
A First Course in Modular Forms:

Corrections to the First Printing

May 26, 2013

(See also the corrections to the later printings, which are corrections to the first printing as well.)

Preface

- Page vii, line 5: Change “provides” to “provided”.

Chapter 1

- Page 12, three-line display: The calculation tacitly uses the fact that $\sqrt{-i\tau_1}\sqrt{-i\tau_2} = \sqrt{(-i\tau_1)(-i\tau_2)}$ for $\tau_1, \tau_2 \in \mathcal{H}$ and the principal branch of the square root.
- Page 17, line 20: Change condition (3') to “ f is holomorphic at ∞ , and in the Fourier expansion...”.

Chapter 2

- Page 55, line 20: Change “nonzero I_k ” to “nonzero ideal I_k ”.
- Page 62, line (–5) of the table: Change “of 0” to “of 0 in \mathbf{C} ” and change “of ∞ ” to “of ∞ in \mathcal{H}^* ”.

Chapter 3

- Page 84, line (–9): Change “ $\text{Div}^0(X)$ ” to “ $\text{Div}(X)$ ”.

Chapter 5

- Page 172, line 5: Change “ N ” to “ n ” twice.
- Page 174, line 7: Change “Section 4 of Chapter 1” to “Section 1.5”.
- Page 178, line 3: Change “(5.9)” to “(5.8)”.
- Page 181, line 15: In the displayed definition of \mathcal{D}^* , change “ $\text{Re}(\tau)$ ” to “ $|\text{Re}(\tau)|$ ”.
- Page 188, second diagram: The map across the bottom should be “ T_p ”.

- Page 198, lines 13–14: The proof of Strong Multiplicity One in [Miy89] is self-contained.
- Page 199, Exercise 5.8.3: The hint is for part (c).
- Page 200, line (–8): Make the same changes to condition (3′) as on page 17.
- Page 201, display (5.23): The last term is $(1 - a_1)a_p p^{-s}$.
- Page 202, line (–8): Change “eigenform” to “eigenform, as follows”.

Chapter 6

- Page 228, line (–10): The summation is over j rather than J .
- Page 228, line (–8): Change “ $[Γ_1αΓ_2]_2 f = f[Γ_1αΓ_2]_2$ ” to “ $[Γ_1αΓ_2]_2 ψ = ψ ∘ [Γ_1αΓ_2]_2$ ”.
- Page 237, line (–10): Change “ $Tf = λ_f(T)$ ” to “ $Tf = λ_f(T)f$ ”.
- Page 239, line 7: The subscript of $α$ should be i rather than j .

Chapter 7

- Page 262, line (–8): Change “now longer” to “no longer”.

Chapter 8

- Page 333, line (–3): Change “if E is an elliptic curve E ” to “if E is an elliptic curve”.
- Page 337, line (–12): Change “.” to “,”.
- Page 337, line (–5): Change “ I_0 ” to “ $I_{(0)}$ ”.
- Page 349, last line: Change “equations” to “a system of equations”.
- Page 361, line (–12): Change “ $a_p(E) = 1$ ” to “ $a_1(E) = 1$ ”.

Chapter 9

- page 370, first line of second complete paragraph: Change “Frobenius automorphism” to “Frobenius element”.

Hints and Answers to the Exercises

- The running header is wrong throughout.
- Page 406: The solution to Exercise 4.3.4 makes a forward reference to the operator $\langle d \rangle$, which is not defined until Chapter 5.
- Page 406, line (–6): Change “and fact that” to “and the fact that”.
- Page 409, line (–13): Change “an argument in Section 1.5” to “Lemma 1.3.1”.
- Page 411, line 1: Change “(b)” to “(c)”.
- Page 412, line (–15): Change “a $\mathbb{T}_{\mathbb{C}}$ ” to “an A ”.