Rutta, Milne). 14. The normal law of error and the principle of least squares. 15. The precision of measurements. 16. Empirical formulas. 17. Harmonic analysis of empirical functions.

Problems are given at the end of every chapter and a table of values of the probability integral is given in an appendix. Of particular importance for a work of reference is the adequate index.

W. R. LONGLEY

The Mathematical Part of Elementary Statistics. By Burton Howard Camp. New York, D. C. Heath and Company, 1931. 409 pp.

Professor Camp's new book is a most thoroughly worked out and comprehensive textbook for teaching the student with the minimum of mathematical preparation the maximum about the mathematical tools of statistical analysis. In fact the extent to which mathematical formulas and results which depend on mathematical considerations of a more or less advanced character for their complete understanding are explained and made available to students whose mathematical equipment is not supposed to go beyond analytic geometry, almost makes this book a new departure in its class.

The book is divided into three parts, the third part being tables with an introduction to them. The first part covers a minimum course for one semester and avoids the more difficult notions of Part II. Part II takes up the point binomial, the Gram-Charlier series, sampling, the Tchebycheff inequality and modifications of it, the X-square test, and a more thorough discussion of correlation including an admirable geometrical explanation of multiple correlation. There is also an introductory chapter on finite differences. A feature of the tables is their adaptability to the problem of easily getting a good approximation to the sum of a group of consecutive terms of a skew point binomial.

Most texts on statistics are sadly lacking in problems; every teacher of statistics knows how hard they are to get up, and Professor Camp is to be congratulated on the full and excellent tests he has provided.

Because of the author's wide first-hand knowledge of the subject, what he has to say about mathematical statistics is accurate. (It seems at least doubtful to the reviewer whether the logical difficulties involved in any attempt to define probability should be mentioned in a book of this character. The author does not mention them.) But the reviewer cannot feel entirely comfortable about teaching so much more about the subject than can be taught of it. He is thoroughly convinced of the value of the study of mathematical statistics and probability as a discipline, of its value for its own sake as a branch of mathematics. And he confesses to being dubious about the practical utility of the knowledge one can gain at second-hand about matters as complex as many of those dealt with in the second half of Professor Camp's book. Perhaps it should be stated explicitly here that this review is written from the point of view of one interested in mathematical statistics for its own sake. But there is great pressure from outside upon mathematics departments to teach the practical methods of mathematical statistics to students of small mathematical preparation and maturity, and wherever this is undertaken Professor Camp's book will be a very valuable aid.

C. C. CRAIG