

Addendum/Erratum for Arithmetic Duality Theorems, Academic Press 1986

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px, yt, zb means page x, line y from top, line z from bottom.

All known errors from the first edition were corrected in the second edition, and significant errors to the first edition have been noted in the footnotes to the second edition. Below, I list only the significant errors.

p24, 2b. In general, $H^2(G, \mathbb{Z}/m\mathbb{Z})$ contains $(G^{\text{ab}})_m$, but need not be equal to it. Throughout the statement and proof of Theorem 1.8, replace $\alpha^0(G, \mathbb{Z}/m\mathbb{Z})$ by the map $(C^G)_m \rightarrow (G^{\text{ab}})_m$. [This confusion is not in Tate's letter.]

p65. Bill McCallum points out that Theorem 4.6b is incorrect: it is necessary to assume that L is a sufficiently large finite totally imaginary Galois extension He writes (22/3/96):

Specifically, sufficiently large would be to adjoin enough p -power roots of unity... If I am right, you would have to replace the statement on line -8 of page 65 "It follows easily that ..." with a more detailed argument, and the hypothesis would be "whenever G_S acts trivially on M and L is sufficiently large".

p100, 6.12 $\beta_v \in C^0 \dots$ not $Z^0 \dots$ [this was not corrected in the new edition]. In the definition of the pairing, a term ε_v was omitted — cf. the proof of (6.9). As far as I know, the pairing first occurs in my paper Comparison of the Brauer group..., J. Fac. Science, Univ. Tokyo, Ser. IA, 28, especially pp. 741–742 (with the ε_v term omitted, which, happily, causes no problems in the paper — see Gonzales-Aviles, J. Math. Sci. Univ. Tokyo 10 (2003), 391–419).

p216. A mistake near the end of the proof of Theorem 3.1 has been corrected.¹

¹I believe that the first complete correct proof of the Artin-Verdier duality theorem in the literature is that in the second edition of my book, published 42 years after the theorem was first announced.