

McCoy property over Jacobson radicals

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Abstract In this paper, we introduce a new class of rings related to Jacobson radicals called feckly McCoy rings. A ring R is called right feckly McCoy if the factor ring $R/J(R)$ is a right McCoy ring. We mainly study the structural property of right feckly McCoy rings, and elaborate upon some special extensions of rings with McCoy property over Jacobson radicals. It is also brought into focus the Ore extension of right feckly McCoy rings under some conditions. Moreover, we generalize the annihilator of a ring to the Jacobson radical, and study some special properties of rings with annihilators over the Jacobson radical under the right feckly McCoy condition.

keywords McCoy ring, Jacobson radical, feckly McCoy ring, polynomial extension, annihilator