MTH 516/616: Topology II

Practice Assignment I

Simplicial homology

1. Try problems 1-10 in Section 2.1 (Page 131) from Hatcher.

2. Compute the simplicial homology groups of the closed orientable surface S_g of genus g. [Hint: Note that a cell-complex structure for S_g comprises 1 0-cell v, $2g$ 1-cells $(a_1, b_1, \ldots, a_g, b_g)$ attached to v by the constant map, and a 2-cell U attached to the 1-skeleton along $\prod_{i=1}^{g}[a_i, b_i]$.]