

*Von Zahlen und Figuren.* By Hans Rademacher und Otto Toeplitz. Berlin, Springer, 1930. 6+164 pp.

The book under review is written for the intelligent man in the street and not for mathematicians. It presupposes very little of mathematical background although it describes a number of difficult problems, some of which are unsolved to this day.

The authors discuss 22 problems chosen from the fields of number theory, geometry, and point-set theory. The subject matter is rather cleverly arranged; for example, the four-color problem is followed by that of Fermat. It results that in the normal process of reading the book, one does not become tired of the sameness of the subject.

The treatment of all problems is very clear, the emphasis being placed on the logic and reasoning involved in the proof. Many people unfamiliar with mathematics have an idea that it is a collection of tricks for rapid calculation or the solution of involved numerical problems; a perusal of this book shows clearly how erroneous this idea is.

The book makes very pleasant reading, containing, as it does, not only interesting problems but also a bit of their history. In the opinion of the reviewer every teacher of elementary mathematics would do well to get acquainted with this delightful little book.

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*Partielle Differentialgleichungen der mathematischen Physik.* By A. G. Webster and G. Szegö. Leipzig, Teubner, 1930. 528 pp.

Since A. G. Webster's *Partial Differential Equations of Mathematical Physics*, edited by Samuel J. Plimpton, has been on the market since 1927, a brief note should suffice to characterize the new edition. The original publication, in English, is a comprehensive treatment of classical wave equations, or more specifically, a treatment of methods of solution of boundary value problems, in particular, the vibration of strings, pipes, membranes, rods, thin plates, also the linear flow of heat, and classical electromagnetic waves. The questions treated are those of classical physics. The partial differential equations of modern physics, the Schrödinger and Dirac equations, as one would expect, are not considered.

The German edition is somewhat more than a mere translation of the original one, though it carries the same article number throughout. The subject matter treated is exactly the same, though the process of revision has augmented the work by 88 pages, making a 528 page book of it. This added material includes an index of ten pages, while the rest of the material is distributed largely through the various articles of Chapters IV, V, VII, and VIII, as is stated in the preface. The result is that numerous articles have been subjected to a more rigorous mathematical treatment than is presented in the English edition.

The revision, like the English edition, is extremely rich in content, but contains no modern physics. For many purposes the English edition will be found very satisfactory; the chief advantage of the new book lies in the more rigorous mathematical presentation of portions of the subject matter.

V. C. POOR