

respects it can be commended highly to those who are attracted by marvellous relations among natural numbers. The author is looking forward to a second edition in which a number of slight errors will be corrected, and he has had the courtesy to send the reviewer a marked copy in which the following changes are suggested: The term "perfect square" as used on page 2 is replaced by "regular square." In the second and third lines from the bottom of page 5 "twenty-eight" and "sixteen" are replaced by twenty and eight respectively, and in the first line of page 6 "twelve" is replaced by sixteen. The term "prime number" as used on page 14 and in many other places in the book is replaced by primary number. In the last line on page 65 the expression "first and last" should read last and first. Near the middle of page 179 the statement marked I. should be followed by "with four exceptions." These errors are, however, not sufficiently serious to detract much from the value of the volume.

G. A. MILLER.

*Exercices et Leçons d'Analyse.* By R. D'ADHÉMAR. Paris, Gauthier Villars, 1908. 208 pp.

THE subtitle of this volume is "Quadratures, équations différentielles, équations intégrales de M. Fredholm et de M. Volterra, équations aux dérivées partielles du second ordre." It will be seen that the topics treated are thoroughly up to date. The book is meant, as the author says in his preface, to supplement the larger *Traité*s and *Cours*. An introduction of 22 pages presents a brief statement of some of the principal theorems on differential geometry and analysis, together with references for their proofs and for further developments. Then follow chapters on quadratures; the functions of Legendre, Bessel, Euler, etc.; partial differential equations of the elliptic type, including a brief treatment of Fredholm's integral equation; equations of the hyperbolic and parabolic types; and two chapters on miscellaneous problems. The book, in spite of its decidedly fragmentary character, will prove useful both by furnishing a source of interesting problems and by giving the reader at least a superficial idea of many recent developments in analysis. The indications given as to the scope and purport of theorems mentioned (to say nothing of their proofs) are, however, frequently so meagre that the reader seeking to gain information will often be in doubt as to how they should be