

# **n**-exponential convexity for Jensen-type inequalities

(Talk)

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(joint work with Asif R. Khan and Josip Pečarić)

Starting from the results given in [J. Pečarić, I. Perić, M. Rodić Lipanović, *Uniform treatment of Jensen type inequalities*, to appear in Math. Rep. (Bucur.)] where the uniform treatment of the Jensen type inequalities and its converses is given, we investigate the exponential convexity of differences of the left-hand and the right-hand side of these inequalities. Using these differences, we produce new exponentially convex functions. At the end, we give several examples of the families of functions for which the obtained results can be applied, and we get some generalized Cauchy means.

MSC2010: 26D15.

Keywords: Green function, Jensen inequality, converse of the Jensen inequality, Cauchy-type mean value theorems,  $n$ -exponential convexity, means.

Section: 8.