

Convergence properties of Ibragimov-Gadjiev-Durrmeyer operators

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ABSTRACT.

The purpose of the present paper is to study the local and global direct approximation properties of the Durrmeyer type generalization of Ibragimov-Gadjiev operators defined in [Aral, A. and Acar, T., *On Approximation Properties of Generalized Durrmeyer Operators*, (submitted)]. The results obtained in this study consist of Korovkin type theorem which enables us to approximate a function uniformly by new Durrmeyer operators, and estimate for approximation error of the operators in terms of weighted modulus of continuity. These results are obtained for the functions which belong to weighted space with polynomial weighted norm by new operators which act on functions defined on the non compact interval $[0, \infty)$. We finally present a direct approximation result.

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