the computational procedure. The vertical lines drawn in divide the decimal part of the table into groups of five places.

Values indicated by a check have been recalculated either by another computer or by comparison with previous tabulations.

AUTHOR'S SUMMARY

37[E].—H. C. SPICER, *Tables of the Descending Exponential Function* e^{-x}, U. S. Geological Survey, Washington 25, D. C. Deposited in UMT File.

This manuscript is in the form of original computation sheets. It contains the values for e^{-x} with x ranging in value as follows: [0(0.0001)1] 25D; [1(0.001) 3.923] 25D; [3.923(0.01)10] 25D.

On each sheet the column indicated as x, the argument, is followed immediately on the same line with the 25-decimal-place value of e^{-x}. All of the values tabulated between two tabular values of e^{-x} are not to be used, as they were obtained as parts of the computational procedure.

The values indicated by C. K. at each 0.0005 mid-value are check values obtained by an additional computation. The difference between the two values is only indicated for the digits at the end of the value.

The values indicated by T. V. are comparison values from previous tabulations. The difference, as before, is only indicated for the end digits.

AUTHOR'S SUMMARY

38[F].—ROBERT SPIRA, *Tables Related to* $x^2 + y^2$ *and* $x^4 + y^4$. Five large manuscripts deposited in UMT files.

The following three tables have been computed:

1. All representations of $p^k = a_i^2 + b_i^2$, where p is a prime $\equiv 1 \pmod 4$ and $p < 1000$. The k's are such that max $(a_i, b_i) < 2^{35}$. The factorizations of a_i and b_i are also given.

2. All representations of $n = a^2 + b^2$ for $n < 122{,}500$. Also given are the factorizations of n, a, and b. The table continues to $n = 127{,}493$ but is not complete here, since a and b are always less than 350. Francis L. Miksa [1] has previously given the representations of the odd $N < 100{,}000$; as he explains in his introduction, the even N are easily derived from these. Miksa did not give the factorizations of n. It is not clear why Spira factors a and b also.

3. All representations of $n = a^4 + b^4$ for a and $b \leqq 350$. The table is thus complete for $n < 351^4 = 15{,}178{,}486{,}401$ but continues up to $n = 350^4 + 350^4$. Also given are the factorizations of n, a, and b.

This last table was searched for solutions of

$$U^4 + V^4 = W^4 + T^4,$$

and only the three known solutions, for U, V, W, and $T \leqq 350$, were found. This confirms the result of Leech [2]. The author adds that there is no solution of $U^5 + V^5 = W^5 + T^5$ for U, V, W, and $T \leqq 110$.

The calculations were done using a sorting routine on an IBM 704 in the University of California Computer Center.

D. S.