241.—P. C. MAHALANOBIS, "Tables of random samples from a normal population," *Sankhyā*, v. 1, 1933, p. 303–328.

We reconstructed MAHALANOBIS' table of random normal deviates as follows: Using the random numbers from TIPPETT's table (*Tracts for Computers*, No. 15, Cambridge 1927) as probabilities, we read the corresponding, normal deviate from the *Kelley Statistical Tables* (I), New York, 1938. In doing so, we found 427 errors which are greater than 0.001, of which 219 errors are greater than 0.01 with 132 errors greater than 0.1. In addition, the rows on ten pages are in the wrong order, and some blocks of numbers are totally incorrect, and much of page 306 is repeated on page 308.

Plans are being made to publish revised tables in *Sankhyā*.

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UNPUBLISHED MATHEMATICAL TABLES

Unpublished tables of special functions are mentioned in RMT **1256** and in *Phil. Mag.*, s. 7, v. 45, 1954, p. 599–609.

191[A].—F. L. MIKSA, *A Table of Binomial Coefficients for* N = 1 *to* N = 100. Typewritten manuscript of 41 p. deposited in the UMT FILE. Other copies are obtainable gratis from the author.

This table gives exact values of the binomial coefficients for the first hundred integer powers. It is thus equivalent to RMT **1234.** A comparison of the two tables has not been made.

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192[F].—A. FERRIER, *Étude de* $5n^2 + 1$ *et* $5n^4 + 1$. 13 typewritten pages deposited in the UMT FILE.

This study is in three parts. The first part gives the solutions n of the congruences

$$5n^2 + 1 \equiv 0 \pmod{p}, \quad p < 12000$$
$$5n^4 + 1 \equiv 0 \pmod{p}, \quad p < 12000$$

The second part is a list of numbers $5n^2 + 1$ for $n \leqslant 5000$ which have a prime factor exceeding 10^7. The last part is a factor table of $5n^4 + 1$ complete to $n = 100$ and partially complete to $n = 1000$.

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193[F].—F. L. MIKSA, *Table of All Primitive Pythagorean Triangles Having Equal Areas Below* 97017 29310. Twelve mimeographed leaves deposited in the UMT FILE.

Fermat noted that if m and n are integers then the two triangles whose sides are equal to the absolute values of

$$(3n - m)^2n^2 + m^2(m + n)^2, \quad (3n - m)^2n^2 - m^2(m + n)^2, \quad 2mn(2mn - m^2 + 3n^2)$$

and

$$(3n + m)^2n^2 + m^2(m - n)^2, \quad (3n + m)^2n^2 - m^2(m - n)^2, \quad 2mn(2mn + m^2 - 3n^2)$$

constitute a pair of Pythagorean triangles of equal area. Not all such pairs are given by this rule, however. The table gives all pairs of such triangles which are primitive whose areas do not exceed 10^{10}, arranged according to increasing area. Besides the area, which is given also in factored form, the three sides and the Pythagorean generators of the triangles are given. There are 149 such pairs of triangles and one triplet. Of these only 81 are given by Fermat's rule. The triplet is made up of triangles whose sides are

(8580,3059,9109) (1380,19019,19069) (5852,4485,7373)

Each has an area of 13123110.

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194[F].—F. L. Miksa, *Counts of Primitive Pythagorean Triangles by Area.* 7 Hectographed leaves deposited in the UMT File.

This list gives the number of primitive Pythagorean triangles whose areas lie between various limits, up to 10^{10}. More precisely the intervals are

$$n \cdot 10^k \leqslant A < (n + 1) \cdot 10^k$$

for

$$k = 6, \quad n = 1(1)9$$
$$k = 7, \quad n = 1(1)99$$
$$k = 8, \quad n = 10(1)99$$

The total count for triangles with area less than 10^{10} is 52482.

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195[G].—R. L. Bivins, N. Metropolis, P. R. Stein & M. B. Wells, *Character Tables for Symmetric Groups of Degree* 15 *and* 16. One reel of microfilm deposited in the UMT File.

This table is the one referred to in the authors' paper *MTAC*, v. 8, p. 212–216.

196[K].—Mary G. Natrella, *Critical Values for Wilcoxon Rank Sum Test.* Six mimeographed leaves deposited in the UMT File.

Critical values of smaller rank sum for the Wilcoxon test for the 5,2, and 1 percent significance levels are given. These are compiled from various published tables with corrections of all known errata in the originals.

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197[L].—A. Opler, *Table Related to the Error Function.* 20 leaves tabulated from punched cards deposited in the UMT File.

The table gives 6S values of the integral

$$2 \exp (z^2) \int_z^\infty \exp (-t^2)\, dt$$

for $z = -4.5(.1)100$, together with first differences. The table is probably good to only 5S for most of the range.

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AUTOMATIC COMPUTING MACHINERY

Edited by the Staff of the National Applied Mathematics Laboratory of the National Bureau of Standards. Correspondence regarding the Section should be directed to Dr. E. W. Cannon, 415 South Building, National Bureau of Standards, Washington 25, D. C.

Bibliography of Coding Procedure

68. J. L. Jones, *A Survey of Automatic Coding Techniques for Digital Computers.*

This MIT master's thesis is one of the first publications on the general subject of automatic coding. It includes chapters on the basic forms of automatic coding, a survey of present techniques, and a survey of contemplated techniques with comments. It includes an appendix of additional applications of the interpretive method and an appendix listing computer groups interested in automatic coding.

69. C. C. Elgot, U. S. Naval Ordnance Laboratory, White Oak, Md., *Single v. Triple Address Computing Machines* (NAVORD Report 2741).

By utilizing a slightly idealized notion of a single address computer, the author obtains a partial answer to the question of whether a single address or a triple address computing machine requires fewer words to specify a sequence of instructions. While he finds that fewer words are required to code by means of an "idealized" single address machine, it is interesting to note that the pseudo codes for single address machines tend to be three-address codes.

70. H. B. Curry, U. S. Naval Ordnance Laboratory, White Oak, Md. *A Program Composition Technique as Applied to Inverse Interpolation* (NOL Memorandum 10337).

71. J. W. Backus, International Business Machines Corporation. Operational Characteristics of the IBM 704.

The IBM 704 differs from the 701 in that among other things four floating point operations have been added along with automatic address modification. Here floating binary point representation similar to that presently used in pseudo-codes can be utilized directly by the computer.

72. W. Brown, J. DeTurk, H. Harner, E. Lewis, University of Michigan. The MIDSAC Computer.