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CORRIGENDUM

GALOIS MODULE STRUCTURE OF IDEALS IN WILDLY RAMIFIED CYCLIC EXTENSIONS OF DEGREE p^2

by Gove Griffith ELDER

(Article paru dans le tome 45 (1995), fascicule 3, pp. 625-647)

The author would like to thank Nigel Byott for pointing out the errors in Theorem 1. Base upon the following lemmas the exponents d_r , b and h_i should read:

- Based upon Lemma 8, $d_r = \lceil (n + (r + 1)pb_1)/p^2 \rceil - \max \{ \lceil n/p^2 \rceil, \lambda_{2,0} - e_0 \}$.

- Based upon Lemma 7, $b = \sum_{j=0, s_j > p-1}^{r-1} (\lceil (n - (p - j - 1)pb_1)/p^2 \rceil - \lceil (n - (p - j)pb_1)/p^2 \rceil) + \sum_{j=0, p-1 \geq s_j > p-2}^{r-1} (\min \{ \lceil (\lambda_{2,1}(n) - (s_j - j)b_1)/p \rceil - e_0, \lceil (n - (p - j - 1)pb_1)/p^2 \rceil \} - \lceil (n - (p - j)pb_1)/p^2 \rceil) + \sum_{j=r, s_j \geq p-1}^r \max \{ 0, \lambda_{2,0}(n) - e_0 - \lceil (n + rpb_1)/p^2 \rceil \}$.

- Based upon Lemma 7, $h_i = \sum_{j=0, s_{j-1}=i}^{r-1} \max \{ 0, \lceil (n - (p - j - 1)pb_1)/p^2 \rceil - \lceil (\lambda_{2,1}(n) - (s_j - j)b_1)/p \rceil + e_0 \} + \sum_{j=0, s_j=i}^{r-1} (\min \{ \lceil (\lambda_{2,1}(n) - (s_j - j)b_1)/p \rceil - e_0, \lceil (n - (p - j - 1)pb_1)/p^2 \rceil \} - \lceil (n - (p - j)pb_1)/p^2 \rceil) + \sum_{j=r, s_j=i}^r \max \{ 0, \lambda_{2,0}(n) - e_0 - \lceil (n + rpb_1)/p^2 \rceil \}$.

A cursory glance at the statement of Theorem 1 might suggest the appearance of many different types of $(R_2, R_1; \lambda^i)$ in a given ideal. This is

misleading. Usually only one or two h_i is nonzero. In fact, generally the only nonzero h_i are h_r and h_{r+1} .

Finally, we note one may use Nakayama's lemma instead of our methods, see 640-644, to prove Step 3, for example [G.G. Elder and M.J. Madan, Galois module structure of integers in wildly ramified $C_p \times C_p$ -extensions, *Can. J. Math.*, 49, n°4 (1997), 722-735].

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