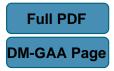
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## THE RINGS WHICH ARE BOOLEAN\*

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## Abstract

We study unitary rings of characteristic 2 satisfying identity  $x^p = x$  for some natural number p. We characterize several infinite families of these rings which are Boolean, i.e., every element is idempotent. For example, it is in the case if  $p = 2^n - 2$  or  $p = 2^n - 5$  or  $p = 2^n + 1$  for a suitable natural number n. Some other (more general) cases are solved for p expressed in the form  $2^q + 2m + 1$  or  $2^q + 2m$  where q is a natural number and  $m \in$  $\{1, 2, \ldots, 2^q - 1\}$ .

Keywords: Boolean ring, unitary ring, characteristic 2.

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