

WEIGHTED MONTGOMERY IDENTITY AND WEIGHTED HADAMARD INEQUALITIES

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Abstract. In this paper the extension of the weighted Montgomery identity is established by using the integral formula of Pečarić, Matić and Ujević. Further, by using this extended weighted Montgomery identity for functions whose derivatives of order $n - 1$ are absolutely continuous functions, new inequalities of the weighted Hermite-Hadamard type are obtained. Also, applications of these results are given for various types of weight function.

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