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Finite groups with some restriction on the vanishing set. (English) Zbl 07253635

Commun. Algebra 48, No. 12, 5474-5481 (2020)

Summary: Let x be an element of a finite group G and denote the order of x by $\text{ord}(x)$. We consider a finite group G such that $\gcd(\text{ord}(x), \text{ord}(y)) \leq 2$ for any two vanishing elements x and y contained in distinct conjugacy classes. We show that such a group G is solvable. When G with the property above is supersolvable, we show that G has a normal metabelian 2-complement.

MSC:

20C15 Ordinary representations and characters

Cited in 1 Document

Keywords:

normal 2-complement; orders of vanishing elements; solvable groups; supersolvable groups

Software:

GAP

Full Text: DOI

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