

TOPOLOGY 2, HOMEWORK 6

- (1) (a) (1 pt) Show that an isomorphism $\phi: G \rightarrow H$ is determined by $\phi(x) = bab$ and $\phi(y) = ab$, where $G = \langle x, y \mid x^2 = y^3 \rangle$ and $H = \langle a, b \mid aba = bab \rangle$.
(b) (1 pt) Show that $\langle a, b, c, d \mid ab = c, bc = d, cd = a, da = b \rangle$ is a finite cyclic group, and find its order.
- (2) (2 pts) Hatcher, Section 1.2 #1
- (3) (2 pts) Hatcher, Section 1.2 #6
- (4) (2 pts) Hatcher, Section 1.2 #8
- (5) (2 pts) Hatcher, Section 1.2 #9