Talbot Day 1 PS 1.

(1) Is there a cpct. Lag'n surface $L \subset \mathbb{R}^4$ w/ $\chi(L) < 0$?

(2) Compute $\pi_1(U(n)/O(n))$, $\pi_2(U(n)/O(n))$ for $n \geq 3$.

(3) Let $L^3 \subset M^6$ be cpct oriented Lag'n. Show that $L \cdot L = 0$.

(4) Take fcns $H_1, H_2, H_3 : M^6 \to \mathbb{R}$ such that $\{H_i, H_j\} = \varepsilon_{ijk} H_k$.
Show that $H_1^{-1}(0) \cap H_2^{-1}(0) \cap H_3^{-1}(0)$ (if smooth) is Lag'n.