

Order Dimension of Subgroups: Abstract

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The number of different orders of nonidentity elements in a group is limited by the number divisors of the order of the group. This upper bound can be made more specific for proper subgroups, and can be calculated from the prime power factorization of the group's order. Some groups have subgroups with the highest possible number of different orders for nonidentity elements. This property can be characterized and general results exist for several families of groups.