

## BOOK REVIEWS

*Collected works*. Vol. 1. *Theory of numbers*. By P. L. Chebyshev (Tchebychef). Moscow-Leningrad, Academy of Sciences of the U.S.S.R., 1944. 342 pp. +1 plate (Russian).

The first edition of the collected works of P. L. Chebyshev in two large volumes which appeared in 1899 and 1907 contained all the memoirs and notes published by the illustrious Russian mathematician during his lifetime with the exception of three dissertations, two of which had been published previously in book form, while the third existed only in manuscript. The Academy of Sciences of the U.S.S.R. has now undertaken the publication of the second edition of the works of Chebyshev.

In a short preface to the first volume S. N. Bernstein states the motives which guided the Academy in undertaking this new edition: "The investigations of P. L. Chebyshev which had played such an important part in the development of contemporary mathematics preserve their vital significance even in our time and many ideas of our great countryman, whose work afforded a shining example of the unity of theory and practice in mathematics, are not as yet completely explored."

According to the plan the new edition will include not only the papers from the first edition, but also the three above-mentioned dissertations together with some hitherto unpublished material. For the convenience of readers who might be interested only in certain phases of the work of Chebyshev the editors of the new edition do not follow the chronological order of publication but distribute the papers in five volumes according to their content. This first volume contains all the papers of Chebyshev pertaining to the theory of numbers, including his well known book, *Teorija Sravenij* (*Theory of congruences*). The influence which some of these papers exercised on the development of mathematical science is well known and it is hardly necessary to stress it in this review. Besides the papers published by Chebyshev himself there is a reproduction of a note by A. Markoff in which he reconstructs the proof of a theorem on prime divisors of numbers of the form  $4x^2 + 1$  communicated orally by Chebyshev to Hermite, and two interesting commentaries: one by A. Gelfond on the famous Chebyshev memoir on prime numbers, and another by B. Delaunay on a series of investigations which grew out of Chebyshev's memoir *Ob odnom arifmetičescom voprose* (*On a certain arithmetical question*).

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