(2) when $\mu = \mu_0$ is known, σ can be estimated by a linear estimate of the form

$$S = b_1 X(n_1) + b_2 X(n_2) + \cdots + b_k X(n_k) - B\mu_0;$$

(3) when both μ and σ are unknown, (μ, σ) can be estimated by (U, S) where

$$U = c_1 X(n_1) + c_2 X(n_2) + \cdots + c_k X(n_k),$$

$$S = d_1 X(n_1) + d_2 X(n_2) + \cdots + d_k X(n_k).$$

In all cases, $1 \leqq R_1 \leqq n_1 < \cdots < n_k \leqq N - R_2 \leqq N$, where R_1 and R_2 are, respectively, the number of lower and upper observations that are censored.

In the present tables, $k = 1(1)4$ and the values of the coefficients of $X(n_i)$, A and B, and the ranks $n_1 < \cdots < n_k$ given are such that Lloyd's (1952) best linear unbiased estimate (obtained by the method of generalized least squares) based on the k order statistics $X(n_1) < \cdots < X(n_k)$ has minimum variance (when one parameter is known) or minimum generalized variance (when both are unknown) among the $\binom{N}{k}$ possible choices of the set of k ranks. Also given in the tables are the variances and covariances of the estimates (V(U), V(S), COV(U, S)), the variances of the estimates U and S based on all order statistics in the uncensored portion (V_1, V_2), the relative efficiencies (RE(U) $\equiv V_1$/V(U), RE(S) $\equiv V_2$/V(S)), and the generalized relative efficiencies (GE. RE. $\equiv V_1 V_2 - (\mathrm{COV})^2/\mathrm{V}(U)\mathrm{V}(S) - (\mathrm{COV}(U, S))^2$).

The tables include the following distributions: normal distribution, $f(y) = (2\pi)^{-1/2} \exp(-y^2/2)$, for $N = k(1)20$ (194 pages); logistic distribution, $f(y) = [\exp(-y)]/[1 + \exp(-y)]^2$, for $N = k(1)25$ (702 pages); Cauchy distribution, $f(y) = 1/[\pi(1 + y^2)]$, for $N = (k + 4)(1)16(2)20$ (94 pages); and double exponential distribution, $f(y) = (1/2)(\exp -|y|)$, for $N = k(1)20$ (197 pages).

The standard deviation of the logistic distribution is $(\pi/\sqrt{3})\sigma$ and that of the double exponential distribution (also called the Laplace distribution) is 2σ.

Computation of the tables was performed on an IBM 7040 system, with 8D output subsequently rounded to 6D in the final printouts.

More detailed descriptions of these tables and their roles in statistical inference can be found in [1] and [2].

AUTHORS' SUMMARY

1. LAI K. CHAN & N. N. CHAN, "Estimates of the parameters of the double exponential distribution based on selected order statistics," *Bull. Inst. Statist. Res. Training*, v. 3, 1969, pp. 21–40.

2. LAI K. CHAN, N. N. CHAN & E. R. MEAD, "Best linear unbiased estimates of the parameters of the logistic distribution based on selected order statistics," *J. Amer. Statist. Assoc.*, v. 66, 1971, pp. 889–892.

24[9].—BROTHER ALFRED BROUSSEAU, Editor, *Fibonacci and Related Number Theoretic Tables*, Fibonacci Association, St. Mary's College, California, 1972, xii + 151 pp. (spiralbound), 29 cm.

This is a collection of 42 tables which will gladden the hearts of Fibonacci devotees, consisting as it does of 26 tables dealing with sundry matters concerning the Fibonacci numbers (here called "F_n") and their companion sequence (here called "Lucas numbers, L_n"). The other 16 tables deal with other recurring sequences.

The contents of the first 12 tables are as follows:

Tables 1 and 2 give the complete prime decomposition of F_n and L_n for $n \leqq 150$, excerpted from a table of Jarden [1]. Table 1 is correct, except that the editor treats 1 as a prime, and the larger prime factor of F_{71} should read 46165371073. Table 2 is correct, except that the entry 2 for $n = 0$ is omitted, which leads the editor erroneously to underline the entry 2^2 for $n = 3$. The middle digits of L_{108} should be $\cdots 69265847 \cdots$.

Tables 3–5 consist of the squares, cubes, and fourth powers, and their sums, of F_n up to $n = 40$, 35, and 25, respectively.

Tables 6–8 give the same for L_n.

Table 9 contains the prime F_n for $n < 1000$. The last eight digits of F_{131} should be $\cdots 14572169$. The indices n for which F_n is prime were taken from Jarden [1], but contrary to the acknowledgment of the editor, the decimal values of these F_n for $n > 385$ were not, since Jarden's tables extend only to $n = 385$. Their source is consequently obscure.

Table 10 contains the prime L_n for $n < 500$, with the exception of the final entry, L_{353}, which was omitted from the reviewer's copy. This omission is difficult to explain, since the list of values of n used in preparing this table, which includes 353, is given in Jarden. The entry 2 for $n = 0$ is also missing from Table 10.

Table 11 gives the rank of apparition (or rank), here called "entry point," for each prime less than 10^4, as calculated by Wunderlich [2]. In the introduction to this table, the restriction $p \neq 2$ has been omitted both in rule (1) and in the sentence beginning, "If $Z(p)$ is odd, $\cdots$."

Table 12 gives the rank of apparition of all numbers n, $2 \leqq n \leqq 1000$, and also the period of the Fibonacci sequence modulo n.

Among the remaining 30 tables, selected titles are: "Residue cycles of Fibonacci sequences," "Fibonomial coefficients," "Continued fraction expansion of multiples of the golden section ratio," and "Special diagonal sums of Pascal's triangle."

The fact that the tables are not individually numbered, or located by an index with page numbers, makes them difficult to find. Also, the choice of an asterisk to represent the product sign makes the tables with products visually unattractive. This volume well represents the standards of taste and excellence of the Fibonacci Association.

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1. Dov Jarden, *Recurring Sequences*, 2nd ed., Riveon Lematematika, Jerusalem, 1966. (See *Math. Comp.*, v. 23, 1969, pp. 212–213, RMT **9**.) A new edition is in preparation.

2. Marvin Wunderlich, *Tables of Fibonacci Entry Points*, The Fibonacci Association, San Jose, California, January 1965. (See *Math. Comp.*, v. 20, 1966, pp. 618–619, RMT **87**.)

25 [9].—Kathryn Miller, *Solutions of* $\phi(n) = \phi(n + 1)$ *for* $1 \leqq n \leqq 500000$, De Pauw University, Greencastle, Indiana, 1972. Four-page table deposited in the UMT file.