

## FUNDAMENTAL RELATION ON HYPER *BCK*-ALGEBRAS

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ABSTRACT. In this paper, we consider the notions of *BCK*-algebras and (weak commutative) hyper *BCK*-algebras, give some related results, introduce the relation  $\beta$  on hyper *BCK*-algebras and let  $\beta^*$  be the transitive closure of  $\beta$ . Then by considering the concept of strongly regular equivalence relation (fundamental relation)  $\beta^*$  on hyper *BCK*-algebras, we define the notion of fundamental *BCK*-algebra and we prove that any countable *BCK*-algebra is a fundamental *BCK*-algebra.

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