TABLE ERRATA

588.—JOHN BRILLHART, D. H. LEHMER & J. L. SELFRIDGE, "New primality criteria and factorizations of $2^m \pm 1$," *Math. Comp.*, v. 29, 1975, pp. 620–647.

P. 639, equation 36: The colon should be placed directly after the factor 257.

P. 641, equation 88: The ending for the final factor should read ...69361.

P. 643, line −9: Insert 225 between 222 and 226. (Submitted to me by Oswald Wyler.)

P. 643, line −1: Insert 205 between 201 and 207.

P. 644, line 13: Read "nine" for "eight", and insert 233 between 197 and 239.

JOHN BRILLHART

Department of Mathematics
University of Arizona
Tucson, Arizona 85721

589.—I. S. GRADSHTEYN & I. M. RYZHIK, *Table of Integrals, Series, and Products*, Corrected and enlarged edition, Academic Press, New York, First printing, 1980.

FOREWORD

This errata list, relating to the recently published "Table of Integrals, Series, and Products", corrected and enlarged edition, by I. S. Gradshteyn and I. M. Ryzhik, Academic Press, New York, 1980, is an abridged version of a more extended one which we have edited in March, 1981. In the interest of brevity, only the more significant items are included in this abridged edition. For instance, conditions like $a > 0$, $n = 1, 2, \ldots$, given by Gradshteyn and Ryzhik, are often only sufficient for the validity of a formula. Frequently the domain of validity can be extended into the complex plane by analytic continuation. The lack of precision in the formulation of the conditions in such cases is not considered as an erratum. These and similar items are omitted. A number of valid errata which refer to previous editions of Gradshteyn and Ryzhik and which remain in the corrected and enlarged edition have been previously reported in *Mathematics of Computation* (see the references below) and are therefore also omitted.

We have corrected a number of *invalid* errata reported in *Mathematics of Computation*. These corrections are reported herein.

We have incorporated many corrections that are listed on pp. 1101–1108 of the Russian fifth edition, published in Moscow in 1971.

New errata, recently submitted to us by H. E. Fettis, E. A. Kuraev, and Y. L. Luke have also been incorporated. We acknowledge with thanks their contributions along with comments and suggestions on our work.

A more extensive list of errata for the corrected and enlarged edition and a corresponding list for the fourth edition of Gradshteyn and Ryzhik are available from the authors on request.

Finally, listed below are the Mathematical Table Errata and Corrigenda notices relating to this work, together with the volume of *Mathematics of Computation* in which they can be found.

H. VAN HAERINGEN
L. P. KOK

Department of Mathematics
Delft University of Technology
Delft, The Netherlands

Institute for Theoretical Physics
P. O. Box 800
Groningen, The Netherlands

MTE #**408**: v. 21(1967), pp. 293–294.
MTE #**428**: v. 22(1968), pp. 903–907.
MTE #**437**: v. 23(1969), pp. 468–469.
MTE #**446**: *ibid.*, pp. 891–892.
MTE #**473**: v. 25(1971), p. 200.
MTE #**486**: v. 26(1972), p. 305.
MTE #**492**: *ibid.*, p. 599.
MTE #**503**: v. 27(1973), pp. 451–452.
MTE #**528**: v. 30(1976), p. 899.
MTE #**534**: v. 31(1977), p. 614.
MTE #**550**: v. 32(1978), p. 318.
MTE #**557**: v. 33(1979), p. 430.
MTE #**564**: *ibid.*, p. 846.
MTE #**565**: *ibid.*, p. 1377.
MTE #**572**: v. 35(1980), p. 1444.
MTE #**577**: v. 36(1981), pp. 317–318.
MTE #**582**: *ibid.*, p. 320.
Review, v. 20(1966), pp. 616–617.
Review, v. 36(1981), pp. 310–314.
Corrigendum, v. 26(1972), p. 601.
Corrigenda, v. 33(1979), p. 433.

