Newman, M. F.; Niemeyer, Alice C.
On complexity of multiplication in finite soluble groups. (English) Zbl 1315.20012

Summary: We determine a reasonable upper bound for the complexity of collection from the left to multiply two elements of a finite soluble group by restricting attention to certain polycyclic presentations of the group. As a corollary we give an upper bound for the complexity of collection from the left in finite $p$-groups in terms of the group order.

MSC:
20D10 Finite solvable groups, theory of formations, Schunck classes, Fitting classes, $\pi$-length, ranks
68Q25 Analysis of algorithms and problem complexity
20F05 Generators, relations, and presentations of groups
68W30 Symbolic computation and algebraic computation

Keywords:
collection from the left; complexity of multiplication; finite soluble groups; polycyclic presentations

Software:
GAP; Magma

Full Text: DOI arXiv

References:

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.