$$x_3 = 0.46271\, e^{x_1} - 0.76287,$$
$$x_4 = -1 - \log_e (1 - y),$$
$$\begin{cases} 124416\, x_5 = -9552 + 127225\, x_1 + 7824\, x_1^2 - 40\, x_1^3 + 576\, x_1^4 - 252\, x_1^5, & x_1 > -2.5, \\ x_5 = -1.86, \quad x_1 \leqq -2.5, & \end{cases}$$
$$1536\, x_6 = 1411\, x_1 + 56\, x_1^3 - 3\, x_1^5,$$
$$124416\, x_7 = -12144 + 122878\, x_1 + 14304\, x_1^2 - 1066\, x_1^3 - 720\, x_1^4 + 261\, x_1^5,$$
$$\begin{cases} x_8 = -2^{-1/2} \log_e [2 - 2y], & x_1 > 0 \\ x_8 = 2^{1/2} \log_e 2y & x_1 \leqq 0. \end{cases}$$

Then, for $i = 1(1)8$, $E(x_i) = 0$, $E(x_i^2) = 1$. Here x_2 is a rectangular random variate; x_3, a log-normal variate; x_4, a one-tailed exponential variate; x_8, a two-tailed exponential variate; x_5, x_6, x_7 are Cornish-Fisher expansions with specified κ_3 and κ_4. A short table on p. 179 shows that the specifications are not met precisely; Pearson's note shows that this failure is negligible for samples of 1000.

The main table, p. 183–202, gives 1000 values of x_i, $i = 1(1)8$, to 2 D, with Σx and Σx^2 in blocks of 50. Auxiliary tables on p. 180–182 give the first and second sample moments of the x_i; their theoretical κ_3, κ_4, κ_5, κ_6; frequency distributions of the 8 samples; x_5, x_6, x_7 to 3 D for $x_1 = -3.2(.1) + 3.2$. The italic headlines on p. 181–182 should be interchanged.

It is not clear why random normal numbers were used as the basis for this table rather than random rectangular numbers, nor why the 2 D deviates of Wold [1] were chosen over the 3 D deviates of Rand Corp. [2].

Reprints may be purchased from the Biometrika Office, University College, London, W.C. 1, under the title "Tables of 1000 standardized random deviates from certain non-normal distributions." Price: Two Shillings and Sixpence. Order New Statistical Tables, No. 27.

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1. Herman A. O. Wold, *Random Normal Deviates*. Tracts for Computers, no. 25, Cambridge Univ. Press, 1954.
2. The RAND Corporation, *A Million Random Digits With 100,000 Normal Deviates*. The Free Press, Glencoe, Illinois, 1955. [*MTAC*, v. 10, 1956, p. 39–43].

47[K].—Alfred Weissberg & Glenn H. Beatty, *Tables of Tolerance-Limit Factors for Normal Distributions*, Battelle Memorial Institute, 1959, 42 p., 28 cm. Available from the Battelle Publications Office, 505 King Avenue, Columbus 1, Ohio.

The abstract of the booklet reads as follows: "Tables of factors for use in computing two-sided tolerance limits for the normal distribution are presented. In contrast to previous tabulations of the tolerance-limit factor K, we tabulate the factors $r(N, P)$ and $u(f, \gamma)$, whose product is equal to K. This results in greatly increased compactness and flexibility. The mathematical development is discussed, including methods used to compute the tabulated values and a study of the accuracy of the basic approximation. A number of possible applications are discussed and examples given."

Since the mean μ and the standard deviation σ are frequently unknown, the tolerance 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