

The known results thus appear to suggest an asymptotic relation for $CN(x)$ as of the order of $Cx^{0.4}$, which is much smaller than has been conjectured by Erdős [2]. In this connection, the change from 2.43 to 2.53 in the ratios of the last orders of magnitude computed may be significant.

AUTHOR'S SUMMARY

1. P. POULET, "Table des nombres composés vérifiant le théorème de Fermat pour le module 2 jusqu'à 100.000.000," *Sphinx*, v. 8, 1938, pp. 42–52. For corrections see *Math. Comp.*, v. 25, 1971, pp. 944–945, MTE 485; v. 26, 1972, p. 814, MTE 497.

2. P. ERDÖS, "On pseudoprimes and Carmichael numbers," *Publ. Math. Debrecen*, v. 4, 1956, pp. 201–206.

14 [9]—H. C. WILLIAMS & C. R. ZARNKE, *A Table of Fundamental Units for Cubic Fields*, Scientific Report 63, University of Manitoba, Winnipeg, January 1973.

Table 1 gives the fundamental unit $\epsilon_0 = (U + V\rho + W\rho^2)/T$ for all irreducible cubics $\rho^3 = Q\rho + N$ having $|Q|$, $N \leq 50$ and a discriminant $D < 0$. Table 3 gives ϵ_0 for $\rho^3 = A\rho^2 + B\rho + C$ with A , $|B|$, $|C| \leq 10$ and $D < 0$. For $D > 0$ there are two fundamental units and Tables 2 and 4 give both of them for the same range of Q , N and A , B , C , respectively.

These are the most extensive tables of cubic units known to me although for special types, such as cyclic or pure cubic fields, units have been computed that are not included here.

No attempt is made here to identify different Q , N or A , B , C that give the same field. That would be a valuable addition, especially if it gave the transformation taking one ρ into another.

D. S.

15 [9].—KENNETH S. WILLIAMS & BARRY LOWE, *Table of Solutions (x, u, v, w) of the Diophantine System $16p = x^2 + 50u^2 + 50v^2 + 125w^2$, $xw = v^2 - 4uv - u^2$, $x \equiv 1 \pmod{5}$ for Primes $p < 10000$, $p \equiv 1 \pmod{5}$* , Carleton University, Ottawa, 1974, manuscript of 13 pages deposited in the UMT file.

The authors tabulate the values (x, u, v, w) of one of the four solutions of the Diophantine system in the title for all primes $p \equiv 1 \pmod{10}$ less than 10000, the remaining three solutions being $(x, -u, -v, w)$, $(x, v, -u, -w)$, and $(x, -v, u, -w)$. These solutions are obtained from the coefficients of the Jacobi function of order five which have been tabulated by Tanner [1] for $p < 10000$. Two errors in Tanner's tables are noted and one in earlier tables.

A derivation of the well-known linear relationship between these coefficients (which are in fact Jacobsthal sums) and the solutions x, u, v, w is also given.

It should be pointed out that Joseph Muskat has obtained the solutions (x, u, v, w) a number of years ago for all $p \equiv 1 \pmod{10}$ for $p < 50000$ from

the corresponding values of the cyclotomic numbers of order five, which he also tabulated together with the ratios of x^2 , $50u^2$, $50v^2$, $125w^2$ to $16p$. This comprises 26 computer sheets and could probably still be obtained from the author.

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1. H. W. LLOYD TANNER, *Proc. London Math. Soc.*, v. 18, 1886–1887, pp. 214–234; v. 24, 1892–1893, pp. 223–272.