
This monograph gives a detailed analysis of the literature on divergent series, from the beginnings of the modern theory, in 1880, to 1922. About two hundred fifty papers on divergent series were produced in this period. These are listed here, in chronological sequence, and the contents of each indicated. The abstracts are, in most cases, very explicit, and permit one to get at the substance of the papers with great rapidity. The monograph will undoubtedly be found an invaluable work of reference by many investigators.

J. F. Ritt


Except for the first four chapters, which treat the binomial, the exponential, and the logarithmic series, this book is designed to answer certain questions relating to the theory of equations which arose in Part I. The subjects developed are those usually treated of in elementary texts on the theory of equations, including the elements of determinants and linear equations. The author introduces the complex variable and proves the fundamental theorem of algebra. In this he does not confine himself to the bare necessities but includes considerable interesting material on algebraic functions and the geometry of the complex plane. The calculus is studiously avoided, the derivative being introduced under the name gradient function. There is a chapter on graphs, frequent graphical illustrations, numerous examples and many excellent sets of exercises.

L. T. Moore

Harmonic Curves. By William F. Rigge, S.J. Published by the Creighton University, Omaha, Nebraska, 1926. 8vo. 213 pp.

While Father Rigge's volume does not perhaps call for special notice from the point of view of higher mathematics, it is particularly attractive to those who are interested in the construction of “conventional” designs. There are numerous diagrams which have been reproduced without change from those actually obtained from his machine, and these show remarkable accuracy in closing complicated symmetric figures. The machine referred to is one which has been gradually developed over an interval of nine years. It contains many components giving harmonic curves and these are greatly increased in number by interchangeable gears. Since it also contains “linkage” components it can draw many types of cycloids and cardioids as well as compound harmonic curves. The author in his preface says that if we consider periods only, it is capable of drawing 7,618,782,498 curves! An interesting additional feature is the production of stereoscopic figures. The elementary equations of the simpler curves are worked out in detail.

E. W. Brown