

Typographical Errors in the Second Edition of

Primes of the Form $x^2 + ny^2$

August 13, 2018

Page v, line –8: The title of §1 should be “FERMAT, EULER AND QUADRATIC RECIPROCITY”

Page 30, first line of (2.21): “15.23” should be “15, 23”

Page 32, line 2 of Theorem 2.26: “not dividing D .” should be “not dividing D ,” (the period should be a comma)

Page 48, line –13: “ $\ker(\chi) \in (\mathbb{Z}/D\mathbb{Z})^*$ ” should be “ $\ker(\chi) \subset (\mathbb{Z}/D\mathbb{Z})^*$ ”

Page 53, line –1: “property” should be “properly”

Page 61, part (a) of Exercise 3.9: “if and only if a, b or ab has order ≤ 2 in G ” should be “if and only if a or b has order ≤ 2 in G ”

Page 65, part (c) of Exercise 3.20: “ $f(\alpha x + \beta y, \gamma x + \delta y)$ ” should be “ $f(\alpha x + \gamma y, \beta x + \delta y)$ ”

Page 65, lines –2 and –1 : “Note also that Lemma 3.25 gives a very quick proof of Exercise 2.27” should be “Note that Lemma 3.25 gives a quick proof of Exercise 2.27(a) for forms of discriminant $-4n$ when $p \nmid n$ ”

Page 75, line 18: “the second memoir. Gauss” should be “the second memoir, Gauss” (the period should be a comma)

Page 91, lines –4 and –3: “ $f_i(x)$ are distinct and irreducible modulo \mathfrak{p} ” with “ $f_i(x)$ are monic, and distinct and irreducible modulo \mathfrak{p} ”

Page 104, part (f) of Exercise 5.6: “ $\mathfrak{p}\mathcal{O}_L + f_i(\alpha)\mathcal{O}_K$ ” should be “ $\mathfrak{p}\mathcal{O}_L + f_i(\alpha)\mathcal{O}_L$ ”

Page 105, part (d) of Exercise 5.7: It should be “Prove the description of \mathcal{O}_K given in (5.14)”

Page 125, line –12: “let \mathfrak{a} be a fractional” should be “let \mathfrak{a} be a proper fractional”

Page 133, four lines below (7.26): “ $u \in \mathcal{O}$ ” should be “ $u \in \mathcal{O}_K$ ”

Page 133, line -4: “[b][c]⁻¹” should be “±[b][c]⁻¹”

Page 138, part (c) of Exercise 7.15, line 4: “dividing by a by c ” should be “dividing a by c ”

Page 143, line 1: “let f be a positive integer” should be “let $f > 1$ be an integer.”

Page 155, lines -18 and -17: “But Exercise 5.9 tells us” should be “But [77, Exercise 4.11(b)] tells us”

Page 161, Exercise 8.16, line 2: “ $\tilde{S}_{M/L}$ ” should be “ $\tilde{S}_{M/K}$ ”

Page 186, line -1: At the end of the display, “ $z\wp(z)$ ” should be “ $2\wp(z)$ ”

Page 197, Exercise 10.4, second line of the display: “+ $\frac{24G_4(L)}{z^2}$ ” should be “- $\frac{24G_4(L)}{z^2}$,”

Page 199, part (b) of Exercise 10.16: “Theorem 5.25” should be “Theorem 5.30”

Page 199, part (c) of Exercise 10.16: In the display, “ $\sum_{f=1}^{[\mathcal{O}_K:\mathbb{Z}[\alpha]]} h(f^2d_K)$ ” should be “ $\sum_{f \mid [\mathcal{O}_K:\mathbb{Z}[\alpha]]} h(f^2d_K)$ ”

Page 203, line -14: “ $\gamma \neq \pm 1$ ” should be “ $\gamma \neq \pm I$ ”

Page 208, line 10: The display should be

$$q(\sigma\tau) = e^{2\pi i(a\tau+b)/d} = e^{2\pi ib/d}q^{a/d}$$

(two errors in the original)

Page 217, line 12: “some prime ideal of \mathcal{O} ” should be “some prime ideal of \mathcal{O}_K ”

Page 219, line -10: “of class field theory” should be “of complex multiplication”

Page 221, second display: The display should be

$$|b| \leq a \leq c, \text{ and } b \geq 0 \text{ if either } |b| = a \text{ or } a = c.$$

Page 268, line 1: “compute $H_D(X)$ ” should be “compute $H_D(X)$ for most D ”

Page 268, line -15: “compute any $H_D(X)$ ” should be “compute $H_D(X)$ for any $D \neq -3k^2$, k odd”