⑦ $\pi_1(\mathbb{S}^n \times \mathbb{S}^m)$, $n, m \in \mathbb{N}$

Teor 2.6.1 : A, B cpa $\Rightarrow$ $\pi_1(A \times B) = \pi_1(A) \times \pi_1(B)$

$\pi_1(\mathbb{S}^n) = \{e\}$, $n \neq 1$

$\{e\} \times \pi_1(A) = \pi_1(A)$

$$\begin{cases} \mathbb{S}^0 \times \mathbb{S}^0 = \{(\pm 1, 0), (0, \pm 1)\} \subset \mathbb{R}^2 \\ \mathbb{S}^0 \times \mathbb{S}^1 = \mathbb{S}^1 \sqcup \mathbb{S}^1 \\ \mathbb{S}^1 \times \mathbb{S}^1 = \mathbb{T}^2 \end{cases}$$

$$\pi_1(\mathbb{S}^n \times \mathbb{S}^m) = \begin{cases} \mathbb{Z}, & n=1 \ \wedge\vee \ m=1 \\ \{e\}, & \text{altrimenti} \end{cases}$$