

On a new type of products of finite groups

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Abstract. Let G_1 and G_2 be subgroups of a finite group G . We say that G_1 and G_2 are totally semipermutable if G_1G_2 is a subgroup of G , and whenever P is a Sylow subgroup of G_1 and Q is a Sylow subgroup of G_2 with $(|P|, |Q|) = 1$, we have every subgroup of P permutes with every subgroup of Q . In this paper, we study the influence of totally semipermutable subgroups on the structure of finite groups. Our results improve and extend some results in the literature.

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