

$$U \cong \mathbb{P}^1(\mathbb{R}) \cong S^1$$

(9)

$$V \cong \mathbb{R}^2 \cong \text{pts}$$

$$H_k(U) = \begin{cases} \mathbb{R} & k=0,1 \\ 0 & \text{otherwise} \end{cases}$$

$$H_k(V) = \begin{cases} \mathbb{R} & k=0 \\ 0 & \text{otherwise} \end{cases}$$

$$\text{In } \mathbb{P}^2(\mathbb{C})$$

$$U_i = \{ [x_0, x_1, x_2] \mid x_i \neq 0 \}$$

$$X = U_0 \cap U_1$$

Calcolare

$$H_k(X, \mathbb{R})$$

$$\{(z, w) \in \mathbb{C}^2 \mid z \neq 0\}$$

$$= \mathbb{C}^2 \setminus \mathbb{C} = \mathbb{R}^4 \setminus \mathbb{R}^2$$

$$Y = U_0 \cap U_1 \cap U_2 = \{(z, w) \in \mathbb{C}^2 \mid z \neq 0, w \neq 0\}$$

$$\mathbb{C}^2 \setminus (\mathbb{C} \cup \mathbb{C})$$

con inputs
in comune.

$$Z = (U_0 \cap U_1) \cap (U_0 \cap U_2)$$