

## PERMUTATIONS WITH A DISTINCT DIVISOR PROPERTY

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**ABSTRACT.** A finite group of order  $n$  is said to have the distinct divisor property (DDP) if there exists a permutation  $g_1, \dots, g_n$  of its elements such that  $g_i^{-1}g_{i+1} \neq g_j^{-1}g_{j+1}$  for all  $1 \leq i < j < n$ . We show that an abelian group is DDP if and only if it has a unique element of order 2. We also describe a construction of DDP groups via group extensions by abelian groups and show that there exist infinitely many non abelian DDP groups.

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