

عنوان مقاله:

A Note on a graph associated to a commutative ring

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خلاصه مقاله:

The rings considered in this article are commutative with identity. This article is motivated by the work on comaximal graphs of rings. In this article, with any ring R , we associate an undirected graph denoted by $G(R)$, whose vertex set is the set of all elements of R and distinct vertices x, y are joined by an edge in $G(R)$ if and only if $Rx \cap Ry = Rxy$. In Section 2 of this article, we classify rings R such that $G(R)$ is complete and we also consider the problem of determining rings R such that $\chi(G(R)) = \omega(G(R)) < \infty$. In Section 3 of this article, we classify rings R such that $G(R)$ is planar.

کلمات کلیدی:

Comaximal graph of a ring, complete graph, chromatic number, clique number, planar graph

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