Math 525, Spring 2018. Homework 3
Due: Thursday, February 8, 2018

(1) Show that $\pi_1(\mathbb{RP}^2) \cong \mathbb{Z}_2$ using the cell complex structure on $\mathbb{RP}^2$ obtained by identifying antipodal vertices, edges, and faces of a cube.

(2) Hatcher §1.2 exercise 3

(3) Hatcher §1.2 exercise 9

(4) Hatcher §1.2 exercise 16

(5) Hatcher §1.2 exercise 21