and waiting time, epidemiology, particle physics, turbulence, prediction, information theory, time series, etc. There are a number of illustrative numerical examples.

Donald A. Darling


The first edition of Collatz's Numerische Behandlung (reviewed in this Bulletin, vol. 59, pp. 94–96) was noteworthy as the most extensive and most complete treatment of the numerical solution of differential equations that had yet appeared. The second edition now at hand continues to maintain this leadership. It is still larger (526 pages) and has undergone considerable reorganization. A major part of the reorganization consists in the insertion of a new chapter at the beginning devoted to basic material needed later, such as finite differences, interpolation, formulas for numerical differentiation and integration, Green's theorem and related topics, least squares, orthogonality, and concepts from functional analysis. The remaining five chapters cover substantially the same material as in the first edition except for the topics now collected in Chapter I and the expansion of the remaining topics by more detailed treatment and the addition of new items. The high character of the first edition has been well preserved.

W. E. Milne


This final volume of Professor de Losada y Puga's treatise covers trigonometric series, divergent series, functions of a complex variable, differential equations, calculus of variations (very briefly) and probability. The exposition is for the most part at the advanced calculus level, and in a leisurely and readable style. The section on differential equations (350 pages) is more up-to-date and detailed than many textbooks on the subject in English.

R. P. Boas, Jr.


For the first two volumes cf. this Bulletin, vol. 60, p. 288.

This volume covers publications from 1916 to 1929.


The function $\sum_{z=1}^{n, n} C_n x p (1 - p)^n - z$ is tabulated to 6 decimals for $n$ at various intervals up to 1000 and for 60 values of $p$. A long introduction explains the applications of the function.


This is a revision of the first edition, which was reviewed in this Bulletin, vol. 56, p. 376.


As the title does not suggest, this is a book about ancient Egyptian, Babylonian and Greek mathematics. For a detailed review of the Dutch edition of 1950, see Mathematical Reviews, vol. 12, p. 381. The present edition is sumptuously illustrated.


This volume contains, in 31 articles, the proceedings of the Conference on Functions of a Complex Variable which was held at the University of Michigan in 1953.


The colloquium was sponsored by the Centre Belge de Recherches Mathématiques. The volume contains articles by Picone, Schwartz, Lions, Leray, Brelot and Choquet, de Rham, Garnir, and Fantappiè.


This is vol. 4, no. 6, of the journal Computers and Automation; it contains a directory of people and organizations active in the field.
RESEARCH PROBLEMS


Define a "connectivity map" from a space $A$ into a space $B$ as one such that the induced map $A \rightarrow A \times B$ preserves the connectedness of any connected set in $A$. Must every connectivity map of a cell into itself have a fixed point? (Received August 24, 1955.)


Let $\phi$ be a bounded, uniformly continuous function on the real line. Is it true that for almost all $t$, $\lim_{N \to \infty} (2N)^{-1} \int_{-N}^{N} \exp (-itx) \phi(x) dx = 0$? (Received October 10, 1955.)


Find the (algebraic) real values of $m$ (between 0 and 2) for which the matrices $(\begin{smallmatrix} 1 & m \\ 0 & 1 \end{smallmatrix})$, $(\begin{smallmatrix} m & 1 \\ 0 & m \end{smallmatrix})$ do not generate a free group. 1. When $m$ is transcendental the group is known to be a free group. 2. When $m$ is real and greater than or equal to 2 the group can be shown to be a free group.) (Received October 20, 1955.)

4. H. L. Alder: Number theory.

Let $q_d(n)$ = the number of partitions of $n$ into parts differing by at least $d$; let $Q_d(n)$ = the number of partitions of $n$ into parts congruent to 1 or $d+2$ (mod $d+3$); let $\Delta_d(n) = q_d(n) - Q_d(n)$. It is known that $\Delta_d(n) = 0$ for all positive $n$ (Euler's identity), $\Delta_2(n) = 0$ for all positive $n$ (from Schur's theorem which states $\Delta_3(n)$ is the number of those partitions of $n$ into parts differing by at least 3 which contain at least one pair of consecutive multiples of 3). a. Is $\Delta_d(n) \geq 0$ for all positive $d$ and $n$? b. If (a) is true, can $\Delta_d(n)$ be characterized as the number of a certain type of restricted partitions of $n$ as is the case for $d = 3$?

References


5. V. L. Klee: Topology.

A topological space $S$ is called homogeneous provided for each two points $x$ and $y$ of $S$ there is a homeomorphism $h$ of $S$ onto $S$ such that $hx = y$. Clearly each product