

ON $S\Phi$ -EMBEDDED SUBGROUPS OF FINITE GROUPS

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A subgroup H of G is called $S\Phi$ -embedded in G if there exists a normal subgroup T of G such that HT is S -quasinormal in G and $(H \cap T)H_G/H_G \leq \Phi(H/H_G)$, where H_G is the maximal normal subgroup of G contained in H and $\Phi(H/H_G)$ is the Frattini subgroup of H/H_G . In this paper, we investigate the influence of $S\Phi$ -embedded subgroups on the structure of finite groups. In particular, some new characterizations of p -supersolvability of finite groups are obtained by assuming some subgroups are $S\Phi$ -embedded.

Keywords: sylow p -subgroup; $S\Phi$ -embedded subgroup; p -supersolvable group; p -nilpotent group.

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