## **TOPOLOGY 2, HOMEWORK 7**

- (1) Hatcher, Section 1.2 #9
- (2) Hatcher, Section 1.2 #14
- (3) Hatcher, Section 1.2 #15
- (4) Hatcher, Section 1.2 # 16
- (5) Hatcher, Chapter 0, #14
- (6) Show that the CW complex  $\Sigma_g$  constructed in class is a 2-dimensional manifold; that is, it is Hausdorff and second-countable, and each point has a neighborhood homeomorphic to an open subset of  $\mathbb{R}^2$ .