

TABLE ERRATA

342.—ZDENĚK KOPAL, *Numerical Analysis*, John Wiley & Sons, Inc., New York, 1955 (second edition, 1961).

On p. 523 of the first edition of this book Professor Kopal acknowledges the table of Lowan, Davids, and Levenson [1] to be the source of his table of Ab-scissae and Weight Coefficients of the Gaussian Quadrature Formula. He repro-duces the known errors [2] in the earlier table and introduces on p. 524 an addi-tional error; namely, corresponding to $n = 10$ the weight coefficient, H , given erroneously as 0.26926 02109 27734 should read 0.26926 67193 09996.

All these errors have been removed from the corresponding table in the second edition.

1. A. N. LOWAN, N. DAVIDS AND A. LEVINSON, "Table of the zeros of the Legendre poly-nomials of order 1-16 and the weight coefficients for Gauss' mechanical quadrature formula," *Bull. Amer. Math. Soc.* v. 48, 1942, p. 739-743.

2. *MTAC*, v. 1, 1943, p. 56.

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343.—J. W. McCLAIN, F. C. SCHOENIG, JR. & N. J. PALLADINO, *Table of Bessel Functions to Argument 85*, Engineering Research Bulletin B-85, The Pennsyl-vania State University, University Park, Pennsylvania, September 1962. [See RMT 17, *Math. Comp.* v. 18, 1964, p. 161.]

The final tabulated digit should be *increased* by a unit in the following cases:

$J_0(x)$ for $x = 2.4, 5.5, 14.9, 46.3, 52.0, 58.9, 74.6$;

$J_1(x)$ for $x = 16.3, 19.6, 38.4, 47.7, 47.9, 69.8, 73.0$;

$Y_0(x)$ for $x = 3.9$;

$Y_1(x)$ for $x = 5.0$;

$I_1(x)$ for $x = 19.5$;

$K_0(x)$ for $x = 3.8$.

The final digit should be *decreased* by a unit in the following cases:

$J_0(x)$ for $x = 27.5, 56.8, 65.2, 74.7, 80.9, 84.5$;

$J_1(x)$ for $x = 3.9, 35.4, 51.6, 57.4, 69.9$;

$Y_0(x)$ for $x = 4.1, 4.2, 5.0, 5.1, 5.2$;

$Y_1(x)$ for $x = 14.9$;

$K_0(x)$ for $x = 15.5$;

$K_1(x)$ for $x = 3.6, 4.2, 5.7, 7.4, 9.8$.

More serious errors are the following:

| | <i>for</i> | <i>read</i> |
|-------------|------------|-------------|
| $J_0(43.2)$ | 2.533 | 2.529 |
| $Y_0(5.3)$ | -3.377 | -3.374 |
| $Y_0(5.4)$ | -3.405 | -3.402 |
| $Y_0(5.5)$ | -3.399 | -3.395 |
| $Y_0(5.6)$ | -3.361 | -3.354 |
| $Y_0(5.7)$ | -3.290 | -3.282 |
| $Y_1(5.2)$ | 7.915 | 7.919 |
| $Y_1(5.3)$ | 4.448 | 4.455 |
| $Y_1(5.4)$ | 1.004 | 1.013 |
| $Y_1(5.5)$ | -2.389 | -2.376 |
| $Y_1(5.6)$ | -5.698 | -5.681 |
| $Y_1(5.7)$ | -8.897 | -8.872 |

J. W. W.

344.—NATIONAL BUREAU OF STANDARDS, *Tables of the Bivariate Normal Distribution Function and Related Functions*, Applied Mathematics Series, No. 50, 1959, Washington 25, D.C. [See *MTAC*, v. 14, 1960, p. 293-295, RMT 55.]

