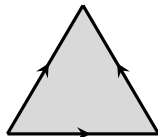


TOPOLOGY 2, HOMEWORK 7

- (1) (a) (1 pt) Identify $\pi_1(X)$, where X is the two-dimensional CW complex obtained by identifying edges of a triangle as indicated below.



- (b) (1 pt) Let $p: \mathbb{R} \rightarrow S^1$ be the universal cover. For a proper subset X of \mathbb{R} , show that the restriction of p to X is not a covering map.
- (2) (2 pts) Hatcher, Section 1.2 # 14
- (3) (2 pts) Hatcher, Section 1.2 # 20
- (4) (2 pts) Hatcher, Section 1.3, # 1
- (5) (2 pts) Hatcher, Section 1.3 # 3