BOOK REVIEWS

Collected works. Vol. 1. *Theory of numbers.* By P. L. Chebyshev (Tche-
bychef). 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 mathemati-
cian 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 im-
portant part in the development of contemporary mathematics pre-
serve 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 com-
pletely explored."

According to the plan the new edition will include not only the
papers from the first edition, but also the three above-mentioned dis-
sertations together with some hitherto unpublished material.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, in-
cluding his well known book, *Teorija Sravenij* (*Theory of congruences*).
The influence which some of these papers exercised on the develop-
ment 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*).

<div align="right">J. V. USPENSKY</div>