Automorphisms of zero divisor graphs of Galois rings

Abstract.

Let R be a commutative finite ring with unity and let Z (R) be its set of zero divisors. The study of R in which the subset of zero divisors forms a unique maximal ideal has been extensively done yielding interesting and useful results. For different classes of R, the invertible element have been characterized by use of fundamental theorem of finitely generated abelian groups while Z (R) has been characterized via the zero divisor graphs. Scanty in the literature are the maps that preserve the structures of R and its subsets. In this paper we discover andcharacterize the automorphisms of zero divisor graphs of Galois rings.

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