

The University Mathematical Laboratory
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1. K. P. SPIES & J. R. WAIT, *Mode Calculations for VLF Propagation in the Earth-Ionosphere Waveguide*, NBS Technical Note No. 114, U. S. Government Printing Office, Washington, D. C., 1961.

2. J. C. P. MILLER, *The Airy Integral, giving Tables of Solutions of the Differential Equation $y'' = xy$* , British Association Mathematical Tables, Pt.-Vol. B, Cambridge University Press, Cambridge, 1946.

123[L].—M. I. ZHURINA & L. N. KARMAZINA, *Tables of the Legendre Functions, Part 2*, Pergamon Press Mathematical Tables Series, Volume 38, The Macmillan Company, New York, 1965, xiii + 409 pp., 26 cm. Price \$16.75.

This volume is an English translation by Prasenjit Basu of the Russian book entitled *Tablitsy funktsii Lezhandra $P_{-1/2+\nu}(x)$* , Tom II published by Akad. Nauk SSSR, Moscow in 1962, and reviewed in this journal (v. 18, 1964, pp. 521–522, RMT 79).

The Russian edition of Part 1, which was reviewed herein (v. 16, 1962, pp. 253–254, RMT 22), has also been published in an English translation by Pergamon Press as Volume 22 of their Mathematical Tables Series.

J. W. W.

124[L].—M. ATOJI & F. L. CLARK, *Tables of the Generalized Riemann Zeta Functions*, ms. of 120 computer sheets deposited in UMT File.

These manuscript tables consist of 7D approximations to $\zeta_N(s, a)$ for $s = 1, 2$, $a = 0.01(0.01)1$, $N = 1(1)200$, and thus form an elaboration of the 4D published tables by the same authors, described in the following review.

J. W. W.

125[L, S].—M. ATOJI & F. L. CLARK, *The Generalized Riemann Zeta Functions and their Applications in the Calculations of Neutron Cross Sections*, Report ANL-6970, Argonne National Laboratory, Argonne, Illinois, December 1964, 55 pp., 28 cm. Available from the Clearinghouse for Federal Scientific and Technical Information, National Bureau of Standards, U. S. Department of Commerce, Springfield, Virginia. Price \$3.00.

The generalized incomplete Riemann zeta function is defined by the equation

$$\zeta_N(s, a) = \sum_{n=0}^N (a+n)^{-s}$$

for $s > 1$, where n and N are nonnegative integers.

This report contains two tables. Table 1 gives 4D values of $\zeta_N^{-1}(1, a) = \zeta_N(1, a) - a^{-1}$ and $\zeta_N^{-1}(2, a) = \zeta_N(2, a) - a^{-2}$ for $a = 0.01(0.01)0.5(0.02)1$, $N = 1(1)100$ and $N = 1(1)50$, respectively. Table 2 gives 4D values of

$$\zeta(2, a) = \sum_{n=0}^{\infty} (a+n)^{-2}$$

for $a = 0.01(0.0005)0.5(0.001)1$. The FORTRAN programs used in performing the underlying calculations on a CDC 3600 are given as prefaces to the tables.