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The additivity theorem in K -theory. (English) Zbl 1077.19001

K-Theory 32, No. 2, 181-191 (2004).

The authors give new versions, in the style of Quillen's Theorem A, of *F. Waldhausen's* proof [Lect. Notes Math. 1126, 318–419 (1985; Zbl 0579.18006)] of the additivity theorem for algebraic K -theory. This is carried out by showing some results that allow to convert a theorem B style proof into a theorem A style proof. The first of these results is Theorem \hat{A} showing conditions such that, for any functors of small categories $f : C \rightarrow D$ and $g : C \rightarrow E$, the induced functor $(f, g) : C \rightarrow D \times E$ is a homotopy equivalence. This theorem is then rewritten for maps of simplicial sets obtaining the simplicial set versions Theorem \hat{A}^* and Theorem \hat{A}' .

Reviewer: [Antonio R. Garzón \(Granada\)](#)

MSC:

[19D06](#) Q - and plus-constructions

[55U10](#) Simplicial sets and complexes in algebraic topology

Cited in **1** Document

Keywords:

additivity theorem; theorem A style; theorem B style; simplicial set

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