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THE NUMBER OF REMAK DECOMPOSITIONS OF A FINITE ABELIAN GROUP

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Abstract. Although the fundamental theorem of finite Abelian groups states that every finite Abelian group has a decomposition into a direct sum of primary cyclic groups which is unique up to isomorphisms and the order of terms, this decomposition is not unique up to equalities and the order of terms. We present here a way to count the number of direct decompositions into a direct sum of primary cyclic groups for a finite Abelian group up to the order of terms, i.e. the number of Remak decompositions of a finite Abelian group.

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Key words. Abelian group, Remak decomposition, direct summand, type.

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