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Tree products and polygonal products of weakly potent groups. (English)
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Authors' abstract: A group G is said to be weakly potent if, for each element x of infinite order in G , we can find a positive integer r with the property that, for every positive integer n , there exists a normal subgroup M_n of finite index in G such that xM_n has order exactly rn in G/M_n . In this paper, we show that certain finite tree products and polygonal products of weakly potent groups are again weakly potent. We then apply our results to tree products and polygonal products of polycyclic-by-finite groups and free-by-finite groups.

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