p. xl:	Left column, line 9 up	
		Read $\mu(x, \beta)$, $\mu(x, \beta, \alpha)$ instead of $\mu(x, \beta)$.
p. 9:	0.243.2	Replace $p + (k - 1)q + l - 1$ by $p + (k - 1)q + l$.
p. 27:	1.331.1	For $(\frac{n}{5})$ read $\binom{n}{5}$.
	1.331.3	For $(\frac{n}{4})$ read $\binom{n}{4}$.
	1.331.4	For $(\frac{n}{2k})$ read $\binom{n}{2k}$.
p. 38:	1.443.1	Read $(\frac{x}{2})$ instead of $\binom{x}{2}$.
p. 40:	1.445.2	Read $0 \leqslant x$ instead of $0 < x$.
p. 46:	1.518.1	Read $0 < x < \pi$ instead of $x^2 < \pi^2$.
p. 46:	1.518.3	Read $0 < x < \pi/2$ instead of $x^2 < \pi^2/4$.
p. 46:	1.521.1	Add $[-\pi/2 < x < \pi/2]$.
p. 46:	1.521.2	Add $[0 < x < \pi]$.
p. 62:	Line 6	Replace $\sqrt{a/b}$ by $\sqrt[4]{a/b}$.
p. 94:	2.413.2	Second term on right-hand side:

$$\text{Read } \frac{1}{2^{2m-1}} \text{ instead of } \frac{1}{2^{2m\ \ 1}}.$$

p. 149: 2.557.2 Read $a \sin x + b \cos x$ instead of $a \cos x + b \sin x$.

p. 159: 2.583.11

$$\text{Read } -\frac{2(2k^4 - k^2 - 1)}{15k^4} \text{ instead of } +\frac{2(2k^4 - k^2 - 1)}{15k^4}.$$

p. 169: 2.586.8 Read $1 \pm k \sin x$ instead of $1 \pm \sin x$.

p. 285: 3.194.5 Read $\arg(1 + u\beta)$ instead of $\arg(1 - u\beta)$.

p. 288: 3.219 Read $\operatorname{Re}\mu > -1$, $\operatorname{Re}\nu > -1$ instead of $\operatorname{Re}\mu > 1$, $\operatorname{Re}\nu > 1$.

p. 290: 3.228.3 Add $[\mu + \nu \neq 1, \mu \neq 1, 2, \ldots]$ to the second right-hand side.

p. 292: 3.241.2 Read $\operatorname{Re}\nu >$ instead of $\operatorname{Re}\nu \geqslant$.

p. 301: 3.271.5 Read $0 < p^2 < \frac{1}{4}$ instead of $p^2 < \frac{1}{4}$.

p. 304: 3.311.5 Read 3.265 instead of 3.266.

p. 306: 3.317.1 Read 3.233 instead of 3.233 2.

p. 307: 3.323.1 is incorrect since the sum is divergent. According to 3.322.1 the integral is equal to

$$\tfrac{1}{2}\pi^{1/2}e^{q^2/4}\left[1 - \Phi\left(1 + \tfrac{1}{2}q\right)\right].$$

When $q = -2$ this expression reduces to $\frac{1}{2}\pi^{1/2}e$. For $q \neq -2$ one obtains, by using 8.254 and

$$(2k-1)!! = \pi^{-1/2}2^k\Gamma\left(k + \tfrac{1}{2}\right), \qquad k = 0, 1, 2, \ldots,$$

an asymptotic expression which is in agreement with the right side of 3.323.1.

p. 308: 3.333.2 Add $[\mu \neq 1]$. For $\mu = 1$ the value of the integral is $\ln 2$.

p. 309: 3.337.2 Read $H_\nu^{(1)}$ instead of H_ν^1.

p. 309: 3.337.3 Read $H_\nu^{(2)}$ instead of H_ν^2.

p. 311: 3.352.5 Add: If $a > u$, the integral must be interpreted in the Cauchy principal value sense. See the discussion given in this report for p. 523, 4.212. Similar remarks pertain to all integrals on pp. 311–315 where the symbol $\operatorname{Ei}(x)$ is used.

p. 311: 3.353.3 should read

$$\int_0^\infty \frac{e^{-px}\,dx}{(a+x)^2} = pe^{ap}\operatorname{Ei}(-ap) + \frac{1}{a}[p > 0, a > 0].$$

p. 319: 3.383.6 Read $\operatorname{Re}\mu \geqslant 0$ instead of $\operatorname{Re}\mu > 0$.

p. 319: 3.383.8 Delete the first three lines of the six lines on the right-hand side.

p. 321: 3.387.1 Read $\operatorname{Re}\nu > 0$ instead of $\operatorname{Re}\nu \geqslant 0$.

