

## Some Properties in Jordan Ideal on 3-Prime Near-Rings

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**Abstract :** The study of non-associative structures in algebraic structures has become a separate entity; for, in the case of groups, their corresponding non-associative structure i.e. loops is dealt with separately. Similarly there is vast amount of research on the nonassociative structures of semigroups i.e. groupoids and that of rings i.e. nonassociative rings. However it is unfortunate that we do not have a parallel notions or study of non-associative near-rings. In this work we shall attempt to generalize a few known results and study the commutativity of Jordan ideal in 3-prime near-rings satisfying certain identities involving the Jordan ideal. We study the derivations satisfying certain differential identities on Jordan ideals of 3-prime near-rings. Moreover, we provide examples to show that hypothesis of our results are necessary. We give some new results and examples concerning the existence of Jordan ideal and derivations in near-rings. These near-rings can be used to build a new codes.

**Keywords :** 3-prime near-rings, near-rings, Jordan ideal, derivations

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