CHARACTERIZATION OF THE INESSENTIAL ENDMORPHISMS IN THE CATEGORY OF ABELIAN GROUPS

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Abstract

An endomorphism \( f \) of an Abelian group \( A \) is said to be inessential (in the category of Abelian groups) if it can be extended to an endomorphism of any Abelian group which contains \( A \) as a subgroup. In this paper we show that \( f \) is as above if and only if \( (f - \text{id}_A)(A) \) is contained in the maximal divisible subgroup of \( A \) for some \( v \in \mathbb{Z} \).