TABLE ERRATA

352.—P. F. Byrd & M. D. Friedman, *Handbook of Elliptic Integrals for Engineers and Physicists*, Springer-Verlag, Berlin, 1954.

On p. 10, line 3 of Formula 111.04 is not valid unless $\alpha^2 > 0$ and $\alpha \sin \varphi < 1$; it should be replaced by

$$\Pi(\varphi, \alpha^2, 1) = \frac{1}{1-\alpha^2}\left[\ln(\tan\varphi + \sec\varphi) - \alpha \ln \sqrt{\left|\frac{1+\alpha\sin\varphi}{1-\alpha\sin\varphi}\right|}\right], \quad \alpha^2 > 0;$$

$$= \frac{1}{1-\alpha^2}[\ln(\tan\varphi + \sec\varphi) + |\alpha| \tan^{-1}(|\alpha| \sin\varphi)], \qquad \alpha^2 < 0.$$

On p. 14, line 5 of Formula 117.03 is incorrect; the argument of the inverse tangent should read

$$\sqrt{\frac{\alpha^2(\alpha^2 - k^2)}{(1 - k^2\sin^2\varphi)(1-\alpha^2)}} \sin\varphi \cos\varphi$$

rather than

$$\sqrt{\frac{\alpha^2 - k^2}{(1 - k^2\sin^2\varphi)(1-\alpha^2)\alpha^2}} \sin\varphi \cos\varphi.$$

On p. 251, Formula 562.03 is incorrect; it should read

$$\int_0^\infty e^{-pt}\{[I_0^2(rt)]^2 + 2rtI_0(rt)I_1(rt)\}\, dt = \frac{2p}{\pi(p^2 - 4r^2)} E, \qquad k = 2r/p.$$

On p. 251, Formula 562.04 is incorrect; it should read

$$\int_0^\infty e^{-pt}[I_0(rt)]^2\, dt = \frac{2K}{\pi p}, \qquad k = 2r/p.$$

It should be noted that this last error appears also in *Tables of Integral Transforms*, Vol. 1, by Erdélyi *et al.*, in Section 4.16, Formula 10 (p. 196).

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353.—A. Erdélyi, editor, *Tables of Integral Transforms*, v. I, McGraw-Hill Book Co., New York, 1954.

The following corrections should be made in the cosine transform numbered 1.3(29), on p. 14: The term $[\Gamma(\mu - \frac{1}{2}\nu)]^{-1}$ should read $[\Gamma(\mu - \frac{1}{2}\nu + 1)]^{-1}$, and the term

$${}_1F_2\left(\mu + 1 - \frac{\nu}{2}, \mu - \frac{\nu}{2} + \frac{3}{2}; \frac{a^2y^2}{4}\right)$$

should read

$$ {}_1F_2\left(\mu + 1; \mu + 1 - \frac{\nu}{2}, \mu - \frac{\nu}{2} + \frac{3}{2}; \frac{a^2y^2}{4}\right). $$

The emended formula can be checked by setting $\nu = -\frac{1}{2}$ in formula 8.5(21) appearing on p. 24 of v. II of this work.

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354.—M. Kraitchik, *Recherches sur la Théorie des Nombres*, v. 1, Gauthier-Villars, Paris, 1924.

Table I (p. 131–191) includes a listing of the residue-index, γ, of 2 modulo p, for all odd primes p less than 300,000.

Errors therein have been noted by D. H. Lehmer [1, 3], A. E. Western [2], and Lehmer and F. Gruenberger [4].

In 1962 J. D. Swift prepared a computer list of values of γ for all odd primes less than a million. At the suggestion of Professors Lehmer and Swift, I have compared the new, unpublished list with the corresponding data of Kraitchik, and thereby discovered a total of 324 new errors in the latter's table. The great majority of these new corrections apply to that part of the table corresponding to $p > 10^5$.

A copy of the complete list of errata in Kraitchik's tabulation of γ has been deposited in the UMT file of this journal.

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1. D. H. Lehmer, *Guide to Tables in the Theory of Numbers*, Washington, 1941, p. 155.
2. *MTAC*, v. 1, 1943–1945, p. 429, MTE 63.
3. *MTAC*, v. 2, 1946–1947, p. 313, MTE 107.
4. *MTAC*, v. 8, 1954, p. 95, MTE 237; p. 96, UMT 184.

355.—Donald B. Owen, *Handbook of Statistical Tables*, Addison-Wesley Publishing Company, Inc., Reading, Massachusetts, 1962.

On page 539, in the table entitled Special Constants, the terminal decimal digits in the 15D approximations to π^{-1}, $(2\pi)^{1/2}$, and $(2\pi)^{-1/2}$ should each be increased by a unit.

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356.—National Bureau of Standards, *Tables of the Binomial Probability Distribution*, Applied Mathematics Series, No. 6, U. S. Government Printing Office, Washington, D. C., 1950.

In addition to the errata listed in *MTAC*, v. 8, 1954, p. 29, the following errors have been noted.

Page	n	r	p	Entry	
				for	read
131	40	19	.44	.1136–88	.1136988
133	40	9	.41	.0170522	.0070522
166	45	8	.02	.0000027	.0000026
192	49	17	.10	.0000023	.0000022
193	49	14	.10	.0001691	.0001690
358	45	8	.02	.0000029	.0000028
385	49	13	.10	.0008176	.0008175

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357.—R. D. VON STERNECK, "Empirische Untersuchung über den Verlauf der zahlentheoretischen Funktion $\sigma(n) = \sum_{x=1}^{n} \mu(x)$ im Intervalle von 0 bis 150000," Akad. d. Wiss. Wien, *Sitzungsberichte*, Math.-Nat. Cl. IIa, v. 106, p. 835–1024 (1897).

