

FITTING HEIGHT OF A FINITE GROUP WITH A METABELIAN GROUP OF AUTOMORPHISMS

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Abstract

Let $M = FH$ be a finite group that is a product of a normal abelian subgroup F and an abelian subgroup H . Assume that all elements in $M - F$ have a prime order p , and F has at most one subgroup of order p . Suppose M acts on a finite group G in such a manner that $C_G(F) = 1$. Then the Fitting height $h(G)$ of G is at most $h(C_G(H)) + 1$. Moreover, the Fitting series of $C_G(H)$ coincides with the intersection of $C_G(H)$ with the Fitting series of G .

In this talk, firstly we will see some background material related to this field. Secondly, we will mention some historical and recent facts about this subject. Finally, we will intuitively study the proof of above result given by Emerson de Melo.

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