Assignment I: Simplicial homology

January 17, 2023

Practice problems

1. Exercises 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 $\prod_{i=1}^{g}[a_i, b_i]$.]

Problems for submission

(Due 26/1/2023)

Please turn in your solutions to the following problems from the practice problems listed above by the due date.

- Exercises 4, 5, and 8 from Problems 1 and 2.