

$$= H_n(S_n) = \mathbb{Z}.$$

The homology groups  $H_i(S_n)$ , with  $i > n$ , are all trivial. It therefore came as a great surprise historically that the corresponding homotopy groups are not trivial in general. This is the case that is of real importance: the higher homotopy groups  $\pi_i(S_n)$ , for  $i > n$ , are surprisingly complex and difficult to compute, and the effort to compute them has generated a significant amount of new mathematics.

== Table ==