Problèmes d'Analyse mathématique. By E. FABRY. Paris, Libraire Scientifique A. Hermann et Fils, 1913. 460 pp.

THE primary object of this collection of problems seems to be to furnish material in which French student candidates preparing for the examinations for certificates in differential and integral calculus might be interested. A list of problems (279) given at examinations within the last twelve years and at fourteen different examination centers scattered throughout France occupies the first 66 pages of the book. The detailed solutions of the problems proposed fill quite completely the remainder of the volume. The reviewer has checked a few—not many—of these solutions.

The 279 problems in the twelve chapters are distributed in numbers from 5 to 35 over the field of analysis as follows: Two chapters on quadratures and their geometric applications. One on line integrals (complex variable, analytic functions). Four on differential equations and their applications to plane curves, space curves, and surfaces, including the determination of geodesics, asymptotic lines, and lines of curvature. A chapter on ruled surfaces (developable). Two chapters on partial differential equations and their geometric applications. One each on total differentials and elliptic functions.

Some of the problems—a few—might be included in the lists of "harder problems" in calculus texts designed for the American college sophomore; more could be solved with much labor in algebraic and trigonometric reductions by a class in the advanced calculus, but many would undoubtedly have to be "left for later consideration." Certainly, if the candidate passed an examination on a similar list he might well feel that he deserved his certificate.

ERNEST W. PONZER.

Cours de Géométrie infinitésimale. By G. DEMARTRES. Paris, Libraire Gauthier-Villars, 1913. x + 455 pp.

EVEN a cursory inspection of this volume would lead one to conclude that it was never intended to rival the classic works of Bianchi or Darboux. One easily comes to the conclusion, especially after reading the excellent preface by Appell, that the book is intended to be a text, not a reference book to accompany lectures, on a subject which, according to the reviewer's opinion, is sadly neglected in mathematical