Homework 4
Due: Feb 27

1. Prove that a space X is simply-connected if and only if there is a unique homotopy class of paths connecting any two points in X.

2. Hatcher Exercise 1.3.2 (p.79)

3. Hatcher Exercise 1.3.4 (p.79)

4. Hatcher Exercise 1.3.7 (p.79)

5. Hatcher Exercise 1.3.9 (p.79)

6. Hatcher Exercise 1.3.10 (p.79)

Think about the following, but do NOT turn in:

- Read the proof of proposition 1.32 of Hatcher (p.61).