p. 324: 3.394 Replace $1 - 2i\mu$ by $-2i\mu$ and $\operatorname{Re}\nu > 0$ by $\operatorname{Re}\nu < 0$.

p. 325: 3.411.6 Read $x^{\nu-1}$ instead of $e^{\nu-1}$.

p. 325: 3.411.9 Read 4.231 3. instead of 4.231 2.

p. 326: 3.411.19 and 3.411.20 Delete $[\cdots]$.

p. 326: 3.411.22 For the right-hand side read

$$\Gamma(p)r^{-p}\sum_{k=1}^{\infty} q^{k-1}k^{-p}[p > 0, r > 0, -1 < q < 1].$$

p. 326: 3.411.25 Read 4.231 4. instead of 4.231 3.

p. 328: 3.417.1 Read 4.231 8. instead of 4.231 6.

p. 328: 3.417.2 Read 4.231 10. instead of 4.231 8.

p. 329: 3.418.1 This integral, p. 354, 3.531.1 and the negative of p. 533, 4.233.2 are the same.
Note the difference in the numerical values. We presume that the latter is correct.

p. 329: 3.419.4 Read $[\pi^2 + (\ln\beta)^2]^2$ instead of $\pi^2 + (\ln\beta)^2$.

p. 329: 3.419.6 Read (11) instead of (7).

p. 331: 3.423.5 Read 4.231 5. instead of 4.231 3.

p. 331: 3.425.1 Read 4.231 7. instead of 4.231 5.

p. 337: 3.458.2 Read $\nu = 1, 2, \ldots$ instead of ν—an integer.

p. 337: 3.461.5 Read $|\arg\mu| \leqslant \pi/2$ instead of $|\arg\mu| < \pi/4$.

p. 342: 3.478.1 Replace $1/|p|$ by $1/p$ and add $[p > 0]$.

p. 343: 3.482.1 Read $-\pi N_n(\beta)$ instead of $+\pi N_n(\beta)$.

p. 343: 3.483 The right-hand side should read

$$2\exp(-\tfrac{1}{2}\nu\pi i)K_\nu(a) \text{ for } a > 0,$$
$$2\exp(\tfrac{1}{2}\nu\pi i)K_\nu(-a) \text{ for } a < 0 \qquad [|\operatorname{Re}\nu| < 1].$$

p. 345: 3.514.1 Add $[a > 0]$.

p. 345: 3.514.2 Read $0 < |a| < b,\ 0 < t_2 < \pi$ instead of $b > |a|,\ 0 < t < \pi$.

p. 345: 3.514.3 Read $0 < a^2 < 1$ instead of $a^2 < 1$.

p. 345: 3.514.4 Read $0 < |b| < a$ instead of $a > |b|$.

p. 350: 3.524.9 is incorrect since the integral is divergent. Perhaps the integral should read

$$\int_0^\infty \frac{x^{2m-1}e^{-ax}}{\operatorname{ch} ax}\,dx.$$

See A. Erdélyi et al., *Higher Transcendental Functions*, Vol. 1, p. 39, Eq. (25).

p. 352: 3.527.3 Add $[\mu \neq 2]$.
Add $= \frac{1}{a^2}\ln 2$ if $\mu = 2$.

p. 353: 3.527.6 Read $\operatorname{Re}\mu > 1$ instead of $\operatorname{Re}\mu > 0$.

p. 354: 3.531.1 Add:

$$= \frac{4}{3^{1/2}}\left[\frac{\pi}{3}\ln 2 - L(\pi/3)\right] = \frac{2}{3^{1/2}}\operatorname{Cl}_2(\pi/3)$$

where $L(x)$ is given on p. 933, Section 8.260, and $\operatorname{Cl}_2(x)$ is Clausen's integral.
See also our comments on p. 329, 3.418.1.

p. 354: 3.531.2 For $\sin t \cos t$ read $\sin 2t$.

p. 354: 3.531.5, 3.531.6, 3.531.7.

