

Enhanced Coursework

Algebraic Topology M4P21

Due Friday, May 7, 2010

Read as much of Hatcher §2.1 as you need to in order to do the following problems:

- #17(b)
- #20—just the first sentence, not the “more generally” part. Use the long exact sequence of the pair (CX, X) .
- #21—construct the maps $C_n(X) \rightarrow C_{n+1}(SX)$ and verify that they commute with ∂ , but you need not show that they induce isomorphisms on reduced homology.
- #29

The “reduced homology” of X is the same as the homology of X relative to a basepoint:

$$\tilde{H}_*(X) = H_*(X, \text{point}).$$

Please feel free to e-mail me with questions or to arrange a meeting.