


Classification of skew morphisms of cyclic groups which are square roots of automorphisms*

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Abstract

The auto-index of a skew morphism φ of a finite group A is the smallest positive integer h such that φ^h is an automorphism of A . In this paper we develop a theory of auto-index of skew morphisms, and as an application we present a complete classification of skew morphisms of finite cyclic groups which are square roots of automorphisms.

Keywords: Skew morphism, auto-index, period, square root.

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Klasifikacija tistih poševnih morfizmov cikličnih grup, ki so kvadratni koreni avtomorfizmov*

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Povzetek

Indeks avtomorfности poševnega morfizma φ končne grupe A je najmanjše pozitivno celo število h , pri katerem je φ^h avtomorfizem grupe A . V tem članku razvijemo teorijo indeksa avtomorfности poševnih morfizmov, in kot primer njene uporabe predstavimo popolno klasifikacijo tistih poševnih morfizmov končnih cikličnih grup, ki so kvadratni koreni avtomorfizmov.

Ključne besede: Poševni morfizem, indeks avtomorfности, perioda, kvadratni koren.

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