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# CORRIGENDUM

## Some self-dual local rings of integers not free over their associated orders

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The last case in the congruence (6) of this paper is incorrect (although Theorem 1 is true as stated). The problem is that $\pi^{e/p}\mathcal{O}_L$ is not mapped to itself by $\sigma$ and $\tau$, only by $\pi^{e/p}\sigma$ and $\pi^{e/p}\tau$. To give the correct formula, define $S_{iu}(c)\in\mathbb{Z}$ for integers $i, u, c \geqslant 0$ by the polynomial identity

$$(X+c)^i = \sum_u S_{iu}(c)\,[X]_u,$$

where $[X]_u = X(X-1)\dots(X-u+1)$. Thus $S_{ii}(c) = 1$, $S_{i0}(c) = c^i$ and $S_{iu}(c) = 0$ for $i < u$. A calculation similar to Lemma 1 then yields the following congruence $\bmod\, p\mathcal{O}_L$:

$$\sigma^i\tau^j(\pi^{re/p}\alpha^r x^s y^t) \equiv \sum_u\sum_v (-1)^v\,[r]_{u+v}\,S_{iu}(s)\,S_{jv}(t)\,\pi^{(r-u-v)\,e/p}\alpha^{r-u-v}x^{s+u}y^{t+v}.$$

In particular, the case $r = p-1 < i+j$ of (6) should read:

$$\pi^{n_{ij}e/p}\sigma^i\tau^j(\alpha^r x^s) \equiv \sum_{u+v=p-1} (-1)^{v+1}S_{iu}(s)\,S_{jv}(0)\,x^{s+u}y^v \pmod{\pi^{e/p}\mathcal{O}_L}.$$

In the penultimate paragraph of the paper, we then have:

$$0 = \xi(\bar{\alpha}^{p-1}\bar{x}^s) = \sum_{i+j\geqslant p-1} \bar{a}_{ij} \sum_{u+v=p-1} (-1)^{v+1}S_{iu}(s)\,S_{jv}(0)\,\bar{x}^{s+u}\bar{y}^v$$

in $k$. The coefficient of $\bar{x}^s\bar{y}^{p-1}$ vanishes by Proposition 1, giving

$$\sum_{i=0}^{p-1} \bar{a}_{ip-1}\,s^i = 0$$

since $S_{jp-1}(0) = 0$ for $j < p-1$. This holds for $0 \leqslant s \leqslant p-1$, so a Vandermonde argument yields $\bar{a}_{ip-1} = 0$ for all $i$. We may assume that $a_{ij} = 0$ for $i+j < p-1$. Replacing $\xi$ successively by $\tau\xi$, $\tau^2\xi, \dots, \tau^{p-1}\xi$, we obtain $\bar{a}_{ij} = 0$ for $i+j \geqslant p-1$ as required.