HOMEWORK 11

Exercise 1. Show that the spaces $\mathbb{C}P^2$ and $S^5 \times \mathbb{C}P^\infty$ have the same homotopy groups but they are not homotopic.

Exercise 2. Let X be a CW-complex with all homotopy groups trivial. Use Whitehead Theorem to prove that X is contractible. One can apply this statement to S^∞.