TABLE OF SOME FUNCTIONAL SYMBOLS.

Riemann's normal elementary integrals

of first kind, generally, $v_1^{x,a}, \ldots, v_p^{x,a}$, p. 15. For periods, p. 16,

of second kind, $\Gamma_z^{x,a}$; periods of, $\Omega_1, \ldots, \Omega_p$, or $\Omega_1(z), \ldots, \Omega_p(z)$, pp. 15, 21,

of third kind, $\Pi_{z,c}^{x,a}$, p. 15.

Integral, rational, functions, g_i, or $g_i(x, y)$, or $g_i(y, x)$, pp. 55, 61.

ϕ-polynomials, special functions, numerators of differential coefficients of integrals of the first kind, $\phi_1, \ldots, \phi_{n-1}$, p. 61. Also $\phi_1, \ldots, \phi_p$, p. 146.

(x, ξ), $= \dfrac{\phi_0(x, y) + \phi_1(x, y)\, g_1(\xi, \eta) + \ldots + \phi_{n-1}(x, y)\, g_{n-1}(\xi, \eta)}{(x-\xi)\, f'(y)}$, p. 68.

Elementary integral of third kind, $P_{z,c}^{x,a}$, p. 68. (Canonical integral), $Q_{z,c}^{x,a}$, p. 185. (Canonical integral), $R_{z,c}^{x,a}$, p. 194.

Integrals of second kind, associated with given system of integrals of first kind, $L_i^{x,a}$, p. 193; periods of, 196. Also $H_z^{x,a}$, p. 182, and $F_z^{x,a}$, p. 291, are used for integrals of second kind.

$\psi(x, a; z, c_1, \ldots, c_p)$, pp. 77, 171, 177. This is called Weierstrass's fundamental rational function.

$\psi(x, a; z, c)$, pp. 174, 175, 178, 200.

$\overline{E}(x, z)$, pp. 171, 178 (Prime function).

$E(x, z)$, pp. 176, 178, 205 (Prime function).

Matrices, see Appendix II., p. 666.

$\Theta(u, \tau; Q, Q')$ or $\Theta\begin{pmatrix} u, \tau \mid Q' \\ Q \end{pmatrix}$ or $\Theta\begin{pmatrix} u \mid Q' \\ Q \end{pmatrix}$ or $\Theta(u; Q, Q')$

$= \Sigma e^{2\pi i u(n+Q') + i\pi\tau(n+Q')^2 + 2\pi i Q(n+Q')}$, p. 248.

$\vartheta(u; Q, Q')$ or $\vartheta\begin{pmatrix} u \mid Q' \\ Q \end{pmatrix} = \Sigma e^{au^2 + 2hu(n+Q') + b(n+Q')^2 + 2\pi i Q(n+Q')}$, p. 283.

$\zeta_i(u) = \dfrac{\partial}{\partial u_i} \log \vartheta(u)$, p. 287.

$\wp_{i,j}(u) = -\dfrac{\partial^2}{\partial u_i \partial u_j} \log \vartheta(u)$, p. 292. See also p. 516.

$\omega_i(x)$ (Differential coefficient of integral of first kind), p. 169. Also $\mu_i(x)$, p. 192.

$\nu_{i,j}$, p. 192. $\bar{\nu}_{i,j}$, p. 288.

$W(x, z; c_1, \ldots, c_p)$, p. 174.

$\varpi(\zeta, \gamma)$, p. 360 (Prime function). But for $\varpi(x, z)$, see pp. 430, 428.

$\lambda(\zeta, \mu)$, p. 367.

$|Q|$, $|Q, R|$, $\begin{pmatrix} Q \\ R \end{pmatrix}$, p. 487.

$\Phi(u, a; A)$, p. 509.

$\phi(u)$, a Jacobian function, p. 579, ff.

$\psi_r(w; K, K'+\mu)$, $\Psi_r(W; K, K'+\mu)$, p. 601.