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Generalized free products of π_c groups. (English)

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A group G is said to be π_c if and only if for every pair of elements g_1 and g_2 of G either $g_1 = g_2^k$ for some integer k or there exists a normal subgroup N of finite index in G such that $g_1 \not\equiv g_2^m \pmod{N}$ for all integers m . A group G is said to be (x) -Pot for a nontrivial element x of G if and only if for every positive integer n (dividing the order of x if the order is finite) there exists a normal subgroup N of finite index G such that xN has order exactly n in G/N .

Let A and B be π_c groups and let $a \in A$ and $b \in B$ where a and b have the same order. The authors prove that if A is (a) -Pot and B is (b) -Pot, then the generalized free product G of A and B amalgamating the subgroups (a) and (b) with $a = b$, is π_c .

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