The quotient functions of the third kind refer herein to the ratios

$$h_\nu^{(1)}(z) = zH_{\nu-1}^{(1)}(z)/H_\nu^{(1)}(z) \quad \text{and} \quad h_\nu^{(2)}(z) = zH_{\nu-1}^{(2)}(z)/H_\nu^{(2)}(z)\,,$$

where $H_\nu^{(1)}(z)$ and $H_\nu^{(2)}(z)$ are the Hankel functions of the first and second kinds, respectively, of order ν.

The tables consist of 5D values of $[2/(2n - 1)]\Re[h_n^{(1)}(x)]$ and $\Im[h_n^{(1)}(x)]$ for $n = 0(1)10$, $x = 0(0.2)15$. Graphs of the tabulated quantities are included. The ratio $h_\nu^{(2)}(x)$ is not tabulated, since it is merely the complex conjugate of $h_\nu^{(1)}(x)$.

Appropriate reference is made to the related tables of Onoe [1], [2].

The authors include a discussion of the asymptotic forms of the functions $h_\nu^{(1)}(z)$ and $h_\nu^{(2)}(z)$, and they state that such functions arise in the study of the propagation of sinusoidal sound waves in loud-speaker horns and in the diffraction of steady plane elastic waves by circular cylindrical discontinuties embedded in an infinite medium.

J. W. W.

1. M. ONOE, "Formulae and tables, the modified quotients of cylinder functions," Report of the Institute of Industrial Science, University of Tokyo, v. 4, 1955, pp. 1–22. (See *MTAC*, v. 10, 1956, p. 53, RMT **29.**)

2. M. ONOE, *Tables of Modified Quotients of Bessel Functions of the First Kind for Real and Imaginary Arguments,* Columbia Univ. Press, New York, 1958. (See *MTAC*, v. 13, 1959, p. 131, RMT **22.**)

28[7, 13.05].—SHIGETOSHI KATSURA & KATSUHIRO NISHIHARA, *Tables of Integrals of Products of Bessel Functions.* II, Department of Applied Physics, Tôhoku University, Sendai, Japan, undated, ms. of 21 computer sheets deposited in the UMT file.

These manuscript tables, which constitute a sequel to earlier manuscript tables by Kilpatrick, Katsura & Inoue [1], gives 16S decimal values (in floating-point form) to the coefficients of p^l in the polynomial expression for the integral

$$\int_0^\infty J_{1/2}(pt)J_{3/2+m}(bt)J_{3/2+n}(ct)t^{-3/2}dt$$

for $l = -\frac{1}{2}\,(1)\; m + n + 7/2$; $m, n = 0(1)6$, $m + n$ even; $b, c = 1$ and 2. These data were calculated on an IBM 7090, using double-precision arithmetic. A spot check revealed that several entries are accurate to only 13S.

Details of the evaluation of the integral by the calculus of residues are set forth in the introductory text of seven pages, to which is appended a list of eight references.

These tables have been used by the authors in the calculation of the molecular distribution function for a square-well potential gas.

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1. J. E. KILPATRICK, SHIGETOSHI KATSURA & YUJI INOUE, *Tables of Integrals of Products of Bessel Functions,* Rice University, Houston, Texas and Tôhoku University, Sendai, Japan, 1966. (See *Math. Comp.*, v. 21, 1967, p. 267, UMT **27.**)