

The Mapping Cylinder

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Abstract

Given an arrow $f : X \rightarrow Y$ in the category of CW complexes, we know how to define Mapping Cylinder of f namely $MCyl(f)$. We also know how to define the Mapping Cylinder of an arrow in the category of ‘chain complexes of abelian groups’. If Ch denote the functor from the category of CW complexes to the category of ‘chain complexes of abelian groups’, we shall prove $MCyl(Ch(f)) \simeq Ch(MCyl(f))$.