

List of Symbols

\mathbb{C}	complex plane	1-1
Re	real part	1-1
Im	imaginary part	1-1
arg	argument	1-1
\bar{z}	complex conjugate of z	1-2
$D(a, r)$	open disk with center at a and radius r	1-3
$\bar{D}(a, r)$	closed disk with center at a and radius r	1-3
$C(a, r)$	circle with center at a and radius r	1-3
f'	derivative of f	1-4
exp	exponential function	1-8
$\int_a^b \varphi(t) dt$	integral of a complex-valued function	2-1
γ	path	2-2
γ^*	range of γ	2-2
$\int_\gamma f(z) dz$	path integral	2-2
$Z(f)$	zero set of f	2-22
\log_α	logarithm	3-1
$n(\gamma, z_0)$	index (winding number) of z_0 with respect to γ	3-5
$\sum_{i=1}^m k_i \gamma_i$	cycle	3-11
$D'(z_0, r)$	punctured disk	4-1
$A(z_0, s_1, s_2)$	annulus	4-2
Res(f, z_0)	residue of f at z_0	4-7
$P_z(t)$	Poisson kernel	4-25
$Q_z(t)$	Cauchy kernel	4-25
$A(\Omega)$	analytic functions on Ω	5-1
$C(\Omega)$	continuous functions on Ω	5-1
$ f _K$	supremum of $ f $ on K	5-1
$\prod_{n=1}^\infty z_n$	infinite product	6-1
$E_m(z)$	Weierstrass primary factor	6-6
$\pi(x)$	number of primes less than or equal to x	7-1
$\zeta(z)$	Riemann zeta function	7-2
Λ	von Mangoldt function	7-5
ψ	a number theoretic function	7-5