ERRATA FOR INTRODUCTION TO CYCLOTOMIC FIELDS, 2ND EDITION

LAWRENCE C. WASHINGTON

page 11, line -2; the $=$ between $\log n$ and the sum should be $-$

page 13, line -16: "s" should be "is"

page 16, line 14: change "alows" to "allows"

page 17, line 16: change [5] to [9]

page 23, line -3: change "all groups" to "all finite groups"

page 37, lines -3, -1: it would be better to have the summation be from 1 to $f - 1$ in order to avoid the necessity of setting $0 \log 0 = 0$

page 42, line 10: change L to K

page 52, line 17: change "$|\log_p(x)|$ is not less than $p^{-1/(p-1)}$ for *all*" to "$|\log_p(1 + x)|$ is not less than $p^{-1/(p-1)}$ for *some*"

page 56, line -8: change "demoninator" to "denominator"

page 63, line -4, and page 68, lines 6, 7: it would be better to have the summation be from 1 to $f - 1$ in order to avoid the necessity of setting $0 \log 0 = 0$

page 73, line 13: change ϕ to $\emptyset$

page 75, line -4: change "pssible" to "possible"

page 76, line -9: change $\tau\sigma$ to $\sigma\tau$

page 98, line -2: change p to P (where P is defined on line 1 of page 99)

page 100, line -4; the line should be "that when $i \neq 0$"

page 101, lines 12-14: change the paragraph to "Now, suppose $i \neq 0$ is even. Then $B_{1,\omega^{-i}} = 0$ so the above says nothing. If $i = 0$ then $A_0 = 0$ since $\varepsilon_0 = $ (Norm)$/(p - 1)$."

page 107, line -7: "large" should be "largest"

page 121, Lemma 7.8: insert "and $d > 1$" after "$(t, d) = 1$"

page 125, line -1: the character $\theta = 1$ should occur in the product

page 126, line 1: the character $\chi = 1$ should occur in the product

page 126, line 6: the first product is over all characters; the second product is over all $\psi \neq 1$

page 135, line 10; the $\prod_{m \neq n}$ before the second integral should be a $\sum_{m \neq n}$

page 138, line 2; change x'' to x'

page 145, lines -8, -4 (twice): it would be better to have the summation be from 1 to $p^m - 1$ in order to avoid the necessity of setting $0 \log 0 = 0$

page 147, line 5: change ζ_p to ζ_n

pages 147-149: it would be better to have the summations stop at $m - 1$, $n - 1$, $F - 1$, $Ft - 1$ in order to avoid the necessity of setting $0 \log 0 = 0$

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page 169, Lemma 9.1: The α to which the lemma is applied is non-integral. Therefore, the lemma and its proof should be stated for the localization of $\mathbb{Z}[\zeta_p]$ at $(1 - \zeta_p)$. Alternatively, α could be multiplied by a suitable power (say $(denom)^{pk}$ for some k) of the denominator to make it integral and preserve the congruence.

page 199, line -1: change "A" to "A_n"

page 200, line 15: change θ_{p^n} to $\theta_{p^{n+1}}$

page 202, line -11: change "for all p" to "for all i"

page 202, line -4: change a_i to a_1

page 233, lines -12, -11: change $\zeta_i(a, s)$ and $\zeta_i(a, 1 - k)$ to $\zeta_i(s, a)$

page 234, line 3: change $\zeta_i(a, 1 - k)$ to $\zeta_i(1 - k, a)$

page 235, lines 6, 7: change $\phi_i(a)$ to $\phi_i(a/i)$

page 235, line 7: change $\phi_i(b)$ to $\phi_j(b/j)$

page 243, line 9: change "this just" to "this is just"

page 246, line 2 and page 248, lines 8 and 10, and page 250, lines 10 and 12: change δ to $d\delta$'s (for consistency with the notation established on page 238, line 8, where δ is the delta distribution and $d\delta$ is the corresponding measure)

page 247, line -13: change $\bar{\theta}$ to θ

page 258, line 11: insert "on" after "distribution"

page 258, line -2: change H'_χ to H_χ

page 269: Corollary 13.6: (bad notation) the symbol H is used both for a field and for a subgroup of the idèles

page 271, line 13: change p^k to P^k

page 285, line 17: change "any exact sequence" to "any finite exact sequence"

page 286, line 11: change Y to Y_e

page 287, line 4: A_n^- should be defined using the exact sequence on line 10. (This is because the norm is not the same as the norm followed by the map from $A(K_n^+)$ to $A(K_n)$.)

page 293, line 16: It should be

$$\eta_i = \varepsilon_i \prod_j \varepsilon_j^{-a'_{ij}}$$

page 302, line -7: change $1 - T$ to $1 + T$

page 303, lines -3 to -1: change $(\zeta_p - 1)$ to $(1 - \zeta_p)$ (four times) and change $(\zeta_p^a - 1)$ to $(1 - \zeta_p^a)$

page 309, line -4; change "$2 \leq k \leq p - 2$" to "$1 \leq k \leq p - 2$"

page 316, line 9: change ε_1 to ε_i

page 317, line 11: change $1 - T$ to $1 + T$ near the right-hand end of the formula

page 335: Radan Kučera points out the following: Changing the definition of C' to the Sinnott definition of circular units, namely to the group of units of the form

$$\delta = \pm \prod_{n|m} N_{\mathbb{Q}(\zeta_n)/F \cap \mathbb{Q}(\zeta_n)}\left(\prod_{a=1}^{n-1}(\zeta_n^a - 1)^{b_{an}}\right)$$

we obtain Theorem 15.2 in the full strength of Thaine's theorem. There is no need to change the proof of the theorem; it is enough to improve Lemma 15.3 to cover this more general case. The proof of this lemma is in fact almost the same; it is enough to consider new

$$\varepsilon = \pm \prod_{n|m} N_{\mathbb{Q}(\zeta_{n\ell})/F(\zeta_\ell) \cap \mathbb{Q}(\zeta_{n\ell})}\left(\prod_{a=1}^{n-1}(\zeta_n^a - \zeta_\ell)^{b_{an}}\right)$$

for this new δ.

page 339, line 15: change χ to ρ

page 345, line -8: change 15.5 to 15.9

page 353, line 8: change "Ker" to "Coker"

page 356, line -5: change $(1 + T)^{-1} - \pi$ to $(1 + T)^{-1} - 1 - \pi$

page 361, line 14: change "Proposition 13.54" to "Theorem 13.54"

page 361, line -2: change $\bar{E}_1/P_n$ to $\bar{E}_1^\infty/P_n$

page 366, line 2: the line should be "Let $M|\ell - 1$ and let"

page 366, line 4: change "choice of ℓ and s" to "choices of ℓ, λ, and s"

page 366, line -10: change $\mathrm{Gal}(L/F)$ to $\mathrm{Gal}(H/F)$

page 369, lines -9, -8: change "class group" to "p-part of the class group"

page 378, line -1: change $c^{(q-1)/2}$ to $c^{(n-1)/2}$

page 421, line 18: change "When" to "We"

page 423: $\tilde{h}$ for $p = 9829$ should be 5

page 443: Entry [10] of Gras, M-N should not appear, since it is already listed as [6]

page 456: papers numbers 3 and 4 listed under F. Kurihara were written by M. Kurihara

page 462: the paper by Mazur and Swinnerton-Dyer is in Inventiones math., 25 (1974), 1-61.

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