Note that these integrals are related. In 3.531.6, use p. 1075, 9.550, replace μ by $\mu + 1$ and t by $\pi - t$ to get 3.531.7. In 3.531.6 if $t = 0$ the integral follows from p. 352, 3.527.1. Also if $t = \pi$ then 3.531.6 follows from p. 352, 3.527.3. In 3.531.6 if $t = \pi$ and $\mu = 2$ then the integral follows from 3.531.2. In 3.531.7, let $\mu = 2m$ and $t = \pi - 2a\pi$. Then 3.531.5 emerges. It is sufficient to cite conditions for 3.531.7. Thus $0 < t < 2\pi$, $\operatorname{Re}(\mu) > -1$ unless $t = \pi$ in which case $\operatorname{Re}(\mu) > 1$. Values of the right-hand side for $t = 0$ or $t = 2\pi$ and $t = \pi$ are easily found by taking limits. For $t = 0$ or $t = 2\pi$, $\operatorname{Re}(\mu) > 0$.

p. 355: 3.533.2 Read

$$\frac{\pi - t}{a^2} \operatorname{cosec} t \text{ instead of } \frac{t}{a^2} \operatorname{cosec} t.$$

Add $[a > 0]$.

p. 355: 3.533.4 Read $[0 < a < 1, a \neq \frac{1}{2}]$ instead of $[0 < a < \pi]$.
Read $\sin 2ka\pi$ instead of $\cos 2ka\pi$.
Add $= 2(2m + 1)(2^{2m-1} - 1)\pi^{2m} |B_{2m}|, [a = \frac{1}{2}]$.

p. 356: 3.541.2 Read EH I 16(14)a instead of EH I 16.

p. 356: 3.541.4 Add $[0 < a < 2]$.

p. 356: Note that 3.541.10 and 3.541.4 are similar.

p. 357: 3.544 Add $[u > 0]$.

p. 361: 3.552.2 and 3.552.4 Add $[a > 0, m = 1, 2, \ldots]$.

p. 361: 3.552.3 Add $[\mu \neq 1]$. Add $= \ln 2$ if $\mu = 1$.

p. 362: 3.555.1 Read $[0 < 2|a| < p]$ instead of $[2a < p]$.

p. 364: 3.557.6 Read $|a|\pi$ instead of $a\pi$.

p. 367: 3.613.4 First line: Add $[n \geqslant 1]$.
Second line: Add $[n \geqslant 1]$.
Add

$$= \frac{\pi a}{1 - a^2} [n = 0, a^2 < 1]$$
$$= \frac{\pi}{a(a^2 - 1)} [n = 0, a^2 > 1].$$

p. 371: 3.624.6 The right member should read

$$= \tfrac{1}{2}\pi a - \tfrac{1}{2} \sin \pi a [2a\beta(a) - 1], \qquad a > 0.$$

Cf. [MTE **582**] with x replaced by ψ on the right-hand side.

p. 391: 3.687.1 Add $[\operatorname{Re}(\mu + \nu) < 2]$.

p. 392: 3.687.2 Add $[\operatorname{Re}(\mu + \nu) < 4]$.

p. 395: 3.691.8 and 3.691.9 are incorrect. Note that these integrals follow from 3.691.4, 5 and 3.691.6, 7, respectively.

p. 405: 3.718.7 Read $\pi(1 - e^{-a})$ instead of $(1 - e^{-a})$.

p. 414: 3.739.2 Add $[a = 0]$ to the second right-hand side.

p. 415: 3.742.2 Read $\beta(a + b)$ instead of $\beta(a + \beta)$.

p. 415: 3.742.6 Read $b > a > 0$ instead of $0 < b < a$.

p. 416: 3.745.1 and 3.745.2 are incorrect. The integrals are divergent.

p. 424: 3.768.3 The function $C_\nu(a)$ on the right-hand side is not defined.
Note that 3.768.3 is a special case of 3.768.5.

p. 424: 3.768.5 An expression for the integral which is valid for $\operatorname{Re} \nu > -1$ is:

$$au^{\mu+\nu} B(\mu, \nu + 1)\, {}_2F_3\left(\frac{\nu + 1}{2}, \frac{\nu + 2}{2}; \frac{\mu + \nu + 1}{2}, \frac{\mu + \nu + 2}{2}, \frac{3}{2}; -\frac{a^2 u^2}{4}\right).$$

p. 424: 3.768.6 The expression is correct, but awkward to use.
Add

$$= u^{\mu+\nu-1} B(\mu, \nu)\, {}_2F_3\left(\frac{\nu}{2}, \frac{\nu+1}{2}; \frac{1}{2}, \frac{\mu+\nu}{2}, \frac{\mu+\nu+1}{2}; \frac{-a^2u^2}{4}\right).$$

p. 425: 3.768.11 Read Re $\nu > -1$, $\nu \neq 0$ instead of Re $\nu > 0$.
Read ETI 68 instead of ETI 58.
Note that 3.768.11 and 12 are essentially the same as 3.768.5 and 6, respectively.

