Abstract

Let R be a commutative ring with Z(R), its set of zero divisors. The total zero divisor graph of R, denoted Z(?(R)) is the undirected (simple) graph with vertices Z(R)*=Z(R)-{0}, the set of nonzero zero divisors of R. and for distinct x, y ? z(R)*, the vertices x and y are adjacent if and only if x + y ? z(R). In this paper prove that let R is commutative ring such that Z(R) is not ideal of R then Z(?(R(+)M)) is connected with diam(Z(?(R(+)M))) = 2 and the sub graphs Z(?(R(+)M)) and Reg(?(R(+)M)) of T(?(R(+)M)) are not disjoint. And also prove that let R be a commutative ring such that Z(R) is not an ideal of R with Z(R(+)M) = Z(R)(+)M and Reg(R(+)M) = Reg(R)(+)M then Z(?(R(+)M)) is connected if and only if Z(?(R) is connected and Reg(?(R(+)M)) is connected if and only if Reg(?(R).

References


Index Terms
- Computer Science
- Applied Mathematics

Keywords
- Zerodivisors
- Total zero-divisor graph of idealization
- Commutative ring
- Connected graph.