
A GENERALIZATION OF THE BURNSIDE BASIS THEOREM

Agnieszka Stocka University of Białystok

Let G be a finite group and $\Phi(G)$ denotes the Frattini subgroup of G . A subset X of G is called g -independent if there is no proper subset Y of X such that $\langle Y, \Phi(G) \rangle = \langle X, \Phi(G) \rangle$. The group G has the embedding property if every g -independent subset of G can be embedded in a minimal generating set of G and G has property \mathcal{B} if all minimal generating sets of G have the same cardinality. If X is a set of prime power order elements, then we say that G has the pp-embedding property, respectively property \mathcal{B}_{pp} . From the Burnside basis theorem we know that all finite p -groups have such properties. During this talk we present some results about groups with the pp-embedding property and property \mathcal{B}_{pp} .