. P. LOSSERS, *Advanced problem 5737*, Amer. Math. Monthly, **78** (1971), 681–683.
- [6] M. MARDEN, *Geometry of Polynomials*, Math. Surveys No. 3, Amer. Math. Soc., providence R.I. (1967).
- [7] Q. G. MOHAMMAD, *Location of the zeros of polynomials*, Amer. Math. Monthly, **74** (1967), 290–292.
- [8] G. V. MILOVANOVIĆ, D. S. MITRINOVIĆ AND TH. M. RASSIAS, *Topics in Polynomials: Extremal Properties, Inequalities, Zeros*, World scientific Publishing Co., Singapore, (1994).
- [9] Q. I. RAHMAN AND G. SCHMEISSER, *Analytic Theory of Polynomials*, Oxford University Press Inc., New York (2002).