MATHEMATICAL TABLES—ERRATA

References to Errata have been made in RMT **693** (Mather), **704** (Greenwood & Danford), **718** (Wiener), **719** (Krat & Petrov).

162.—R. A. FISHER & F. YATES, *Statistical Tables for Biological and Medical Research*, Edinburgh, 1st ed. 1938, 2nd ed. 1943, 3rd ed. 1948.

Table 22, Initial differences of powers of natural numbers

r	*s*	*for*	*read*
12	19	51330	51300
12	21	31078	30178
12	22	61937	51137
12	23	27736 13530	27734 83930
12	24	45923 13460	45907 58260
12	25	08035 37080	07848 74680
13	23	52190	41390
13	24	60581 92000	60579 22000
13	25	33488 09460	33437 44260
14	24	51800	41000
14	25	03613 17200	03608 96000
15	25	58000	47200

These errata are in all three editions.

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Table 17, 3rd ed. only, Solution no. 11 should read

"Use 19, taking any set of varieties occurring in the same block, and deleting that block."

Professor W. L. STEVENS has recently derived a cyclic solution in two families for this design, namely:

$$\begin{matrix} a & b & c & e \\ a & d & f & i \end{matrix}$$

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163.—FMR *Index*, p. 39, line −7, reference to actual partitions $n = 1(1)18$, CAYLEY 1881. In author's Index, p. 385, Cayley, 1881, refers incorrectly to *Trans., Camb. Phil. Soc.*, 13 and *Coll. Math. Papers*, 11, 144–147. In fact the correct reference is given in LEHMER's Guide, p. 90, CAYLEY 4 to *Am. Jn. Math.*, v. 4, 1881, p. 248–255 and *Coll. Math. Papers*, v. 11, 1896, p. 357–364.

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164.—D. H. LEHMER, "Note on an absolute constant of Khintchine," *Amer. Math. Monthly*, v. 46, 1939, p. 148–152.

The constant K mentioned in the title is the limit, as $n \to \infty$ of the geometric mean of the first n partial quotients in the continued fraction expansion of almost all real numbers. KHINTCHINE [1] has shown that this limit exists and its logarithm is given by:

$$\ln 2 \ln K = \sum_{r=2}^{\infty} \ln r \ln (1 + (r(r+2))^{-1}) = S.$$

Khintchine gave $K = 2.6$. Lehmer found that $S = .6847248$ but, in passing from S to K, erroneously concluded that $K = 2.685550$. This value is quoted in the FMR *Index*, p. 107. A transformation of the slowly converging series for S gives

$$S = \ln 2 - \tfrac{1}{2} \sum_{k=2}^{\infty} k^{-1}(1 - \zeta(2k)) \sum_{r=1}^{k-1} r^{-1}(2r+1)^{-1},$$

where ζ is RIEMANN's function. From tables [2] of this function we find that

$$S = .68472478856$$

and hence

$$K = 2.685452001.$$

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[1] A. KHINTCHINE, "Zur metrische Kettenbruchtheorie," *Compositio Math.*, v. 3, 1936, p. 276–285.

[2] H. T. DAVIS, *Tables of the Higher Mathematical Functions*, v. 2, Bloomington, 1935, p. 244.

165.—NBSMTP, *Tables of Fractional Powers*, Columbia University Press, N. Y., 1946. There is a last figure error in the 15D value of π^{10} in table 3, p. 34. In fact the correct value to 20D is given by J. T. PETERS, *Zehnstellige Logarithmentafel. Erster Band, . . . Anhang* by PETERS & STEIN, Berlin, 1922.

$$\pi^{10} = 93648.04747\ 60830\ 20973\ 71669.$$

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166.—KEIKITIRO TANI, *Tables of si(x) and ci(x) for the Range x = 0 to x = 50*. Meguro, Tokyo, Naval Research and Experiment Establishment, 1931, iv, 128 p. 18.4 × 25.6 cm.

The following errors were found when the NBSCL was preparing its three volumes for tables of Si(x), Ci(x), Ei(x), $-$Ei($-x$), 1940–1942. In the Tani tables are values of $si(x)$ for $x = [0(.01)50;\ 6D]$, Δ; and values of $ci(x)$ for $x = [0(.0001).05(.001)1(.01)50;\ 6D]$, Δ.

Argument	*For* $ci(x)$	*Read* $ci(x)$	Argument	*For* $ci(x)$	*Read* $ci(x)$
0.057	−2.288200	−2.288300	2.34	0.335436	0.335434
0.512	−0.157037	−0.157039	2.38	0.326406	0.323405
0.656	+0.049348	+0.049948	2.39	0.320358	0.320356
0.843	0.233949	0.233943	2.45	0.301748	0.301746
1.67	0.468998	0.468996	3.91	−0.125351	−0.125349
1.68	0.468377	0.468375			
1.69	0.467701	0.467699	8.55	+0.095875	+0.095785

The argument following 2.58 *should read* 2.59, *not* 2.69; the argument following 5.74 *should read* 5.75, *not* 3.75.

Apart from the 13 errors greater than one unit in the last place, listed above, there were 334 last-place unit errors in values of $ci(x)$, and 127 such errors in $si(x)$.

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167.—J. TRAVERS, "Perfect numbers," *Math. Gazette*, v. 23, 1939, p. 302.

The 10-th and 11-th perfect numbers are given incorrectly. The 30-th digit (from the left) of P_{10} should be 4, not 2. The 27-th digit of P_{11} is missing; it should be 4.

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UNPUBLISHED MATHEMATICAL TABLES

EDITORIAL NOTE: Beginning with this issue we are starting a collection of unpublished mathematical tables to be known as the UMT FILE. Authors of tables which have no immediate prospect of publication are invited to submit copies for deposit in UMT FILE. Description of such tables will appear in UMT and photostat or microphilm copies will be supplied at cost to any reader of *MTAC*. Address tables or correspondence to D. H. LEHMER, 942 HILLDALE AVE., BERKELEY 8, CALIFORNIA.

84[C].—G. W. REITWIESNER, *Arccot* 5 *and arccot* 239 *to* 2035 *places*. On deposit in UMT FILE.

This is a by-product of the author's calculation of π [*MTAC*, v. 4, p. xx].

85[F].—D. JARDAN [YARDEN] & A. KATZ. *Additional page 477 to D. N. Lehmer's Factor Table*. On deposit in UMT FILE.

This single page is of the same form as Lehmer's well known factor table [Carnegie Institution of Washington, *Publ.* 105, 476 p.] and covers the range 10 017 000 − 10 038 000.

86[F].—SYLVESTER WHITTEN. *Tables of the totient and reduced totient function*. Manuscript deposited in UMT FILE.

The totient function, $\phi(n)$, is the number of numbers not exceeding n and relatively prime to n. The function $\phi(n)$ has the property that $a^{\phi(n)} - 1$ is divisible by n for all a prime to n. The reduced totient $\psi(n)$ is defined as the least positive number m such that $a^m - 1$ is divisible by n for all a prime to n so that $\psi(n) \leqslant \phi(n)$.