

- 32 [8].—THE INSTITUTE OF MATHEMATICAL STATISTICS, Editors, and H. L. HARTER & D. B. OWEN, Coeditors, *Selected Tables in Mathematical Statistics*, Volume I, American Mathematical Society, Providence, R. I., second printing with revisions, 1973, 403 pp., 26 cm. Price \$8.60.

This is the first of a series of specialized tables prepared and edited by the Committee on Mathematical Tables of the Institute of Mathematical Statistics and published by the American Mathematical Society under a joint agreement.

The present volume contains five sets of tables; namely, "Tables of the Cumulative Noncentral Chi-Square Distribution", by G. E. Haynam, Z. Govindarajula and F. C. Leone, "Tables of the Exact Sampling Distribution of the Two-Sample Kolmogorov-Smirnov Criterion  $D_{mn}$ , ( $m \leq n$ )", by P. J. Kim and R. I. Jennrich, "Critical Values and Probability Levels for the Wilcoxon Rank Sum Test and the Wilcoxon Signed Rank Test," by Frank Wilcoxon, S. K. Katti and Roberta A. Wilcox, "The Null Distribution of the First Three Product-Moment Statistics for Exponential, Half-Gamma, and Normal Scores," by P. A. W. Lewis and A. S. Goodman, and "Tables to Facilitate the Use of Orthogonal Polynomials for Two Types of Error Structures," by Kirkland B. Stewart.

Each set of tables is prefaced by an introduction, a description of the mathematical algorithms used in their preparation, a discussion of tabular accuracy and interpolation, examples of their application, and references to the relevant literature.

A possible criticism of this collection of tables is that it is too specific and selective; however, this reviewer believes that this selection reflects the fact that most statistical texts do not adequately address the problems to which these tables apply. For example, this reviewer has many times been confronted with problems in chemical and mechanical engineering where a cumulative-error model beyond that of the first degree would have been appropriate, but necessary guidance was not to be found in the available literature. The tables of Stewart would have been extremely useful in that connection, and it is to be hoped that these tables will inspire similar research with other types of error structures.

Similarly, the tables of Lewis and Goodman address certain reliability problems involving failure clustering patterns that do not conform to typical textbook problems.

Especially useful is the presentation by Haynam, Govindarajula and Leone of two types of tables displaying different aspects of the power of the chi-square distribution as illustrated by well chosen examples.

The importance of the tables of Kim and Jennrich and also of those of Wilcoxon, Katti and Wilcox cannot be overemphasized for those researchers who depend upon distribution-free statistics for the solution of many of their problems.

In conclusion, this reviewer endorses this approach adopted by the Institute of Mathematical Statistics of soliciting meritorious material for mathematical statistical tables. This procedure should lead to a broad representation of those difficult statistical problems that continue to challenge researchers, and it should provide relevant tables not hitherto accessible in the literature.

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- 33 [9].—I. O. ANGELL, *Table of Complex Cubic Fields*, Royal Holloway College, University of London, Surrey, England, 1972, 53 computer output sheets deposited in the UMT file.

There are listed here the 3169 nonconjugate cubic fields  $Q(x)$  having discriminants  $-D$  between 0 and  $-200000$ . For each  $Q(x)$  there is given:  $D$ ; a generating equation