

ON THE PRIME RADICAL OF AN IDEAL IN AN  $(m, n)$ -RING

Maria S. POP

**Abstract.** The extension of the usual ring concept to the case where the underlying group and semigroup are respectively an  $m$ -ary group and an  $n$ -ary semigroup has been studied by Crombez [1]; some ideal theory aspects and the properties of the prime radical of an ideal in a commutative  $(m, n)$ -ring for  $m=n$  were investigated. In this note we prove that these properties remain true for  $n \neq m$ , too.