

THE JENSEN–STEFFENSEN INEQUALITY

P. S. BULLEN

Abstract. In this paper a simple calculus proof is given of the Jensen–Steffensen inequality, and of an inverse inequality due to Pečarić.

Mathematics subject classification (1991): 26D15.

Keywords and phrases: Inequalities, mean value theorem, convex, arithmetic mean, converse inequality, Jensen, Steffensen.

REFERENCES

- [1] P. S. BULLEN, *The Steffensen inequality*, Univ. Beograd Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. **320**–No. **328** (1970), 59–63.
- [2] ———, *Another look at some classical inequalities*, Inequalities and Applications, World Sci. Ser. Appl. Anal. 3, World Sci. Publishing (1994), 127–137.
- [3] ———, *Jensen's Inequality*, Menumi Matematika, 1994.
- [4] P. S. BULLEN, D. S. MITRINOVIĆ & P. M. VASIĆ, *Means and Their Inequalities*, Reidel Publishing Co. Dordrecht–Boston, 1988.
- [5] J. E. PEČARIĆ, *Inverse of Jensen–Steffensen's Inequality*, Glasnik Mat. (36) **16** (1981), 221–229.
- [6] A. W. ROBERTS & D. E. VARBERG, *Convex Functions*, Academic Press, New York–London, 1973.