عنوان مقاله:

On the order of the n-center factor subgroup of an n-abelian group

نویسنده:

Azam Pourmirzaei - *Hakim Sabzevari University*

خلاصه مقاله:

A group G is said to be n-abelian, if $(xy)^n = x^n y^n$, for any $x, y \in$ in G and a positive integer n. In ۱۹۷۹, Fay and Waals introduced the n-potent and the n-center subgroups of a group G, denoted by G^n and $Z_n(G)$, respectively. In this paper, we show that the index of the n-center is bounded by an order power of the n-potent subgroup, for some classes of groups. In fact for all n-abelian groups G with finite n-potent subgroup, we prove that if $G/Z_n(G)$ is finitely generated, then $[G : Z_n(G)] \leq |G^n|^{d(G/Z_n(G))}$. Moreover, we conclude that $[G : Z_n(G)] \leq |G^n|^{۲\log ۲|G^n|}$, for some n-capable group G.

کلمات کلیدی:

n-abelian group, n-center subgroup and n-potent subgroup

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