27[9].—SOL WEINTRAUB, *Distribution of Primes between* 10^{14} *and* $10^{14} + 10^8$, 6 pages of computer output deposited in the UMT file together with a text of 3 pages, 1971

The number of primes between 10^{14} and $10^{14} + 10^8$ is 3102679. (Riemann's formula gives the estimate 3102104.)

For each $k = 2(2)600$, these tables list four quantities:

COUNTS		RATIOS to $k = 2$	
GAPS	PAIRS	ACTUAL	THEORY

GAPS are the number of p_i in this interval such that $p_{i+1} - p_i = k$. PAIRS are the number of p here such that $p + k$ is prime (whether or not it is the next prime). ACTUAL is the ratio

$$\frac{\text{PAIRS }(k)}{\text{PAIRS }(2)}$$

and THEORY is that ratio according to the Hardy-Littlewood Conjecture.

Here are several observations. The most popular gap is for $k = 6$ (237524 specimens). The average gap is, of course, $\ln 10^{14} = 32+$. The number of twins ($k = 2$) is 127084. The first missing gap is $k = 332$. The largest gap is 414 and follows the prime $10^{14} + 13214473$. The most popular pairs are, obviously, for $k = 210$ and 420, namely, 408552 and 406950 specimens, respectively. "Actual" and "Theory" agree closely.

The brief text also mentions triples and quadruples.

See the following references for related tables.

D. S.

1. D. H. LEHMER, UMT 3, *MTAC*, v. 13, 1959, pp. 56–57.
2. F. GRUENBERGER & G. ARMERDING, UMT 73, *Math. Comp.*, v. 19, 1965, pp. 503–505.
3. M. F. JONES, M. LAI & W. J. BLUNDON, UMT 20, *Math. Comp.*, v. 21, 1967, p. 262.