The following differences of two or more units in the last figure of the tabular entries are noted. Only those values were checked for which $r = -0.60$ (-0.050) $- 0.95$ (-0.01) $- 0.99$. They were recomputed to at least eight decimal places on a CDC-1604 digital computer, using the formulas given by D. B. Owen in "Tables for computing bivariate normal probabilities," *Annals of Mathematical Statistics*, Vol. 27, 1957, p. 1075-1090.

| r | h | k | <i>for</i> | <i>read</i> |
|-------|-----|-----|------------|-------------|
| -0.60 | 0.7 | 0.0 | 0.0439466 | 0.0439468 |
| | 0.0 | 0.7 | | |
| -0.60 | 0.7 | 0.2 | 0.0303662 | 0.0303660 |
| | 0.2 | 0.7 | | |
| -0.60 | 2.0 | 0.9 | 0.0000516 | 0.0000518 |
| | 0.9 | 2.0 | | |
| -0.70 | 1.3 | 2.1 | 0.0000000 | 0.0000004 |
| -0.95 | 0.5 | 0.0 | 0.0029965 | 0.0029967 |
| | 0.0 | 0.5 | | |
| -0.95 | 0.3 | 0.1 | 0.0062076 | 0.0062078 |
| | 0.1 | 0.3 | | |
| -0.95 | 0.4 | 0.1 | 0.0030582 | 0.0030584 |
| | 0.1 | 0.4 | | |
| -0.95 | 0.3 | 0.2 | 0.0030895 | 0.0030897 |
| | 0.2 | 0.3 | | |

The following discrepancies in entries which should have been reflections of one another are also noted. The correct entries are designated by an asterisk.

| r | h | k | <i>entry</i> |
|------|-----|-----|--------------|
| -.60 | 1.0 | 2.4 | 0.0000050 |
| | 2.4 | 1.0 | 0.0000049* |
| -.65 | 0.7 | 1.8 | 0.0001209 |
| | 1.8 | 0.7 | 0.0001208* |
| -.65 | 0.8 | 1.8 | 0.0000814 |

| r | h | k | entry |
|------|-----|-----|------------|
| | 1.8 | 0.8 | 0.0000813* |
| -.65 | 0.5 | 1.9 | 0.0001638 |
| | 1.9 | 0.5 | 0.0001637* |
| -.65 | 0.5 | 2.2 | 0.0000397 |
| | 2.2 | 0.5 | 0.0000396* |
| -.65 | 0.7 | 2.5 | 0.0000035 |
| | 2.5 | 0.7 | 0.0000034* |
| -.65 | 1.2 | 1.6 | 0.0000377 |
| | 1.6 | 1.2 | 0.0000378* |
| -.70 | 1.3 | 2.1 | 0.0000000 |
| | 2.1 | 1.3 | 0.0000004* |
| -.98 | 1.0 | 0.0 | 0.0000001 |
| | 0.0 | 1.0 | 0.0000000* |

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345.—P. RABINOWITZ & G. WEISS, "Tables of Abscissas and Weights for Numerical Evaluation of Integrals of the Form $\int_0^\infty e^{-x} x^n f(x) dx$," *Math. Comp.*, v. 13, 1959, p. 285–294.

The zeros and weights have been recomputed to 25 significant figures on an IBM 7030 system, using double-precision floating-point arithmetic, and the following terminal-digit unit errors have been found.

