$$\phi_n(x) = \left[\int_{-n-1}^{n+1} \beta(\xi; n, \alpha)\, d\xi\right]^{-1}\left[\frac{1}{2} + \frac{1+n-|x|}{2\,|1+n-|x||}\right]\beta(x; n, \alpha),$$

and the normalizing factor $\int_{-n-1}^{n+1} \beta(\xi; n, \alpha)\, d\xi$ is tabulated to 5D for $n = 0, 0.1, 0.5, 1, 2, \infty$.

Two computer plots are also included: one of $\beta(x; n, \pi/4)$ for the tabular arguments; the other of $\beta(x; 0, \alpha)$ for $\alpha/\pi = 0.05(0.05)0.25$ and $-1 \leqq x \leqq 3$.

J. W. W.

37 [9].—M. LAL, C. ELDRIDGE & P. GILLARD, *Solutions of* $\sigma(n) = \sigma(n + k)$, Memorial University of Newfoundland, May 1972. Plastic bound set of 88 computer sheets (unnumbered) deposited in the UMT file.

The function $\sigma(n)$ is the sum of all positive divisors of n. Table 2 contains 50 separate tables. The kth of these gives all $n \leqq 10^5$ such that

(1) $\sigma(n) = \sigma(n + k)$.

Also listed here are $n + k$ and $\sigma(n)$.

Table 1 gives the number of solutions above for each k. Thus, $k = 1$ has 24 solutions, the first being $n = 14$ and the last being $n = 92685$.

An earlier table, apparently unpublished, was by John L. Hunsucker, Jack Nebb, and Robert E. Stearns, Jr. of the University of Georgia. This larger table listed all 113 solutions for $k = 1$ and $n \leqq 10^7$. Their last is $n = 9693818$. They had the same 24 solutions $< 10^5$. They also computed (1) for all $1 \leqq k \leqq 5000$ and $n + k \leqq 2\cdot 10^5$, and so should include everything here deposited. I have not seen this larger table.

In their larger range of n there are still only two solutions for $k = 15$: $n = 26$ and $n = 62$. Won't someone please prove that there are only two? Or are there others?

D. S.

38 [9].—SOL WEINTRAUB, *Four Tables Concerning the Distribution of Primes*, 23 pages of computer output deposited in the UMT file, 1972.

Tables 2, 2A and 2B (6 pages each) are very similar to Weintraub's earlier [1]. See that review for the definitions of GAPS, PAIRS, ACTUAL, and THEORY. For the same variable $k = 2(2)600$, Table 2 lists these four quantities for the 11078937 primes in $0 < p < 2\cdot 10^8$; Table 2A for the (unstated number of) primes in $10^{16} < p < 10^{16} + 25\cdot 10^5$; and Table 2B for the 255085 primes in $10^{17} < p < 10^{17} + 10^7$. Nothing extraordinary occurs in these tables that requires special mention. The largest gap here is a case of $k = 432$ in Table 2A. ACTUAL and THEORY agree very well, as expected.

Table A (5 pages) covers the same range as Table 2 does. For $n = 1(1)200$ it first lists