is always something new to learn where so much material is
so well presented. EDWIN BIDWELL WILSON.

Theorie der elliptischen Funktionen. Von M. KRAUSE unter
Mitwirkung von E. NAETSCH. Leipzig, B. G. Teubner,
1912. vi+186 pp.

ANOTHER text in Jahnke's series for engineers and students.
Its object is to give a brief development of elliptic functions
for the sake of rendering intelligible those formulas, figures,
and tables which relate to elliptic functions in Jahnke and
Emde's Funktionentafeln. The titles of the chapters are:
Introduction, General theory of Jacobi's functions, Special
theory for the real domain, Legendre's normal integrals,
Weierstrass's functions, Representation of the general doubly
periodic function by means of the foregoing types, Reduction
of the general elliptic integral to normal forms. The develop-
ment is based on the ϑ-functions, and makes relatively little
use of the theory of functions of a complex variable. The
prominent place given to the ϑ-functions is commendable.
In most cases these series converge with extraordinary rapidity
and are readily available for computation. The attention to
the functions sn, cn, dn is also advantageous; in physical
problems where the trigonometric functions offer a first
approximation, these elliptic functions are the most natural
to use. The p-function is admirably discussed, and especial
mention should be made of the reduction of the p-function
with conjugate imaginary periods to the related p-function
with real and pure imaginary periods. It is noteworthy that
the authors use a plain p, and not $\wp$; perhaps this latter con-
tortion is on the road to abandonment.

From some points of view it might have been better to
assume and use a greater, even a great, amount of the theory
of functions of a complex variable; the work would not have
been so elementary, but it would have been more instructive.
We note with regret that Jahnke has not announced in his
series a text on the theory of functions. Such a text, properly
executed in the interest of physicists and engineers, would
be a welcome addition to his series. Perhaps Lewent's
Konforme Abbildung will supply much of the lack; for it is in
connection with conformal representation (and elliptic func-
tions) that the function theory becomes most vital to the
student of applied mathematics. Whether such a student will