

INTRO TO ALGEBRAIC TOPOLOGY
HOMEWORK 5 DUE MARCH 5

Turn in the following:

- (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)