author's own words, "stands alone". However, it is interesting to a probabilist. It should also please people interested in simulation of random numbers. This book is a valuable addition to the existing mathematical literature.

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An Introduction to Statistical Mathematics. BY A. M. MATHAI. S. Chand and Co., Delhi (1967). xvi+432 pp. U.S. $8.

Professor Mathai addresses his book to those attending a one-year course in Probability and Statistics and to those learning these subjects by themselves. The accent is firmly on the mathematical aspect of statistical procedures, a feature accurately reflected in the title.

The book can be divided into three sections, background mathematics leading up to probability and random variables, distribution theory, and inference. The generally fast pace seems appropriate in the middle section, in which few new concepts are introduced, but gives unsatisfactory results elsewhere. In particular it is arguable that most of the first two chapters should not have been included, since the treatment of set theory and linear algebra given there is far too compressed to help the reader previously unfamiliar with them, and unnecessary for others.

The treatment of inference is, in principle, general, but virtually all the detailed discussion relates to the normal and binomial distributions, for which most of the standard techniques are given. There is, however, little attempt to provide any coherent development of the theory, and the mechanics of statistical techniques are emphasized at the expense of their rationale.

On reading through the book one is left with the feeling that the subtlety of the material would have been more appropriately served by a more careful presentation. The abundance of misprints would seriously mislead anyone working alone, and incorrect or vague statements are hardly less in evidence. We learn, for example, that if, in successive trials, the probability of success is not constant the hypergeometric distribution is appropriate, also that the maximum likelihood ratio test usually gives a uniformly most powerful critical region for testing a simple or composite hypothesis. The short discussion of sampling from a finite population is rendered unconvincing by an erroneous definition of a simple random sample.

The author's pedagogical style involves repetitions of the sequence: theory, example (with solution) or proof, and comments. This is quite effective, particularly in the earlier chapters. Many exercises are provided, but occasionally these are badly linked with the text, and some cannot be answered without recourse to results and techniques not given in the book. For example, the reader is instructed

to use the Central Limit Theorem seven pages before it is introduced in the text. Further, the inadequate discussion given to such an important result deals only with the mean of a random sample, while the earlier exercise would, were it not marred by a misprint in a crucial place, necessitate application of the Theorem to the sum of random variables. This distinction, while slight, is nevertheless one which must cause great trouble to an inexperienced reader. Such a reader will encounter similar difficulties—and some more serious—throughout the text.

The book closes with 30 pages of tables, mainly specially computed tables of cumulative binomial or Poisson probabilities, answers (several of which are incorrect) to selected exercises, and an index.

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Fundamentals of Probability Theory and Mathematical Statistics. By V. E. Gmurman. English translation edited by I. I. Berenblut. Illiffe Book Ltd., London (1968). 249 pp. 50 shillings.

During the last decade there has been a tremendous growth, especially, of elementary textbooks on Statistics, and the present book is one of them. It contains the usual material that is found in other elementary textbooks, except decision theory, nonparametric statistics, testing of hypotheses, and analysis of variance. Perhaps, Berenblut could have included these topics to make the book more suitable for the English market. The book stresses the calculating rather than the analytic aspect. Most of the problems in the book are direct applications of the theory and there are no tricky problems. Further, very few problems show applications to other disciplines, such as, sociology, economics, and engineering.

The book is divided into three parts: (1) Probability, (2) Calculus of Random Variables, (3) Statistics.

The first part consisting of five chapters deals with very simple problems of numerical probability including Bernoulli's theorem. The second part consisting of the next eight chapters introduces the descriptive ideas of univariate and bivariate distribution functions and the constants (parameters) associated with the distribution functions. A chapter is devoted to the law of large numbers. The last part consisting of only four chapters is devoted to elementary statistical methodology including the calculations of confidence intervals and sample correlation coefficient.

The book is almost error-free and the printing and the general getup of the book is fairly good. However, there is no special feature of the book which is worth