

ADDENDUM to the paper

L. Ribes, K. Stevenson and P. Zalesskii ‘On Quasifree Profinite Groups’ *Proc. Amer. Math. Soc.* 135 (2007), no. 9, 2669–2676.

We provide explicit details to justify an assertion in this paper; namely, referring to the last paragraph of the paper, we give an explicit proof that the number of epimorphisms λ' is at least m .

Clearly $\lambda(T) = \tilde{K}/N$, for any solution λ , and since T is open, the number of $\lambda|_T$ is m . Hence it suffices to show the following assertion: the number of $(\tilde{\sigma}|_{\tilde{K}/N})(\lambda|_T)$ is m (*).

Since $(\tilde{\sigma}\pi)|_K = \text{id}_K$, $\pi|_K$ is an injection; so abusing notation, we shall write $\pi(K)$ as K again. Put $R = \text{Ker}(\tilde{\sigma}|_{\tilde{K}/N})$; then $\tilde{K}/N = R \rtimes K = R^b \rtimes K^b$, for all $b \in B'$. Note that $R' = \bigcap_{b \in B'} R^b$ is contained in \tilde{K}/N and it is normal in $A'/N = \tilde{K}/N \rtimes B'$. Since $\tilde{\sigma}(R') = 1$, to prove (*) we may assume that $R' = 1$, since we could replace A'/N by $(A'/N)/R'$. Making that assumption, the natural map $\tilde{K}/N \rightarrow \prod_{b \in B'} K^b$ is an embedding as a subdirect product, i.e., each of the compositions $\rho_b : \tilde{K}/N \rightarrow \prod_{b \in B'} K^b \rightarrow K^b$ is onto. Since B' is finite, the number of compositions $\rho_b(\lambda|_T)$ must be m for at least one $b_0 \in B'$. Finally, since $\tilde{\sigma}|_{K^{b_0}}$ is injective, assertion (*) follows.