## SHORTER NOTICES.

*Carl Gustav Jacob Jacobi. Festschrift zur Feier der hundert-
sten Wiederkehr seines Geburtstages.* Mit einem Bildnis und
dem Faksimile eines Briefes. By LEO KÖNIGSBERGER.
Leipzig, B. G. Teubner, 1904. 8vo. xvii + 554 pp.

IT is a pleasure as well as a duty for posterity to honor and
keep green the memory of those great men of science whose
discoveries have contributed to human happiness or whose pro-
found meditations have opened up new and fruitful lines of re-
search. To the latter class belongs Jacobi, the hundredth
anniversary of whose birthday fell on December 10, 1904.
The third International congress of mathematicians, held that
year, determined to celebrate this event with due solemnity and
Professor Königsberger was asked to prepare a commemorative
address. No better choice of speaker could be made; for Pro-
fessor Königsberger besides having published a noteworthy
history of the elliptic functions for the years 1826–29 has
contributed numerous important papers on the abelian trans-
cendants, on differential equations and on principles of me-
chanics, all subjects which occupied Jacobi's unceasing attention.

The exceptional position that Jacobi occupies in the history of
German mathematics makes the story of his life doubly inter-
esting. At the time when he began his career the condition of
mathematics in Germany was truly deplorable. The whole
mathematical genius of the Teutonic people seems to have been
absorbed by a single individual, Gauss, leaving a mere pittance
to be thinly distributed among his contemporaries. Moreover
the cold and reserved nature of Gauss, his uncommunicative if
not secretive disposition, his unvarying practice of publishing
nothing that was not perfect in form and complete in content,
all contributed most unhappily in reducing to a minumum the
mighty influence he should have exerted on his countrymen
during the first quarter of the nineteenth century.

With the advent of Jacobi a new era began ; a new genera-
tion of mathematicians sprang up with a suddenness and bril-
liancy which is astounding. Jacobi was presently joined by
Steiner, Dirichlet, Plücker and others, and Germany began the
triumphal march which soon led her to the first rank in the
world of mathematics.

The most prominent figure in this new generation is Jacobi.

His epoch-making discoveries in the theory of elliptic functions when only twenty-three years of age excited the admiration of all Europe, while his many and profound researches rapidly rendered him one of the most celebrated mathematicians of his day. But Germany had had great mathematicians before; Leibniz, Euler, the Bernoullis, not to mention later ones. What distinguishes Jacobi from his predecessors is the fact that he was a great teacher. In this respect he was the very opposite of his great contemporary Gauss, who disliked to teach, and who was anything but inspiring. Jacobi's lectures were models of clearness; the enthusiasm of the teacher kindled a like enthusiasm in his pupils. He took the unprecedented step of making his more gifted students acquainted with his own unfinished investigations and stimulated them to attack problems suggested by these researches. The results were most gratifying, for ere long we see his pupils, Hesse, Goepel, Rosenhain, Richelot, and others, publishing important memoirs.

It is not our intention, however, to write a sketch of Jacobi's life, but rather to call attention to the interest and the lessons which it has for us. We feel sure that no reader will regret perusing Professor Königsberger's biography, which is obviously a labor of love and the result of long and patient research. A feature of the work deserves especial commendation, and is most unusual. All of Jacobi's principal papers are carefully analyzed and the growth and filiation of his mathematical ideas stand forth in bold relief. It has no doubt cost his biographer months of patient study to do this; but the results here given will prove of utmost service to future generations of mathematicians who seek a rapid orientation of the leading facts in any part of Jacobi's multitudinous and varied publications.

<div align="right">JAMES PIERPONT.</div>

*Uebungsbuch zum Studium der höheren Analysis.* VON OSKAR SCHLÖMILCH. Erster Theil: *Aufgaben aus der Differential-rechnung.* Fifth edition, prepared by Dr. E. NAETSCH. Leipzig, B. G. Teubner, 1904. 8vo. viii + 372 pp.

THIS work whose first edition appeared more than thirty years ago has enjoyed a well-merited popularity, both on account of the variety and careful choice of its problems and also the elegance and instructiveness often exhibited in their solutions. Numerous additions have been made in this, the fifth edition, giving fresh interest to the work. The problems