

An Introduction to the Mathematical Analysis of Statistics. By C. H. Forsyth. New York, John Wiley and Sons, 1924. 8 + 241 pp.

The preface advises us: "This book is offered as a textbook in mathematics and not as a reference book for the statistician". A knowledge of calculus is assumed, but the text lies strictly within the grasp of an undergraduate. Before taking up the usual topics of a book on statistics, a substantial mathematical background is established — as may be seen from the chapter headings: Errors and numerical computation; Finite differences; Interpolation; Gamma and beta functions; Probability; Averages and aids in their computation; Moments; The normal curve; The binomial $(p + q)^n$. Statistical series; Correlation theory. Few texts on statistics have been written in English which have such an admirable selection of topics for a junior course in mathematics. Without going into intricate details, the book is decidedly comprehensive, and introduces the student to a multitude of problems in statistical research. It is written in an attractive style — quite informal — and on this account an instructor will need to supplement some statements, by using more technical phraseology. For example, the student should be put on notice that "compensating errors" (p. 3) do not compensate, and that in tangential interpolation (p. 42) the continuity of the curve is not involved. Moreover, for (27) on page 57 $a > 0$; the illustration on page 81 is not felicitous; normality (p. 93) involves a great deal more than symmetry; the "set of observations" at the foot of page 94 is a set of deviations; the bisection of area (p. 119) is effected by the ordinate through the *median*; the argument (p. 139) for the differential equation of the normal curve is hardly convincing. Besides the useful 6-place tables of logarithms and antilogarithms at the back of the book, there are some half-dozen other tables that might well be placed at the back.

E. L. DODD

Methodik des mathematischen Unterrichts. Dritter Teil: *Didaktik der angewandten Mathematik.* By W. Lietzmann. Leipzig, Quelle und Mayer, 1923. xi + 234 pp.

This is the third and last volume of a work of which the second volume has already been reviewed in this BULLETIN, (1923, p. 479). The general characteristics of the present volume on "Applied Mathematics" are similar to those of its predecessor. Accordingly, it will suffice to mention here the various fields whose mathematical aspects are discussed in so far as they fall within the scope of secondary school mathematics, namely: linear drawing, manual training, geodesy and astronomy, commerce and politics, mechanics, physics, philosophy.

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