

## SOME SUFFICIENT AND NECESSARY CONDITIONS FOR NILPOTENT GROUPS

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## **Abstract**

A subgroup H of a group G is said to be quasi-c-normal in G if there exists a normal subgroup K of G such that |G:HK| is a power of a prime and  $H\cap K \leq H_G$ . In this paper, we obtain some sufficient and necessary conditions for finite nilpotent groups by means of the quasi-c-normality of some subgroups of a group G.

**Keywords and phrases:** Sylow subgroups, minimal subgroups, quasi-*c*-normal sub-groups, Nilpotent groups.

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