p. 425: 3.768.13 Read $\sin(2ax)$ instead of $\sin(ax)$.

p. 425: 3.768.14 Read $\cos(2ax)$ instead of $\cos(ax)$.

p. 427: 3.771.5 Except for the condition on ν which should read Re $\nu < 0$, the entry is correct but awkward to use. A more convenient expression is

$$\int_0^\infty x\left(x^2+\beta^2\right)^{-1/2-\mu} \sin ax\, dx = \frac{\pi^{1/2}\beta}{\Gamma\left(\frac{1}{2}+\mu\right)}\left(\frac{a}{2\beta}\right)^{\mu} K_{\mu-1}(a\beta)$$

$$[a>0, \operatorname{Re}(\beta)>0, \operatorname{Re}(\mu)>0].$$

p. 436: 3.792.10 The integral should read

$$\int_0^\infty \frac{1}{1-2a\cos bx+a^2}\,\frac{dx}{\beta^2+x^2}.$$

p. 437: 3.793.1 Read $-2\pi a^n$ instead of $2\pi a^n$.

p. 445: 3.819.4 Read $\int_0^\infty$ instead of $\int_0$.

p. 448: 3.824.5. The given result is incorrect. Read

$$= \frac{\pi e^{-a}(2m+1)!}{2^{2m+1}m!\,(m+1)!}\, {}_2F_1\left(\begin{matrix}-m, 1\\ m+2\end{matrix}\middle| e^{-2a}\right)$$

$$[|\arg a| < \pi/2], m = 0, 1, 2, \ldots.$$

If $a = 0$, value of the integral is $\pi(2m)!/2^{2m+1}(m!)^2$.

Note: In many of the entries on pp. 447–449 and elsewhere, the parameter a or its analog can be complex provided it is restricted as above. Also a can be zero.

p. 454: 3.832.2 Add $[m = 0, 1, \ldots]$.
Add for $m = -1$, see 3.723 2.

p. 454: 3.832.6 is incorrect. The right-hand side should read

$$\frac{(-1)^m \pi}{2^{2m+1}} e^a\left[\left(1-e^{-2a}\right)^{2m} - \left(1+e^{-2a}\right)\right] \; [a \geqslant 0, m = 0, 1, \ldots].$$

p. 455: 3.832.18 is incorrect. The right-hand side should read

$$\frac{(-1)^{m+1}\pi}{2^{2m+2}}\left\{e^a\left[\left(1-e^{-2a}\right)^{2m+1} - 1\right] - e^{-a}\right\}$$

$$[a \geqslant 0, m = 0, 1, \ldots].$$

p. 455: 3.832.26 is incorrect. The right-hand side should read

$$\frac{\pi}{2^m}\operatorname{ch} a\left[(1+e^{-2a})^{m-1}-1\right]\ [a \geqslant 0,\ m=0,1,\ldots].$$

p. 456: 3.832.31 is incorrect. The right-hand side should read

$$\frac{\pi}{2^{m+1}a}e^{a}\left[(1+e^{-2a})^{m}-(1-e^{-2a})\right]\ [a>0,\ m=0,1,\ldots].$$

p. 458: 3.836.5 Replace $n+an+2k$ by $n+an-2k$. Also replace LO V 340(14)
by ET I 20(11) and delete the remark in square brackets.
See *Math. Comp.*, v. 36, 1981, pp. 312, 313.
On the latter page, line 7, for 3.836.5 read 3.836.4.

p. 458: 3.836.6 Read $n \geqslant 2$ instead of $n=2$.

p. 480: 3.898.3 Replace $\frac{1}{2}\surd$ by $\frac{1}{4}\surd$.

p. 481: 3.911.3 Read $\frac{1}{2}\pi \operatorname{th} a\pi$ instead of $-\frac{1}{2}\operatorname{th}(a\pi)$.

