

Finite groups, close to Frobenius groups

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We discuss finite non-soluble generalized Frobenius groups, i. e. groups G with a proper nontrivial normal subgroup F (said to be the *kernel* of G), such that every coset Fx , which (as an element of the quotient group G/F) has a prime order p , consists only of p -elements. In particular, all Frobenius groups, and also Camina groups [1] and Camina pairs (see a review of this topic in [2]) give examples of generalized Frobenius groups.

We describe the structure of a perfect generalized Frobenius group and, in particular, prove that its kernel is nilpotent.

References

- [1] Camina A. R. Some conditions which almost characterize Frobenius groups // Israel J. Math. 1978. V. 31, No. 2. P. 153–160.
- [2] Lewis M. L. Camina groups, Camina pairs, and generalization // in: N. S. N. Sastry and M. K. Yadav (eds.), Group theory and computation. Springer Nature Singapore Pte Ltd. 2018. P. 141–174.

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