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On the residual finiteness of polygonal products of nilpotent groups. (English)
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In general polygonal products of finitely generated torsion-free nilpotent groups amalgamating cyclic subgroups need not be residually finite. In this paper we prove that polygonal products of finitely generated torsion-free nilpotent groups amalgamating maximal cyclic subgroups such that the amalgamated cycles generate an isolated subgroup in the vertex group containing them, are residually finite. We also prove that, for finitely generated torsion-free nilpotent groups, if the subgroups generated by the amalgamated cycles have the same nilpotency classes as their respective vertex groups, then their polygonal product is residually finite.

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