Year: 2015 | Vol.: 86 | Fasc.: 3-4

Title: Sublattices of verbal subgroups

Author(s): Beata Bajorska, Olga Macedońska and Witold Tomaszewski

The problem of classification of group varieties is still open. We consider four classes of verbal subgroups of a free group F of rank 2: $\{VN\text{-verbal}\} \subseteq \{P\text{-verbal}\} \subseteq \{R\text{-verbal}\} \subseteq \{M\text{-verbal}\}$. The subgroups in each class define specific properties in corresponding varieties, namely, VN-varieties have their 2-generator groups virtually nilpotent; P-varieties satisfy positive laws; R-varieties are restrained; and M-varieties contain no $\mathfrak{A}_p\mathfrak{A}$ as a subvariety. It is shown that each of these classes of verbal subgroups forms a sublattice of the lattice of subgroups in F. Three questions are posed.

Address:

Beata Bajorska Institute of Mathematics Silesian University of Technology Kaszubska 23 44-100 Gliwice Poland Address: Olga Macedońska Institute of Mathematics Silesian University of Technology Kaszubska 2344-100 Gliwice Poland Address: Witold Tomaszewski Institute of Mathematics Silesian University of Technology Kaszubska 23 44-100 Gliwice Poland