Bibi, Rabia; Bibi, Fazilat; Nosheen, Ammara; Pečarić, Josip
Extended Jensen’s functional for diamond integral via Hermite polynomial. (English)
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Summary: In this paper, with the help of Hermite interpolating polynomial, extension of Jensen’s functional for \( n \)-convex function is deduced from Jensen’s inequality involving diamond integrals. Special Hermite conditions, including Taylor two-point formula and Lagrange’s interpolation, are also deployed to find further extensions of Jensen’s functional. The paper also includes discussion on bounds for Grüss-type inequality, Ostrowski-type inequality, and Chebyshev functional associated with newly defined Jensen’s functional.

MSC:
26D15 Inequalities for sums, series and integrals
26A51 Convexity of real functions in one variable, generalizations

Full Text: DOI

References:

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