p. 505: 3.983.3 Read cth $a\pi$ instead of ch $a\pi$.
Delete BI((267))(4),
Note that the integral is of the Cauchy principal-value type.

p. 506: 3.984.1 and
3.984.2 are incorrect: The integrals are divergent.

p. 507: 3.985.3 Read [Re $\beta>0$, $n=0,1,\ldots$, all real a] instead of $[a>0]$.

p. 523, 4.212; pp. 524, 525. There is considerable confusion in this section. Equation 4.212.1 must be written as

$$\text{P.V.}\int_0^1 \frac{dx}{a+\ln x}=\text{P.V.}\int_0^\infty \frac{e^{-y}}{a-y}dy=-e^{-a}\,\text{P.V.}\int_{-a}^\infty t^{-1}e^{-t}\,dt, \qquad a>0,$$

where P.V. stands for Cauchy principal value. Thus

$$-\overline{\text{Ei}}\,(x)=\text{P.V.}\int_{-x}^\infty t^{-1}e^{-t}\,dt=\lim\left(\int_{-x}^{-\varepsilon}t^{-1}e^{-t}\,dt+\int_\varepsilon^\infty t^{-1}e^{-t}\,dt\right)$$

as $\varepsilon\to 0$, $\varepsilon>0$, $x>0$. See p. 925, 8.211.2, pp. 310–315 and EH, v. 2, p. 143. We have the equivalent notations

$$\overline{\text{Ei}}\,(x)=\text{Ei}(x)=E^*(x).$$

Thus p. 311, 3.352.6 should read

$$\text{P.V.}\int_0^\infty \frac{e^{-\mu x}}{a-x}dx=e^{-\mu a}\,\text{Ei}(a\mu).$$

Note that $-\text{Ei}(-a)=\int_a^\infty t^{-1}e^{-t}\,dt$ and that the expression is valid for $|\arg a|<\pi$. See p. 310, 3.351.5 and p. 925, 8.211.1. In the EH reference cited above, $E_1(a)=-\text{Ei}(-a)$.

The integrals in 4.212.3, .5, .8 are all divergent. They can be considered valid if we interpret

$$\int_0^x \frac{f(y)\,dy}{(y-t)^n}=\frac{1}{(n-1)!}\left(\frac{d}{dt}\right)^{n-1}\text{P.V.}\int_0^x\frac{f(y)\,dy}{y-t}, \qquad 0<t<x,\ f(t)\neq 0.$$

On pp. 524, 525, 925, 926, most integrals expressed in terms of $\overline{\text{Ei}}(a)$ or $\text{Ei}(x)$ must be interpreted in the Cauchy principal-value sense.

p. 527: 4.224.11 is incorrect for the cases $a^2 < 1$ and $a^2 > 1$. According to MTE 503, for $a > 0$ the common value of the two integrals can be written as

$$I(a) = 4G + \pi \ln(a/2) + 4 \sum_{k=1}^{\infty} \frac{b^k}{k} \sum_{n=1}^{k} \frac{(-1)^{n+1}}{2n-1},$$

where G is Catalan's constant and $b = (1-a)/(1+a)$. An alternative result valid for $a \geqslant 0$ is

$$I(a) = 4G + \pi \ln\left(\frac{1+a}{4}\right) - 4S^*(b),$$

$$S^*(b) = \sum_{k=1}^{\infty} \frac{b^k}{k}\left[\frac{\pi}{4} - \sum_{n=1}^{k} \frac{(-1)^{n+1}}{2n-1}\right],$$

$$b = (1-a)/(1+a).$$

In the editorial note to MTE 503, the first and second terms should read

$$\pi \ln\left\{\frac{1+(1-a^2)^{1/2}}{2}\right\} \quad \text{and}$$

$$-2(\arcsin a)\ln\left\{\frac{1+(1-a^2)^{1/2}}{a}\right\},$$

respectively. We also have

$$I(a) = \pi \ln\left\{\frac{1+(1-a^2)^{1/2}}{2}\right\} + 4\sum_{k=1}^{\infty} \frac{(-1)^{k+1}}{(2k-1)^2}\left(\frac{a}{1+(1-a^2)^{1/2}}\right)^{2k-1}, \quad a^2 \leqslant 1,$$

