6. J. E. LITTLEWOOD, "On the class-number of the corpus $P(\sqrt{-k})$", *Proc. London Math. Soc.*, v. 28, 1928, pp. 358–372.

7. P. LÉVY, "Sur le développement en fraction continue d'un nombre choisi au hasard", *Compositio Math.*, v. 3, 1936, pp. 286–303.

8. DANIEL SHANKS, "Calculation and applications of Epstein zeta functions", *Math. Comp.*, v. 29, 1975, pp. 271–287.

21 [9].—RICHARD P. BRENT, *Tables Concerning Irregularities in the Distribution of Primes and Twin Primes to* 10^{11}, Computer Centre, Australian National University, Canberra, August 1975, 2 pp. + 12 computer sheets deposited in the UMT file.

These tables supersede the author's earlier incomplete UMT [1], which one can see for further detail. The previous Tables 1 and 2 are here extended to $n = 10^{11}$, and the author thereby also completes two tables in his paper [2] as follows. To Table 1, page 45, add a final row:

$$8 \times 10^{10} \quad 10^{11} \quad 8176 \quad 16088 \quad -5618 \quad 3037 \quad -9881 \quad 1786$$

and to Table 4, page 51, add two more rows:

$$9 \times 10^{10} \quad 203710414 \quad -6872 \quad 1.797468808649 \quad 1.90216053$$

$$10^{11} \quad 224376048 \quad -7183 \quad 1.797904310955 \quad 1.90216054$$

While these tables required a great amount of machine time, the author expresses confidence in their accuracy since the counts of $\pi(n)$ obtained here for $n = 10^{10}(10^{10})10^{11}$ agree with earlier values computed by Lehmer's method. In the extension here, from $n = 8 \times 10^{10}$ to $n = 10^{11}$, of $r_1(n) = \langle L(n) \rangle - \pi(n)$, nothing extraordinary occurs, it being a melancholy feature of these computations that computation time goes as $O(n)$ while points of interest occur as $O(\log n)$.

The downward trend of $s_3(q)$ in Fig. 3 of [2] that began at $\log_{10}(q) \approx 10.6$ continues throughout this extension with one consequence that the estimate for Brun's constant is now up to 1.9021605. But the earlier value 1.9021604 may really be more accurate according to the discussion in the previous review [1]. Of course, it still is "unknown" that there are infinitely many twin primes; there are only 224376048 pairs here. Perhaps in all mathematics there is no conjecture for which there is more supporting data. Further, this data makes it almost certain that the Hardy-Littlewood conjecture is true. On the other hand, the second-order fluctuations, observed in Fig. 3, are a complete mystery; to my knowledge they have no rational interpretation whatsoever. It is a highly repetitive feature in the history of physics that the investigation of very small second-order effects (the perihelion of Mercury, the fine-structure of the hydrogen spectrum, etc.) have repeatedly led to a radically new understanding of the main phenomenon. If that is relevant here, let the reader draw the proper inference.

D. S.

1. RICHARD P. BRENT, UMT 4, *Math. Comp.*, v. 29, 1975, p. 331.

2. RICHARD P. BRENT, "Irregularities in the distribution of primes and twin primes", *ibid.*, pp. 43–55.

22 [9].—WILLIAM J. LeVEQUE, Editor, *Reviews in Number Theory*, Amer. Math. Soc., Providence, R. I., 6 vols., 2931 pp. Price $76.00 for individual AMS members.

This collection contains all reviews of papers of an arithmetical nature which have appeared in Volumes 1–44 (1940–1972) of *Mathematical Reviews*. As such, its value to anyone interested in recent research in number theory is hard to overestimate.

The reviews are classified by a modification of the 1970 MOS classification