THE TWO-SQUARE LEMMA AND THE CONNECTING MORPHISM IN A PREABELIAN CATEGORY

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In 1989, Fay, Hardie, and Hilton proved the so-called “Two-Square Lemma”, a diagram assertion used as a tool for constructing a connecting morphism in the Snake Lemma in abelian categories. Later Generalov extended this construction to arbitrary preabelian categories.

We obtain a version of the general Two-Square Lemma by Fay–Hardie–Hilton for preabelian categories. We also establish the equivalence up to sign of two definitions of the connecting morphism of the Snake Lemma, one going back to André–MacLane and the other provided by the Two-Square Lemma.

REFERENCES


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The author was partially supported by the Russian Foundation for Basic Research (Grants 09-01-00142-a, 12-01–00873-a), the State Maintenance Program for the Leading Scientific Schools and Junior Scientists of the Russian Federation (Grants NSh-6613.2010.1, NSh-921.2012.1), and the Integration Project “Quasiconformal Analysis and Geometric Aspects of Operator Theory” of the Siberian and Far Eastern Branches of the Russian Academy of Sciences.