

NEW KINDS OF PREFILTERS IN EQ-ALGEBRAS

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Abstract

In this paper, the notions of n -fold positive implicative prefilter and n -fold implicative prefilter in EQ-algebras are introduced and several properties, characterizations and equivalent conditions are provided. It is proved that the quotient EQ-algebra induced by an n -fold positive implicative prefilter is n -idempotent. Also, it is proved that in an n -idempotent EQ-algebra, any filter is an n -fold positive implicative filter. In the sequel, we investigate the relationships between these two types of prefilters. Finally, some characterizations of n -fold implicative prefilters in bounded EQ-algebras are given.

Keywords: (n -idempotent) EQ-algebra, n -fold positive implicative prefilter, n -fold implicative prefilter.

2010 Mathematics Subject Classification: 03G25, 06F35.

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Received 7 June 2020

Revised 27 November 2020

Accepted 29 November 2020