

A note on Skolem-Noether algebras

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Abstract

The paper was motivated by Kovacs' paper [?], Isaacs' paper [?] and a recent paper [?] concerning Skolem-Noether algebras due to Brešar et al.. Let K be a unital commutative ring, not necessarily a field. Given a unital K -algebra S , where K is contained in the center of S , $n \in \mathbb{N}$, the goal of this paper is to study the question: when can a homomorphism $\phi: M_n(K) \rightarrow M_n(S)$ be extended to an inner automorphism of $M_n(S)$? As an application of main results proved in the paper, it is proved that if S is a semilocal algebra with a central separable subalgebra R , then any homomorphism from R into S can be extended to an inner automorphism of S .

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