18 [F].—Roger Osborn, *Tables of All Primitive Roots of Odd Primes Less than 1000*, University of Texas Press, Austin, 1961, 70 p., 30 cm. Price $3.00.

This slim volume lists all 28,597 primitive roots of the 167 odd primes less than 1000. These tables were computed on an IBM 650. The program and running times are not indicated. The most extensive earlier table, as noted by the author, is due to Chebyshev and extends to $p = 353$.

There also is a small table of statistical information. Perhaps the most interesting column here lists the number of (positive) primitive roots less than $p/2$ for each prime p. Of the 87 primes $\equiv -1 \pmod 4$, eight have exactly one-half of their primitive roots less than $p/2$. The seven primes 223, 379, 463, 631, 691, 883, and 907 have more than one-half less than $p/2$. The remaining 72 primes have less than one-half there. The author associates this preponderance with the well-known fact that more than one-half of the quadratic residues of such primes lie in this interval.

For the primes $\equiv +1 \pmod 4$ this column is clearly redundant, since it is easily seen that if g is a primitive root for such a prime then so is $p - g$. For these primes the real interval of interest is $p/4 < g < 3p/4$. Since the quadratic non-residues are in excess here, one would expect the primitive roots to also be preponderantly in excess, since approximately three-fourths of all non-residues are primitive roots.

D. S.

19 [I, X].—D. S. Mitrinović & R. S. Mitrinović, *Sur les nombres de Stirling et les nombres de Bernoulli de l'ordre supérieur*, *Publ. Fac Élect. Univ. Belgrade* (Série: *Math. et Phys.*), No. 43, 1960, 64 p. (French with Serbian summary.)

The tables in this paper extend those given in previous papers, especially the three reviewed in *Mathematics of Computation*, v. 15, 1961, p. 107. The notation used is explained in that review.

Table I (p. 15–44) gives $(-)^m C_m^{\ k}$ for $k = 0(1)32$, $m = 33(1)50$, and for $k = 33(1)49$, $m = k + 1(1)50$,

Table II (p. 45–50) gives $S_n^{\ n-m}$ for $m = 33(1)49$, $n = m + 1(1)50$, and also for $m = 50$, $n = 51$.

Table III (p. 51–63) gives $S_n^{\ n-m}$ for $m = 1(1)3$, $n = 201(1)1000$.

The tables were computed on desk machines. Checks made by the authors were supplemented by comparison with Miksa's unpublished tables and by many-figure computations made in laboratories at Liverpool, Rome, and Munich. A bibliography of 26 items is given.

A. F.

20 [K].—B. M. Bennett & P. Hsu, *Significance Tests in a 2 × 2 Contingency Table: Further Extension of Finney-Latscha Tables*, February 1961. Deposited in UMT File.

These manuscript tables constitute an extension for $A = 21(1)30$ of tables prepared by Latscha for $A = 16(1)20$, and supersede the previous tables by the present