HOMEWORKS 9 AND 10 − 2020

Exercise 1. Let (X, A) be a pair of CW-complexes with A contractible. Use the extension lemma to prove that A is a retract of X.

Exercise 2. Let G be an Abelian group and let $n \geq 2$ be an integer. Construct a CW-complex X with homotopy groups $\pi_n(X) = G$ and $\pi_i(X) = 0$ for $i \neq n$. Try to prove that any two such CW-comlexes are homotopy equivalent.