ance limits must be computed on the basis of a sample estimate $\bar{x}$ of the mean and an estimate s of the standard deviation. The tolerance limits treated in the booklet have the form $x \pm Ks$, where the factor K (the product of the tabulated entries $r(N, P)$ and $u(f, \gamma)$) accounts for sampling errors in $\bar{x}$ and s as well as for the population fraction P.

Six levels of probability for P and γ are used (.50, .75, .90, .95, .99, .999). The values of N used are given by

$$N = 1(1)300(10)1000(1000)10000, \infty.$$

The values of f used are given by

$$f = 1(1)1000(1000)10000, \infty.$$

Values of $r(N, P)$ and $u(f, \gamma)$ are given to four decimal places, which means that most of the tabular entries have five significant figures.

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48[K].—E. J. Williams, *Regression Analysis*, John Wiley & Sons, Inc., New York, 1959, ix + 214 p., 24 cm. Price $7.50.

This useful volume is a monograph devoted to the exposition of the practical aspects of "regression analysis." These so-called regression analysis techniques are based on the method of least squares and are equivalent to analysis of variance procedures. The author discusses many different techniques, some containing much novelty. All are accompanied by illustrations using actual data drawn mainly from the biological sciences. The book contains a great deal of interesting discussion and advice on the proper and practical applications of the methods.

No attention is devoted to the planning of experiments; the book is only concerned with the analysis of data. Although nearly all the techniques involve the solution of simultaneous equations, there is little discussion of numerical techniques, except to recommend the "Crout" method.

The author makes much use of statements about parameters which are termed fiducial statements. This reviewer feels these are confidence statements. In explaining the meaning of fiducial statements the author writes (p. 91), ". . . a fiducial statement about a parameter is, broadly speaking, a statement that the parameter lies in a certain range or takes a certain set of values. The statement is either true or false in any particular instance, but it is made according to a rule which ensures that such statements, *when applied in repeated sampling*, have a given probability (say 0.95 or 0.99) of being correct."

The various techniques are presented without theory, as "to have done so would have made the book unnecessarily long." Without the accompanying theoretical material, this book is simply a handbook of regression methods. It is for this reason that the reviewer feels the book will be more useful to applied statisticians than to the author's intended audience, i.e., research workers in the experimental sciences.

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49[L].—G. F. MILLER, *Tables of Generalized Exponential Integrals*, National Physical Laboratory Mathematical Tables, Vol. 3, British Information Services, New York, 1960, iii + 43 p., 28 cm. Price $1.43 postpaid.

According to the author, the tables under review were prepared to meet the requirements of quantum chemists concerned with the evaluation of molecular integrals, who frequently have found the tables computed by the New York Mathematical Tables Project and edited by G. Placzek [1] inadequate for this purpose.

Actually tabulated in the present work is the auxiliary function

$$F_n(x) = (x + n)e^x E_n(x),$$

where $E_n(x)$ represents the generalized exponential integral, defined by the equation $E_n(x) = \int_1^\infty e^{-xt}t^{-n}\, dt$. Three tables of $F_n(x)$ to 8D are provided. The first table covers the range $x = 0(0.01)1$ for $n = 1(1)8$; the second, the range $x = 0(0.1)20$ for $n = 1(1)24$; and the last, the range $1/x = 0(0.001)0.05$ for $n = 1(1)24$. Modified second (and occasionally fourth) central differences are provided throughout for use with Everett's interpolation formula. For details of methods of interpolation and tables of interpolation coefficients the table-user is referred to the first two volumes of this series of tables [2], [3].

It is stated that the total error in an unrounded interpolated value of $F_n(x)$ derived from the present tables need never exceed $1\frac{1}{2}$ units in the eighth decimal place if the tabulated differences are used. Furthermore, the values of $F_n(x)$ here tabulated are guaranteed to be accurate to within 0.6 unit in the last place.

The tables are preceded by an Introduction containing a brief account of pertinent literature, followed by a section devoted to a description of the tables and a justification for the tabulation of $F_n(x)$ in preference to $E_n(x)$. The properties of the generalized exponential integral, many of them reproduced from Placzek [1], are enumerated in a third section. The fourth section of the text is devoted to a careful description of the several procedures followed in the preparation of the tables. An excellent set of references is appended to this introductory textual material.

The typography is uniformly excellent, and the format of the tables is conducive to their easy use. The only defect observed was a systematic error in the heading of Table 2 on pages 24 through 37, where this heading erroneously appears as Table 3.

J. W. W.

1. NATIONAL RESEARCH COUNCIL OF CANADA, Division of Atomic Energy, Report MT-1, *The Functions* $E_n(x) = \int_1^\infty e^{-xu}u^{-n}\, du$, Chalk River, Ontario, December 1946. Reproduced in