$$I(a) = \pi \ln \frac{|a|}{2} + \frac{4|a|}{a} \sum_{k=1}^{\infty} \frac{(-1)^{k+1}}{(2k-1)^2} \cos(2k-1)\theta,$$

$$\theta = \arccos(1/a),\ a^2 \geqslant 1.$$

p. 533: 4.233 Analytical expressions for the first four integrals are

4.233.1

$$\frac{2}{9}\left[\frac{2\pi^2}{3} - \psi'\left(\frac{1}{3}\right)\right].$$

4.233.2

$$\frac{1}{3}\left[\frac{2\pi^2}{3} - \psi'\left(\frac{1}{3}\right)\right].$$

4.233.3

$$-\frac{1}{9}\left[\frac{7\pi^2}{6}-\psi'\left(\frac{1}{3}\right)\right].$$

4.233.4

$$\frac{1}{6}\left[\frac{5\pi^2}{6}-\psi'\left(\frac{1}{3}\right)\right].$$

p. 537: 4.251.3 Read $\beta'(\mu)$ instead of $\frac{1}{2}\beta(\mu)$.

p. 538: 4.254.4 Read

$$\frac{1}{q^2}\beta'\left(\frac{p}{q}\right) \text{ instead of } \frac{1}{2q^2}\beta\left(\frac{p}{q}\right).$$

p. 539: 4.261.1 Add $[0 < t < \pi]$.
For $t = 0$ or $t = \pi$ take the limit of the right-hand sides to get $\pi^2/6$ and $\pi^2/3$, respectively.

p. 540: 4.261.4 Add $[a > 0]$.

p. 540: 4.261.8 Read

$$\frac{1}{36}\left[\frac{4\sqrt{3}\,\pi^3}{27}-\psi''\left(\frac{1}{3}\right)\right] \text{ instead of } \frac{\sqrt{3}\,\pi^3}{27}.$$

p. 549: 4.271.14 Replace $\int_0^1$ by $\int_0^\infty$.
On the right-hand side, replace $\cos t$ by $\operatorname{cosec} t$, and $|t| < \pi$ by $0 < |t| < \pi$.

p. 549: 4.271.16 Read

$$\frac{1}{q^{n+1}}\beta^{(n)}\left(\frac{p}{q}\right) \text{ instead of } \frac{1}{2^n q^{n+1}}\beta\left(\frac{p}{q}\right).$$

p. 550: 4.272.3 Replace $\int_0^\infty$ by $\int_0^1$.
On the right-hand side, for $\sum_{k=0}^\infty$ read $\sum_{k=1}^\infty$.
For $0 < \operatorname{Re}\nu < 2$ read $\operatorname{Re}\nu > 0$.
For $|t| < \pi$, read $-\pi < t < \pi$.

p. 566: 4.311.1 is incorrect: The integral is divergent. Perhaps $\int_0^\infty \ln|1-x^3|\,dx/x^3$ is intended. If so, the value is $-\pi(3)^{1/2}/6$. See p. 558, 4.293.7.

p. 571: 4.325.1 The value of this integral is $-\frac{1}{2}(\ln 2)^2$.

p. 577: 4.355.2 should read

$$\int_0^\infty \cdots = \frac{1}{4\mu}+\frac{\nu}{4\mu}\sqrt{\frac{\pi}{\mu}}\,\exp\left(\frac{\nu^2}{\mu}\right)\left[1+\Phi\left(\frac{\nu}{\sqrt{\mu}}\right)\right].$$

p. 578: 4.358.1 The right-hand side should read

$$\frac{\partial^m}{\partial\nu^m}\{\mu^{-\nu}\Gamma(\nu,\mu)\}\ [m=0,1,2,\ldots],\ [\operatorname{Re}\mu>0, \operatorname{Re}\nu>0].$$

p. 582: 4.376.8 Add $[n = 1, 2, \ldots]$. For $n = 0$ the value of the integral is $1/a$.

p. 582: 4.376.9 Add $[a > 0, n = 1, 2, \ldots]$.
For $n = 0$ the integral is divergent.

