On the nilpotence of the multiplication operator in commutative right nil algebras

Correa, Ivan

Hentzel, Irvin Roy

Labra, Alicia

We study conditions under which the identity ((xx)x)x = 0 in a commutative nonassociative algebra A implies Rx is nil-potent where Rx is the multiplication operator Rx(y) = xy for all y in A. The separate conditions that we found to be sufficient are (1) dimension four or less, (2) any additional non-trivial identity of degree four, or (3) ((xx)x)(xx) = 0. We assume characteristic ? 2, 3.