

Additive Combinatorics
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Nilpotent groups are round

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Abstract

We define a notion of roundness for finite groups. Roughly speaking, a group is round if one can order its elements in a cycle in such a way that some natural summation operators map this cycle into new cycles containing all the elements of the group. Our main result is that this combinatorial property is equivalent to nilpotence.

Joint work with M. D. Boshernitzan.