Wissenschaften, vol. 67.) Berlin, Springer, 1954. 13+355 pp. 36 DM.; bound, 39.60 DM.

This work is essentially a large table of elliptic integrals and, as such, is a valuable addition to the literature of the subject.

After an introduction containing a rich collection of formulas on the Jacobian elliptic functions and integrals (about 40 pages), the greater part of the book consists of 148 pages of formulas giving the reduction of more than a thousand elliptic integrals, with algebraic or elementary transcendental integrands, to (far less numerous) integrals whose integrands are rational combinations of Jacobian elliptic functions. A further section (about 30 pages) gives the expressions of the latter integrals in terms of elliptic functions and of the three classical kinds of elliptic integrals, in Legendre's notation. The last part of the book (about 70 pages) deals first with methods for evaluating the integrals of the third kind (the weak point of many works on the subject), which are generally expressed in terms of ϑ-functions. There are also a table of integrals and derivatives with respect to the modulus, an appendix on Weierstrassian functions and integrals (in the rest of the book only the notations of Legendre and Jacobi are used), and some supplements to the principal table of elliptic integrals. The book closes with about 30 pages of numerical tables, the most extensive of which gives the values of the Legendrian elliptic integrals of the first and second kinds.

In the background of the work there seems to be a certain, not unfounded, skepticism about the ability of the average applied mathematician to reduce, himself, a given elliptic integral to one of the canonical types. I myself have often had a similar feeling, considering the poor help which many "practical" books on the subject offer to an unskilled reader. With this handbook at hand, the difficulty is largely eliminated, since in most cases one will find his integral, or a similar one, in the tables.

Despite three pages of errata and some misspellings in the bibliography, the book seems to be reliable; the typography is excellent.

F. G. TRICOMI

BRIEF MENTION

The geometry of René Descartes. Trans. from the French and Latin by D. E. Smith and M. L. Latham. With a facsimile of the first edition, 1637. New York, Dover, 1954. 14+244 pp. $2.95 cloth, $1.50 paper.

This is a photographic reproduction of the 1925 edition published by Open Court, Chicago (and not mentioned in this edition). The French text and the translation appear on facing pages.

Selected papers on noise and stochastic processes. Ed. by N. Wax. New York, Dover, 1954. 6+337 pp. $3.50 cloth, $2.00 paper.

Reprints of papers by S. Chandrasekhar, G. E. Uhlenbeck and L. S. Ornstein, Ming Chen Wang and G. E. Uhlenbeck, S. O. Rice, M. Kac, and J. L. Doob.

Modern physics for the engineer. Ed. by L. N. Ridenour. New York, McGraw-Hill, 1954. 20+499 pp. $7.50.

This volume contains two chapters of possible interest to mathematicians: Communication theory and transmission of information, by J. B. Wiesner; Computing machines and the processing of information, by L. N. Ridenour.

Table of binomial coefficients. Prepared for the Mathematical Tables Committees of The British Association and The Royal Society under the editorship of J. C. P. Miller. Cambridge University Press, 1954. 8+162 pp. $5.50.

Exact values of ${}_nC_r$ are given for $r \leqq n/2 \leqq 100$, as well as for some small values of r and larger values of n; for $r=2$, 3 the tables extend to $n=5000$.