p. 605:	4.441.1	Read $-\frac{p}{2}\ln$ instead of $+\frac{p}{2}\ln$.
p. 634:	5.53	Read ${}_q(\beta x)$ instead of ${}_p(\beta x)$ on the left-hand side.
p. 640:	6.214.2	Read $0 < p < 1$ instead of $p > 0$.
p. 641:	6.224.1	Second line: Read $= -1/\beta$ instead of $= 1$.
p. 643:	6.244.1 and 6.244.2	Delete $+\pi/2$ in the integrand.
p. 658:	6.422.6	Read $4\pi i$ instead of $-4\pi i$.
p. 660:	6.423.3 and 6.423.4	The right member should be multiplied by $\Gamma(m+1)$.
p. 673:	6.522.7	Read $b^{-2}(1+4a^2b^{-2})^{-1/2}$ instead of $b^{-2}(1+4a^2b^{-2})^{1/2}$.
p. 679:	6.539.1	Add $J_\nu(x) \neq 0$ for $x \in [a, b]$.
p. 679:	6.539.2	Add $N_\nu(x) \neq 0$ for $x \in [a, b]$.
p. 733:	6.672.8	Read $2\sqrt{ab}$ instead of $\sqrt{2ab}$.
p. 769:	6.784.2	Multiply the right member by $2/\sqrt{\pi}$. Also $a^{1/2-\nu}$ should be lowered.
p. 833:	7.343.2	First line: Delete or $m = n = 0$. Second line: Delete $\neq 0$.
p. 837:	7.374.5	Add $\alpha^2 \neq \frac{1}{2}$. For $\alpha^2 = \frac{1}{2}$ see 7.374.3.
p. 838:	7.378	Read 2^{-2m} instead of 2^{2m}.
p. 843:	7.393.2	Read $\Gamma(2n+\nu+1)$ instead of $\Gamma(2n+\nu-1)$.
p. 849:	7.512.6	Read $(1-z/b)^{-\alpha}$ instead of $F(\alpha, b; \beta; z/b)$.
p. 849:	7.512.9	Read $(1-z)^{-\sigma}$ instead of $(1-z)^{\sigma}$.
p. 904:	Line 8	Read $(1-nx^2)$ instead of $(1+nx^2)$.
	Line 14	Read BY(110.04) instead of FI II 97-106.
p. 904:	8.110.2	Read $1 - n\sin^2\varphi$ instead of $1 + n\sin^2\varphi$. Read BY(110.04) instead of FI II 106.
p. 905:	8.111.4	Read $1 - n\sin^2\alpha$ instead of $1 + n\sin^2\alpha$. Read $1 - nx^2$ instead of $1 + nx^2$. Read BY(110.04) instead of SI 13.
p. 909:	8.130.8	should read: A single-valued function (which is not constant)....
p. 925:	8.211.3	Read $\overline{\mathrm{Ei}}(x)$ instead of $\overline{\mathrm{Ei}}$.
pp. 925, 926:		See the comments concerning pp. 523–525.
p. 937:	8.332.4	Read $\operatorname{ch} 2y\pi$ instead of $\operatorname{sh} 2y\pi$.
p. 945:	Line 3	Read 9.237 instead of 9.238.
p. 947:	8.371.1	The integral should have limits 0 and 1.
p. 960:	8.442.1	Replace $\Gamma(\mu+k+1)$ by $k!\Gamma(\mu+k+1)$.
p. 960:	8.444.2	Replace $\{\cdots\}$ by $\left\{\frac{1}{k} + 2\sum_{m=1}^{k-1}\frac{1}{m}\right\}$. Note that $\sum_{m=1}^{k-1}$ for $k = 1$ vanishes, according to the convention at page xliii. This corrects the corresponding entry in *Math. Comp.*, v. 36, 1981, p. 314.

p. 973:	8.512.2	Add $[n = 1, 2, \ldots]$. For $n = 0$ see 8.512.1.
p. 1030:	8.933.4	Read C_{n-1}^{λ} instead of C_{n-1}.
p. 1038:	8.974.4	Read $L_{n-m}^{\beta}(y)$ instead of $L_{n-m}^{\beta}(x)$.
p. 1042:	Line 21	Read 7.725 6 instead of 7.726 6.
p. 1066:	9.246.2	Read $(p+1)(p+2)\cdots$ instead of $p(p+1)(p+2)\cdots$.
p. 1067:	9.254.2	Delete the minus sign in front of the right-hand side.
p. 1094:	11.118	Line 3: Read b_j instead of h_j.