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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