Frequently used notation

log :	unless otherwise specified, $\log z$ denotes the principal determination of the logarithm of the non-zero complex number z, that is, writing $z = r e^{i\theta}$ with r positive and θ in $(-\pi, \pi]$, we have $\log z = \log r + i\theta$.
e :	base of the natural logarithm.
deg :	degree (of a polynomial, of an algebraic number).
det :	determinant.
positive :	strictly positive.
$\lfloor x \rfloor$:	largest integer $\le x$.
$\lceil x \rceil$:	smallest integer $\ge x$.
$\{\cdot\}$:	fractional part.
$\Vert \cdot \Vert$:	distance to the nearest integer.
Card :	cardinality (of a finite set).
perfect power :	integer of the form a^b, with $a \ge 1$ and $b \ge 2$ integers.
$p_1 < p_2 < \cdots$:	the set of all prime numbers ranged in increasing order.
$q_1 < \cdots < q_s$:	a collection of s distinct prime numbers, not necessarily consecutive.
$P[n]$:	greatest prime factor of the integer n, with $P[0] = P[\pm 1] = 1$.
$\omega(n)$:	number of distinct prime factors of the positive integer n, with $\omega(1) = 0$.
φ :	Euler totient function (Definition D.3).
μ :	Möbius function (Definition D.3).
$\Phi_d(X, Y)$:	homogeneous d-th cyclotomic polynomial.
$h(\alpha)$:	logarithmic Weil height of the algebraic number α (Definition B.4).
$L(P)$:	length of the polynomial $P(X_1, \ldots, X_n)$ (Definition B.9).
$\vert \cdot \vert_p$:	p-adic absolute value, normalized such that $\vert p \vert_p = p^{-1}$.
v_p :	p-adic valuation, normalized such that $v_p(p) = 1$.
S :	finite, non-empty set of prime numbers (or, sometimes, of places of an algebraic number field).

$[n]_S$:	S-part of the non-zero integer n, defined by $[n]_S = \prod_{p \in S} \|n\|_p^{-1}$.
S-unit :	rational number whose numerator and denominator are only composed of prime numbers in S.
integral S-unit :	rational integer being an S-unit.
$a \ll b$:	the quantity a is less than b times an absolute, positive, effectively computable real number.
$a \ll_{c_1,\ldots,c_n} b$:	the quantity a is less than b times an effectively computable, positive, real number, which depends at most on $c_1, \ldots, c_n$.
$a \ll^{\text{ineff}} b$:	the quantity a is less than b times an absolute, positive real number.
$\log_p, \exp_p$:	p-adic logarithm and p-adic exponential functions.
$\mathcal{S}_N$:	set of permutations of $\{1, \ldots, N\}$.
e_K, f_K :	ramification index and residue degree of a p-adic field K.
$\mathfrak{a}, \mathfrak{b}, \mathfrak{c}, \mathfrak{p}$:	ideals of an algebraic number field.
$e_\mathfrak{p}, f_\mathfrak{p}$:	ramification index and residue degree of an ideal $\mathfrak{p}$.
$\cdot^\sigma$:	Galois conjugacy.
$K, O_K, O_K^*, M_K, M_K^\infty, D_K, h_K$:	an algebraic number field, its ring of integers, group of units, set of places, set of infinite places, discriminant, and class number.