Homework 1. January 12, 2018.

1. Compute the simiplicial homology of the Klein bottle using the cell-structure described in class.

2. Compute the simplicial homology of the triangular parachute obtained from a two-simplex Δ^2 by identifying its three vertices to a single point.

3. The n-sphere S^n has a Δ-complex structure using two n-simplices and identifying their boundaries via the identity map. Calculate the simplicial homology using this Δ-complex structure. (If this is confusing, first try S^2.)

   RECALLING FUNDAMENTAL GROUPS

4. Problem 5, p 38, Hatcher.

5. Problem 7, p 38, Hatcher.

6. Problem 12, p 39, Hatcher.