

Combinatorial Topology Quiz 2 (2017 Fall)

Question 1. *Write your name, student ID number.*

Let B be a path-connected, locally path-connected, and semilocally simply connected space, and let $b_0 \in B$.

Question 2. *Whis the definition of “semilocally simply connected”?*

Question 3. *Let E be the universal cover of B . Show that $\pi_1(B, b_0)$ acts on E properly discontinuously.*

Question 4. *Show that the fundamental group of a double-holed torus has rank at most 4.*