



$$X = A \sqcup B$$

$\pi_0(X)$ is the set of path connected components

so $\pi_0(X) = \{0, 1\}$

$$\forall n \in \mathbb{N}^+ : \pi_n(A, x_0) = 0 \text{ since } A \sim \{*\}$$

$$\pi_1(B, x_1) = \mathbb{Z} \text{ since } B \sim S^1$$

$$\forall n \in \mathbb{N}^+ \setminus \{2\} : \pi_n(B, x_1) = \pi_n(S^1, x_1) = 0 \text{ since } n \geq 2$$