MORE ABOUT JENSEN’S INEQUALITY AND CAUCHY’S MEANS FOR SUPERQUADRATIC FUNCTIONS

S. ABRAMOVICH, G. FARID AND J. PEČARIĆ

Abstract. One of the many inequalities that superquadratic functions satisfy is the parallelogram inequality

\[ f(u + v) + f(u - v) \geq 2f(u) + 2f(v). \]

In this paper, we present Cauchy means for superquadratic functions and other mean value theorems. We show also positive semi-definiteness, log-convexity, exponential convexity of certain set of functions.


Keywords and phrases: Jensen’s inequality, log-convex function, linear functional, superquadracity, mean value theorems.

REFERENCES