

*Complementi di Geometria Descrittiva—visibilita—ombre—chiaroscuro—prospettiva lineare.* By Gino Loria. Milano, Ulrico Hoepli, 1924. xii + 191.

In his preface the author states that this will probably be the concluding volume of his series of books on descriptive geometry published by this firm. (The earlier books were (1) *Metodi della Geometria Descrittiva*, 1st ed., 1909, 2d ed., 1919; (2) *Poliedri, Curve e Superfici, secondo i Metodi della Geometria Descrittiva*, 1912; (3) *Storia della Geometria Descrittiva della Origini Sino ai Giorni Nostri*. The two latter are reviewed in this BULLETIN, vol. 20, p. 415, and vol. 28, p. 414.)

The eight chapters are grouped into three "books". The first, whose title is the same as the principal title of the volume, has chapters on visibility, on surfaces of the second order, and on ruled surfaces. Book II (shadows and chiaroscuro) has chapters entitled shadows cast by points, lines, and plane polygons; shadows on surfaces; ideas concerning chiaroscuro; and the illumination of surfaces. These two books are of the same length; but book III (linear perspective) is much briefer (18 pages) and attempts nothing beyond "definitions, constructions, and formulas".

In writing this brief introduction to the applications of descriptive geometry, the author had in mind the student with a good geometrical background rather than the draftsman who wants merely a set of "working rules" for making perspective drawings and putting in shades and shadows.

E. B. COWLEY

*Traité du Calcul des Probabilités et de ses Applications.* By E. Borel, Tome III, *Les Applications de la Théorie des Probabilités aux Sciences Economiques et Biologiques.* Fascicule I. *Assurances sur la Vie.* *Calcul des Primes*, by Henri Galbrun. Paris, Gauthier-Villars, 1924. 311 pp.

This volume, the first part of a work on the mathematical side of life insurance, is just the sort of a book that we, here in America, would expect to be written by a professor of mathematics who was interested in life insurance. The best known writers in English on actuarial mathematics are actuaries who write for actuaries and who ever keep the practical applications in view. For them mathematics is simply a means to an end. The author is a French actuary and his book well illustrates the somewhat different view points of practical actuaries in this country and in France. Some allowance must, however, be taken for the fact that this volume is a part of a monumental work on the theory of probability and its applications.

Galbrun starts with the law of large numbers and proceeds in a straightforward way through the topics Bernoulli's theorem, Techebycheff's theorem, interest, tables of mortality, Makeham's law, interpolation,