
This multum in parvo of mathematical history forms No. 18 in the Selected Papers of the Summer School for Engineering Teachers issued by the Society for the Promotion of Engineering Education. It is reprinted from the Journal of Engineering Education (New Series, vol. 22, pp. 246-298, Dec., 1931) and consists of two lectures delivered before the Mathematical Session of the Summer School for Engineering Teachers at the University of Minnesota, August 31 and September 1, 1931.

The first lecture, History of Mathematics before the Seventeenth Century, covers a period of about 5000 years and the second, History of Mathematics after 1600, a period of about 300 years. The author accurately characterizes the work (p. 1) as an attempt "to give indications of the development of mathematics before the nineteenth century, and to refer briefly to some developments of the nineteenth century in connection with topics usually discussed at undergraduate colleges. Chinese and Japanese mathematics are not considered in such a skeleton survey, and the reference to mathematics of the Hindus is brief."

Since summaries and outlines are, of necessity, quite general in their nature and usually prepared to meet the needs of beginners in the field, it might be supposed that good ones are easily written. The opposite is the case. The preparation of a scholarly outline requires a large range of information, good judgment in selection of material, patience in checking carefully many details, and familiarity with the results of recent research. Fortunately, the author of this outline measures up to these qualifications. The reader may rest assured that he will find material well selected and carefully documented and that he will not find repetitions of errors which have, all too often, persisted in general secondary works long after research workers had published corrections.

U. G. MITCHELL


This monograph contains extremely rich material and introduces the reader into many theories of high importance. It represents a modified and magnified reproduction of a course of lectures delivered in 1931 by invitation at the University of Lwów. The first chapter (Nichtlineare Integralgleichungen im kleinen) contains an existence and uniqueness proof for a general class of non-linear integral equations, which includes that treated in well known papers by E. Schmidt as a special case. Instead of Schmidt's power series expansions the author consistently and successfully uses an elaborated method of successive approximations. Special attention is given to the investigation of the case of ramification (Verzweigungsfall) which plays a fundamental role in the theory and in its applications. Various extensions (for example, to integro-differential equations, systems of integral and integro-differential equations, etc.) are briefly treated. Chapter 2 gives immediate applications of the preceding theory to various problems of mathematical physics and partial differential