

ON THE REAL ACCURACY OF APPROXIMATION IN THE CENTRAL LIMIT THEOREM. II

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In the present article, we obtain new explicit estimates for accuracy of approximation in the central limit theorem (CLT). We construct these approximations with the use of asymptotic expansions. We compare the estimates with the real accuracy of approximation for a specific distribution. We also discuss the following question: Why the estimate from the Berry–Esseen theorem cannot catch even the order of proximity of distributions in the CLT?

Key words and phrases: central limit theorem, accuracy of approximation, asymptotic expansions, Berry–Esseen theorem.

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