R. D. VON STERNECK, "Empirische Untersuchung über den Verlauf der zahlentheoretischen Funktion $\sigma(n) = \sum_{x=1}^{n} \mu(x)$ im Intervalle 150000 bis 500000," Akad. d. Wiss. Wien, *Sitzungsberichte*, Math.-Nat. Cl. IIa, v. 110, p. 1053–1102 (1901).

Following is a list of errors contained in these two tables of Mertens' function. The author has good reasons to believe that this list is complete. Owing to the methods of examination employed, no error should have been possibly left out in the first table, and any omission in the second table should be very unlikely. For the sake of completeness all errors already known and all misprints (as far as function values are concerned) have been included. The new values given have been computed several times and by independent methods so that there can be no reasonable doubt about their reliability. The only question remaining is why von Sterneck did not discover these errors, especially for the arguments 400000 and 440000, for which he carried out some strong checks which confirmed his values. The author suspected in an earlier paper (*Numerische Mathematik*, v. 5, 1963, p. 1–13) that these checks might have been based on wrong values in the first table. This conjecture was not supported by the examination of this table. Though all values possibly used in these checks were carefully examined, all were found to be right. Thus the question of this strange coincidence of errors remains unsolved.

The three columns below give the arguments x, the values $\sigma^*(x)$ from von Sterneck's tables, and the true values $\sigma(x)$. Obvious misprints have been indicated by . . . in the σ^*-column, dots in the x-column indicate an interval, the first and last argument of which are explicitly given. For these intervals the σ-values are given in terms of the σ^*.

x	$\sigma^*(x)$	$\sigma(x)$
29126	...	-2
29127	...	-1
29128	...	-1
33547	...	-3
33548	...	-3
58641	-62	-61
58642	-61	-62
58643	-61	-62
58644	-61	-62
62590	-46	-44
66301	33	31
...	σ^*	$\sigma^* - 2$
66306	34	32
86065	...	67
86066	...	66
86067	...	66
86068	...	66
97778	-62	-60
106553	-28	-26
...	σ^*	$\sigma^* + 2$
106558	-30	-28
106561	-28	-30
...	σ^*	$\sigma^* - 2$
106566	-26	-28
132602	-17	-15
...	σ^*	$\sigma^* + 2$
132613	-17	-15
155450	-75	-65
156900	-57	-47
166100	40	50
167450	42	32
173700	96	86
189800	38	28
193250	37	27
199750	3	-3
311950	147	149
...	σ^*	$\sigma^* + 2$
313750	99	101
313800	107	110
313850	104	106
...	σ^*	$\sigma^* + 2$
430200	39	41
430250	47	51
...	σ^*	$\sigma^* + 4$
440000	-6	-2
440050	11	13
...	σ^*	$\sigma^* + 2$
479950	44	46

It should be mentioned further that in the first table on p. 973 the last two columns should be marked 110200 and 110250 instead of 110250 and 110300.

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358.—(a) A. V. LEBEDEV & R. M. FEDEROVA, *Spravočhnik po matematičheskim tablitŝam*, Akad. Nauk, Moscow, 1956. [See RMT **49,** *MTAC*, v. 11, 1957, p. 104–106.]

(b) A. V. LEBEDEV & R. M. FEDEROVA, *A Guide to Mathematical Tables*, Pergamon Press, Oxford, 1960.

(c) N. M. BURUNOVA, *Spravočhnik po matematičheskim tablitŝam, Dopolnenie N.1*, Akad. Nauk, Moscow, 1959. [See RMT **1,** *Math. Comp.*, v. 15, 1961, p. 81.]

(d) N. M. BURUNOVA, *A Guide to Mathematical Tables, Supplement No. 1*, Pergamon Press, Oxford, 1960.

The following misprint originating on p. 157 of (a) has been reproduced in (b), (c), and (d).

For $\int_1^\infty e^{-xt}t^n\,dt = \frac{1}{x^{n+1}}\int_0^\infty e^{-t}t^n\,dt$, read $\int_1^\infty e^{-xt}t^n\,dt = \frac{1}{x^{n+1}}\int_x^\infty e^{-t}t^n\,dt.$

This correction is required also in (b), (c), and (d), as follows: (b), p. 157; (c), p. 36; and (d), p. 36.

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CORRIGENDA

A. C. R. NEWBERY, "Multistep integration formulas," *Math. Comp.*, v. 17, 1963, p. 452–455.

On p. 454, the element in the fifth row and second column of the corrector matrix corresponding to $K = 5$ should read -4032 instead of -4042.

A. C. R. NEWBERY

JOHN R. B. WHITTLESEY, "Incomplete gamma functions for evaluating Erlang process probabilities," *Math. Comp.*, v. 17, 1963, p. 11–17.

On p. 12, in section 3C, the continued fraction expression for $G_a(x)$ should read

$$G_a(x) = H_a(x)\left(\frac{a}{x} + \cfrac{a_1}{b_1 + \cfrac{a_2}{b_2 + \cfrac{a_3}{b_3 + \cdots}}}\right)$$

This typographical error does not affect either the single- or double-precision FORTRAN subroutines referred to in this paper.

On p. 14, in Fig. 2, for the *double precision* FORTRAN subroutine the "regions of x" should cover the range $0 < x < 7$, $7 \leqq x \leqq A_1$ instead of $0 < x < 1$, $1 \leqq x \leqq A_1$. This affects the double-precision subroutine output for $G_a(x)$ only for $a < 1$, $1 \leqq x < 1.35$. A corrected version of this program has been submitted to SHARE.

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