Djursholm; *Higher Trigonometry* may be seen in B.M., B.P.L., and Columbia Univ.; Part I of *Mathematical Tracts* is in B.U., and U.M., but both parts are in B.P.L., University of California, and the Mittag-Leffler Library. The Mathematical Association, England, has all four of Newman's mathematical works, including both editions of his *Difficulties of Elementary Geometry*, each printed in 1841, but by different printers. The copy of Spence's rare *Mathematical Essays* in B.P.L. was acquired by Nathaniel Bowditch soon after publication, possibly a presentation copy from the editor, and the first Essay, to which we refer, contains many marginal notes in Bowditch's handwriting. Both of the Spence volumes mentioned are in the New York Public Library, and the 1809 *Essay* is in University of California, Berkeley.

R. C. A.

44. TABLE OF $\frac{1}{2}Wx/V$.—A 5-place table of this function is given (*MTAC*, p. 256) in E. B. ROSA & F. W. GROVER, "Formulas and tables for the calculation of mutual and self-inductance," U. S. Bureau of Standards, *Bulletin*, v. 8, no. 1, 1912, table XXII, p. 226–228; $W = \text{ber}\, x \text{bei}' x - \text{bei}\, x \text{ber}' x$, $V = \text{ber}'^2 x + \text{bei}'^2 x$, $x = 0(.1)5(.2)10(.5)15(1)26(2)50(10)100$, with δ^2. A 3-place adaptation of this table, with Δ, is given on p. 162 of H. B. DWIGHT, *Electric Coils and Conductors*, New York, McGraw-Hill, 1945. Dwight tells us that table XXII was calculated by Grover, and that the adaptation was with his permission.

R. C. A.

QUERIES

15. INTEGRAL AND FUNCTIONAL TABLES.—Are there any tables of $\int_0^z e^{-t^2}\, dt$ and of $e^{-z^2} \int_0^z e^{t^2}\, dt$, where z is complex? Or of $\int_0^x e^{-t^2} \sin at\, dt$, and $\int_0^x e^{-t^2} \cos at\, dt$, where x is real?

F. E. WHITE

Duke University

EDITORIAL NOTE: In 1930 RONALD M. FOSTER, of the American Telephone and Telegraph Co. (now of the department of mathematics at Polytechnic Institute of Brooklyn), prepared tables of $\text{erfc}z = (2/\pi^{1/2}) \int_z^\infty e^{-t^2} dt$, and of $e^{z^2}\, \text{erfc}z$, $z = x + iy$, for $x = 0(1)3$, $y = 0(1)3$, to 5S. From this material he computed a rather large number of values by a simple method of numerical integration along selected rays in the complex plane. These results were then used to draw contour lines, so that the real and the imaginary parts of the error function could be read off in a rough sort of way for a limited range. Charts I and II (50.7 × 50.7 cm.) are of the real and complex parts of erfc$z$, $0 < x < 2$, $0 < y < 2$; Chart III (38 × 38 cm.) is of real and imaginary parts of erfc$z$, $0 < x < 3$, $0 < y < 3$; Chart IV (38 × 38 cm.) is for absolute value and angle of erfc$z$, $0 < x < 3$, $0 < y < 3$. None of this material has been published. A particular case of the first integral of the Query, $z = \frac{1}{2}\pi^{\frac{1}{2}}(1 + i)u$, may be reduced to functions already tabulated, *MTAC*, p. 250, since we then have $\int_0^z e^{-t^2} dt = (\frac{1}{2}\pi i)^{\frac{1}{2}}[C(u) - iS(u)]$.

QUERIES—REPLIES

17. ROOTS OF THE EQUATION TAN $x = cx$ (Q **8**, p. 203; QR **10**, p. 336). —In A. T. MCKAY, "Diffusion for the infinite plane sheet," Phys. So. London, *Proc.*, v. 44, 1932, p. 22–23, there are tables of real roots, x_n, $n = [1(1)4; 4D]$, of this equation for $c = \pm \tan \lambda$, $\lambda^\circ = 0(5^\circ)90^\circ$. In the case of $c = + \tan \lambda$, there are no roots x_1 for $\lambda < 45^\circ$.

R. C. A.

18. TABLES OF TAN^{-1} (m/n) (Q **14**, p. 431).—I have a 9-place manuscript table of $\tan^{-1}(m/n)$, where m and n are integers ranging from 1 to 26 inclusive. However, there may be errors, as the table has not been checked by use. Photostat copies of this manuscript are permitted. Mr. Pollack may also be interested in my paper, "A table of inverse trigonometric functions in radians," *Terrestrial Magnetism*, v. 40, 1935, which contains (p. 311–312) a table of $\tan^{-1} x$, $x = [0(.01)1;\ 11D]$, and which also gives the first four coefficients of a power series to be used in interpolating; by reducing to decimals the ratio in which he is interested, an ordinary ten-bank computing machine will furnish results to eleven decimals, with some uncertainty in the last figure.

IRWIN ROMAN

Custom House,
Baltimore, Md.

EDITORIAL NOTE: The smaller interval of argument in the NYMTP, *Table of Arc Tan x*, Washington, 1942, $x = [0(.001)1;\ 12D]$, may be even more useful for interpolating than the Roman table. There are also tables, of doubtful accuracy, $x = [0(.00001).001; .001(.0001).0999;\ 20D;\ 10D]$ in K. HAYASHI, *Sieben- und mehrstellige Tafeln der Kreis- und Hyperbelfunktionen . . .*, Berlin, 1926.

CORRIGENDA ET ADDENDA

P. 26, l. 1–2, *for* trigonometry by H. GELLIBRAND, Gouda, 1633., *read* Gouda, 1633; see RMT **79**.

P. 232, 234(3), 277, 291, 299, 329, *for* HAURVITZ, *read* HAURWITZ.

P. 235[2], 289, *for* FRANZ, *read* FRÄNZ.

P. 252, l. 24–25, *for* We shall not use the notation $\mathrm{ster}_n x + i\,\mathrm{stei}_n x = H_n(xi^{3/2})$, offered by MCLACHLAN & MEYERS., *read* The notation $\mathrm{ster}_n x + i\,\mathrm{stei}_n x = H_n(xi^{3/2})$ was employed by MCLACHLAN & MEYERS.

P. 253, l. 15–18, *read* Polar forms of the functions have been used by some writers, thus the notation of MCLACHLAN 2, $M_n e^{i\theta_n(x)}$, used above, is a slight modification of the notation employed by KENNELLY, LAWS & PIERCE 1. These writers actually use ρ for this particular modulus of a complex quantity but propose the use of the notation M for the modulus in general. The corresponding notation $N_n e^{i\phi_n(x)}$ of MCLACHLAN 2, is adopted by MCLACHLAN & MEYERS.

P. 273, l. 13, *for* 23*c*, *read* 23*c*/15.

P. 293[2], *for* J. G. JAEGER, *read* J. C. JAEGER.

P. 461, RMT, *read* **93** (Lowan, Salzer & Hillman, Bickley & Miller) 53.

P. 462, MTE **3**, *read* (Cunningham, Euler) 26; and **58**, *read* (Lommel, Watson) 366.

P. 478, *add* Thomas, L. H. 453.