

Home Work Due Feb 28

Problem 1

We can think of $\pi_1(X, x_o)$ as homotopy classes of maps from S^1 to X sending $*$ $\in S^1$ to x_o . We can likewise define $\pi_0(X, x_o)$ to be homotopy classes of maps from $S^0 = \{x \in \mathbb{R} \mid |x| = 1\}$ to X sending $1 \in S^0$ to x_o . Show that $\pi_0(X, x_o)$ is in bijective correspondence with the path connected components of X .