| n | N | row | column | for | read |
|-----|-----|-----|--------|--------------|--------------|
| 0 | 24 | 14 | 2 | ... 966(-9) | ... 967(-9) |
| 0 | 24 | 16 | 2 | ... 138(-12) | ... 139(-12) |
| 0 | 24 | 19 | 1 | ... 670(1) | ... 671(1) |
| 0 | 32 | 2 | 2 | ... 234(-1) | ... 233(-1) |
| 0 | 32 | 6 | 2 | ... 415(-2) | ... 416(-2) |
| 0 | 32 | 32 | 2 | ... 424(-48) | ... 423(-48) |
| 1 | 8 | 5 | 1 | ... 733(0) | ... 734(0) |
| 1 | 16 | 1 | 2 | ... 308(-2) | ... 309(-2) |
| 2 | 8 | 1 | 2 | ... 970(-1) | ... 971(-1) |
| 3 | 4 | 4 | 1 | ... 832(1) | ... 833(1) |
| 3 | 16 | 4 | 2 | ... 486(0) | ... 487(0) |
| 4 | 4 | 4 | 1 | ... 903(1) | ... 904(1) |
| 4 | 16 | 8 | 2 | ... 629(-1) | ... 630(-1) |
| 5 | 4 | 4 | 1 | ... 417(1) | ... 418(1) |
| 5 | 8 | 2 | 1 | ... 781(0) | ... 782(0) |
| 5 | 12 | 4 | 1 | ... 539(0) | ... 540(0) |
| 5 | 16 | 3 | 2 | ... 158(1) | ... 159(1) |
| 5 | 16 | 15 | 2 | ... 559(-13) | ... 560(-13) |
| 5 | 16 | 16 | 1 | ... 663(1) | ... 664(1) |

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346.—A. H. STROUD & DON SECREST, "Approximate Integration Formulas for Certain Spherically Symmetric Regions," *Math. Comp.*, v. 17, 1963 p. 105–135.

The following errors have been noted on page 121 in Table 4, "Quadrature Formulas for the Integral $\int_{-\infty}^{\infty} |r|^{n-1} e^{-r^2} f(r) dr$."

| n | h | row | column | for | read |
|-----|-----|-----|--------|-------------|-------------|
| 3 | 8 | 1 | 1 | ... 187(-1) | ... 188(-1) |
| 3 | 16 | 1 | 2 | ... 806(-1) | ... 810(-1) |
| 3 | 16 | 2 | 2 | ... 719(-1) | ... 714(-1) |
| 3 | 16 | 3 | 2 | ... 853(-1) | ... 854(-1) |
| 3 | 16 | 4 | 2 | ... 162(-2) | ... 160(-2) |
| 3 | 16 | 6 | 2 | ... 012(-5) | ... 009(-5) |
| 3 | 16 | 7 | 2 | ... 067(-7) | ... 069(-7) |
| 3 | 16 | 8 | 2 | ... 564(-9) | ... 563(-9) |

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NOTE

NEW JOURNAL

The Information Processing Society of Japan has announced the annual publication, beginning in 1961, of an English-language compilation of selected papers from bimonthly Japanese journals devoted to information processing. The new journal is entitled *Information Processing in Japan*. The publisher's address is c/o JEIDA, 35 Nishikubo-tomoecho, Minato-ku, Tokyo.

The first issue contains the following papers:

- T. Kasami: Systematic Codes Using Binary Shift Register Sequences
- T. Kasami: A Systematic Code for Non-Independent Errors
- J. Baba & S. Hayashi: Evaluation of Errors at [sic] Numerical Integration of Ordinary Differential Equations
- H. Takahashi & Y. Ishibashi: A New Method for "Exact Calculation" by a Digital Computer (An Application of Modulo p Arithmetics)
- T. Norimatsu & T. Deido: Investigation of Error Accumulation in Runge-Kutta Integration Process by Circle Test
- M. Takata: The Programmed Digital Differential Analyzer
- M. Hosaka: On Block Operations Using Delay Lines
- K. Fuchi & H. Nishino: System Design of ETL MK-4B, an Input-Output Computer
- S. Muroga, K. Takashima, I. Toda & M. Yamada: The Magnetic Tape Device for the Parametron Digital Computer M-1
- T. Deido, M. Ito & T. Norimatsu: Quasi-Optimum Automatic Design for a Feedback Control System by Use of the Digital Computer
- K. Fuchi & H. Nishino: Automatic Data Processing in the Wiring of a Digital Computer
- K. Mori: Simulation Experiment for Japanese Economy: 1953–1957.