

TWO IMPORTANT FORMULAE IN THE THEORY OF FINITE GROUPS

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ABSTRACT

In this paper we proposed two formulae to calculate the number of elements of prime order of a finite group. The first one is used to calculate the number of prime order elements of a given direct product representation of an Abelian group for a given positive integer. The second one is used to determine the total number of elements of prime order in a symmetric group S_n of degree n .

KEYWORDS: Abelian Group, Direct Product, Prime Order, Symmetric Group