

Math 427/527: algebraic topology
Homework problem for Lecture 14.

During this lecture I asserted the existence of a long exact sequence, induced by considering the collection of short exact sequences $\{0 \rightarrow Z^n \rightarrow C^n \rightarrow B^n \rightarrow 0\}$ related by the coboundary map.

Provide the details for this long exact sequence and, in particular, show that the connecting homomorphism is $i_n^*: Z^n \rightarrow B^n$, where $i_n: B_n \hookrightarrow Z_n$.