

Extra Credit Assignment 6

Due Friday, March 26, 11:59 PM

Fix two topological spaces X and Y , along with basepoints $x_0 \in X, y_0 \in Y$. Exhibit a bijection

$$\pi_1(X, x_0) \times \pi_1(Y, y_0) \cong \pi_1(X \times Y, (x_0, y_0)).$$

In fact, the two groups are isomorphic; you can prove this if you like, too. (For this you'll have to look up what it means to give $G \times H$ a group structure once you're given group structures on G and H .)