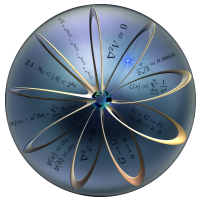

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suspension isomorphism

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Proposition 1. *Let X be a topological space. There is a natural isomorphism*

$$s : H_{n+1}(SX) \to H_n(X),$$

where SX stands for the unreduced suspension of X.

If X has a basepoint, there is a natural isomorphism

$$s : \widetilde{H}_{n+1}(\Sigma X) \to \widetilde{H}_n(X),$$

where ΣX is the reduced suspension.

A similar proposition holds with homology replaced by cohomology.

In fact, these propositions follow from the Eilenberg-Steenrod axioms without the dimension axiom, so they hold for any generalized (co)homology theory in place of integral (co)homology.