quite recent material. The reviewer especially liked the "Bibliography and Discussion" at the end of each chapter. The pertinent comments are made at this time rather than interrupting the mathematical development of the subject matter.

The level of the book is sufficiently elementary so that first year graduate students could be expected to grasp the material. Some knowledge of matrix theory is required. *Matrix Iterative Analysis* belongs in the personal library of every numerical analyst interested in either the practical or theoretical aspects of the numerical solution of partial differential equations.

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44[I].—D. S. MITRINOVIĆ & R. S. MITRINOVIĆ, *Tableaux d'une classe de nombres reliés aux nombres de Stirling*, *Publ. Fac. Elect. Univ. Belgrade* (*Serie: Math. et Phys.*), No. 77, 1962, 78 p.

Pages 7–76 contain tables of the integers ${}^pP_n^{\,r}$ defined by

$$\prod_{r=0}^{n-1} (x - p - r) = \sum_{r=0}^{n} {}^pP_n^{\,r} x^r$$

The values are for $p = 2(1)5$, $n = 1(1)50 - p$, $r = 0(1)\ n - 1$; for a few p and r, n assumes values to 50 instead of $50 - p$. The values are exact, several having 64 digits. Connections with Stirling and generalized Bernoulli numbers are explained. For earlier work on Stirling numbers by the same authors, see *Math. Comp.*, vol. 15, 1961, p. 107 and vol. 16, 1962, p. 252.

A. F.

45[K].—B. M. BENNETT & E. NAKAMURA, *Significance Tests in a 2 × 3 Contingency Table, A = 3(1)20*, University of Washington, Seattle, February 1963. Deposited in UMT File.

For qualitative data classified in the form of a 2 × 3 contingency table

	Sample 1	Sample 2	Sample 3	Total
'Successes'	a_1	a_2	a_3	$a = \Sigma a_i$
'Failures'	$A - a_1$	$A - a_2$	$A - a_3$	$N - a$
Total	A	A	A	N

where each a_i $(0 \leqq a_i \leqq A)$ represents the results of A independent binomial trials in each of which "Success" or "Failure" has been observed, it is known that the conditional probability of obtaining a particular configuration subject to a fixed overall marginal total $(=a)$ is

$$f(a_1, a_2, a_3 \mid a) = \binom{A}{a_1}\binom{A}{a_2}\binom{A}{a_3} \Big/ \binom{N}{a}$$

Freeman & Halton (*Biometrika*, v. 38, 1952, p. 141–149) suggested a randomized test procedure using these conditional probabilities in evaluating the significance of 2 × 3 and $r \times c$ contingency tables generally. This method is used to obtain the significance points for the 2×3 contingency table for $A = 3(1)20$ at levels of significance $\alpha = 0.05, 0.025, 0.01$, and 0.001, respectively, when $a = [\frac{3}{2}A]$, which by symmetry includes all significant combinations if the categories of Success and Failure are interchanged.

AUTHORS' SUMMARY

46[K].—SAMUEL S. WILKS, *Mathematical Statistics*, John Wiley & Sons, New York, 1962, 23.5 cm., xvi + 644 p. Price $15.00.

This long awaited book by Professor Wilks is written primarily as a text on the graduate mathematics level. A brief summary of its contents will best indicate the wide extent of the material it covers. The first part of the book is concerned with standard topics. Chapter 1 gives a condensed treatment of probability measures and spaces, followed by chapters on distribution functions, expected values and moments, special distributions, characteristic functions, and limit theorems. Each of these subjects is covered in considerable detail for a general-purpose mathematical statistics text. For instance, the chapter on mean values and moments is composed of 24 pages of tightly packed exposition on this topic for one-dimensional random variables, two-dimensional random variables, k-dimensional random variables, linear functions of a random variable, conditional random variables and, finally, least-squares regression.

The book then has chapters on sampling theory, asymptotic sampling theory, linear estimation, nonparametric estimation, and parametric estimation. Separate chapters treat the testing of parametric and nonparametric hypotheses. At the end there are introductory chapters on sequential analysis, decision functions, time series, and multivariate theory.

The outstanding feature of this book is its extensive and detailed, yet unified, coverage of material. It gives enough topics for a full-year graduate course, with much to spare. In this way the book fills a real need for instructors who want a more modern treatment and selection of topics, and less measure theory, than Harald Cramér's 1946 classic has, but who still want a graduate text that gives a thorough grounding in fundamentals along with plenty of "elbow room".

However, this bounty comes at a price, namely, the neglect of discussion on the statistical aspects of the mathematical theory. The author himself states in the preface that, in order to give a proper mathematical treatment, no attempt was made to discuss the statistical methodology for which the mathematics is being developed. Hence, this book is better described as a treatise on the "mathematics of statistics" rather than "mathematical statistics". There is a lack of motivation and emphasis, and the novice mathematical statistician will not know where he is going or why.

For example, in the chapter on special distributions ten pages are devoted to introducing the beta distribution and its multivariate form, the Dirichlet, while a total of only five pages are used for the χ^2-, the t-, and the F-distributions. Without any guiding discussion on their relative importance and usefulness in later work, the student is likely to be misled and will spend a disproportionate amount of energy on the beta and Dirichlet distributions. But here we also see an example of the value of the book; the section on the beta and Dirichlet distributions is preliminary to an unusually thorough treatment of order statistics.