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A CERTAIN CLASS OF STATISTICAL PRODUCT SUMMABLILITY MEAN AND KOROVKIN-TYPE THEOREMS

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Abstract: Statistical convergence is more extensive than the classical convergence and has recently drawn the recognition of many researchers. The Korovkin-type approximation theorems are usually based on the convergence analysis of sequences of positive linear operators. Gradually, such approximation theorems are extended over more general sequence spaces with several settings via different kinds of statistical summability techniques. In this paper, we introduce presumably a new statistical Riesz-Euler product summability technique to prove a Korovkin-type approximation theorem. Moreover, we demonstrate another result for the rate of statistical convergence under our proposed summability technique.

Keywords and Phrases: Statistical convergence; Korovkin's theorem; positive linear operator; (E, q) mean; $(\overline{N}, p_n, q_n)$ mean.

2020 Mathematics Subject Classification: 41A24, 41A25, 42B05, 42B08.

1. Introduction, Definitions and Preliminaries

The perception of statistical convergence for real sequences was first familiarized by Fast [7] in 1951. But previously the idea of statistical convergence was given