A Characterization of Certain Morphic Trivial Extensions.

A ring $R$ is called left morphic if for every $a \in R$ there is an element $b \in R$ such that $\text{ann}_l(a) = Rb$ and $\text{ann}_l(b) = Ra$. A ring is called morphic if it is both left and right morphic. Morphic rings are a natural generalization of the classical unit regular rings. In this paper, we investigate when the trivial extension of a ring by a suitable bimodule is morphic. Among the classes of rings we investigate are left perfect rings, unit regular rings and commutative reduced rings. (Received September 16, 2008)