

## ON PSEUDO $BE$ -ALGEBRAS

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### Abstract

In this paper, we introduce the notion of pseudo  $BE$ -algebra which is a generalization of  $BE$ -algebra. We define the concepts of pseudo subalgebras and pseudo filters and prove that, under some conditions, pseudo subalgebra can be a pseudo filter. We prove that every homomorphic image and pre-image of a pseudo filter is also a pseudo filter. Furthermore, the notion

of pseudo upper sets in pseudo  $BE$ -algebras introduced and is proved that every pseudo filter is an union of pseudo upper sets.

**Keywords:**  $BE$ -algebra, Pseudo  $BE$ -algebra, pseudo filter, pseudo upper set.

**2010 Mathematics Subject Classification:** 06F35,03G25,03B52.

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Received 22 February 2013

Revised 11 May 2013

