number of gaps is

$$P = \int_N^{N'} dx/\log x,$$

while the number for $g = 2$ or for $g = 4$ is the well-known

$$E_2 = E_4 = 1.3203236317 \int_N^{N'} dx/\log^2 x.$$

For larger g, Brent uses his formulae developed in [1].

The first 21 tables are for the intervals

$$(10^j, 10^j + 10^6), \qquad j = 6(1)15;$$
$$(10^j, 10^j + 10^7), \qquad j = 7(1)14;$$
$$(10^6, 10^j), \qquad j = 7, 8, 9.$$

For each interval there is listed the first and last prime; the observed population for each g: O_g; the expected number E_g for $g = 2(2)80$ according to the aforementioned formulas; the expected number for $g > 80 = P - \sum_2^{80} E_g$; the normalized differences $(O_g - E_g)/(E_g)^{1/2}$; and a χ^2 computed for these 41 degrees of freedom. The χ^2 vary from 20 to 73 and seem to suggest that, if anything, the distribution agrees "too well" with the expected distribution.

For the remaining four intervals

$$(10^j, 10^j + 2\cdot 10^7), \qquad j = 15, 16,$$
$$(10^j, 10^j + 10^8), \qquad j = 14, 16,$$

only the empirical data are given, not the expected values or χ^2.

There is included a 13-page Fortran and 360 Assembly Language program. One sees that the estimating integrals were computed with a 16-point Gauss integration. There also is a 3-page text.

The empirical counts in the interval $(10^{14}, 10^{14} + 10^8)$ were tabulated earlier by Weintraub [2]. The data agree.

D. S.

1. R. P. Brent, "The distribution of small gaps between successive primes," *Math. Comp.*, v. 28, 1974, pp. 315–324.

2. S. Weintraub, UMT 27, *Math. Comp.*, v. 26, 1972, p. 596.

8 [9].—Edgar Karst, *The Third* 2500 *Reciprocals and their Partial Sums of all Twin Primes* (*p*, *p* + 2) *between* (239429, 239431) *and* (393077, 393079), University Computer Center, The University of Arizona, Tucson, Arizona, February 1973. Ms. of 207 computer sheets deposited in the UMT file.

9 [9].—Daniel Shanks & Carol Neild, *Brun's Constant*, Computation and Mathematics Department, Naval Ship Research and Development Center, Bethesda, Maryland, April 1973. Ms. of 67 computer sheets deposited in the UMT file. For a detailed review of these unpublished tables, see pp. 295–296 of this issue.