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ON THE SKEW LIE PRODUCT AND DERIVATIONS OF PRIME RINGS WITH INVOLUTION

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Abstract

Let R be a ring with involution $'*'$. The skew Lie product of $a, b \in R$ is defined by $*[a, b] = ab - ba^*$. The purpose of this paper is to study the commutativity of a prime ring which satisfies the various $*$-differential identities involving skew Lie product. Finally, we provide two examples to prove that the assumed restrictions on some of our results are not superfluous.

Keywords: prime ring, skew Lie product, derivation, involution.

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