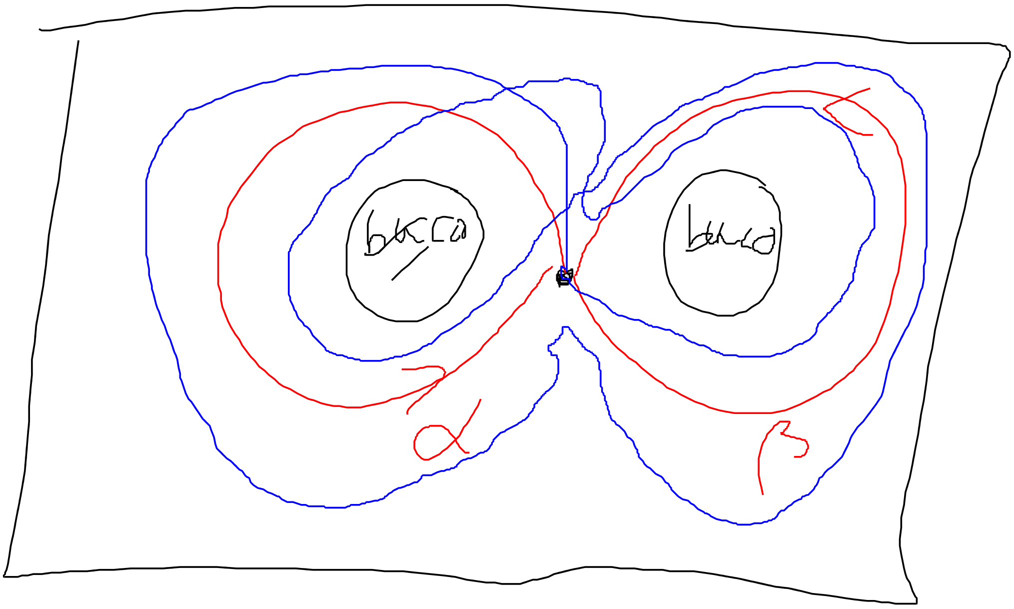
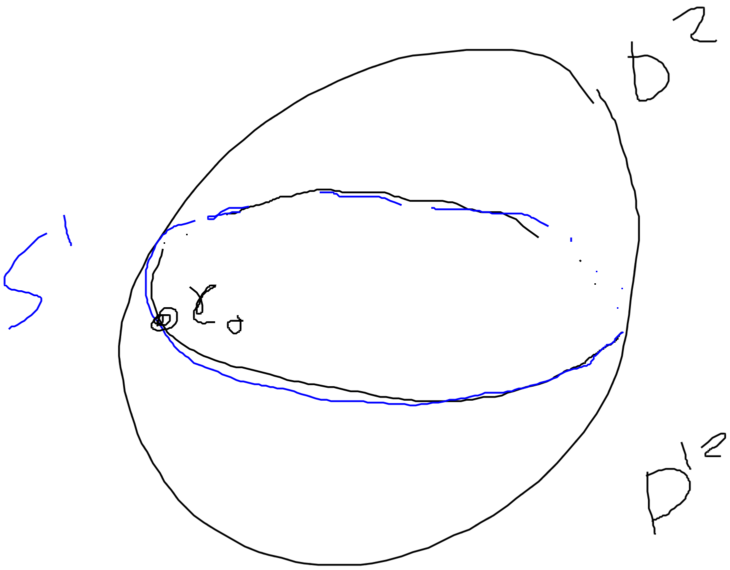
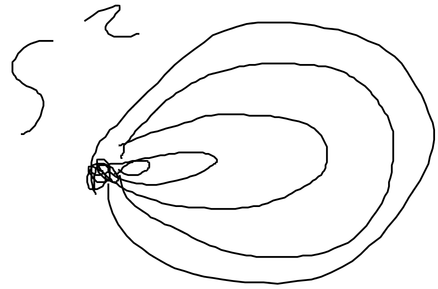






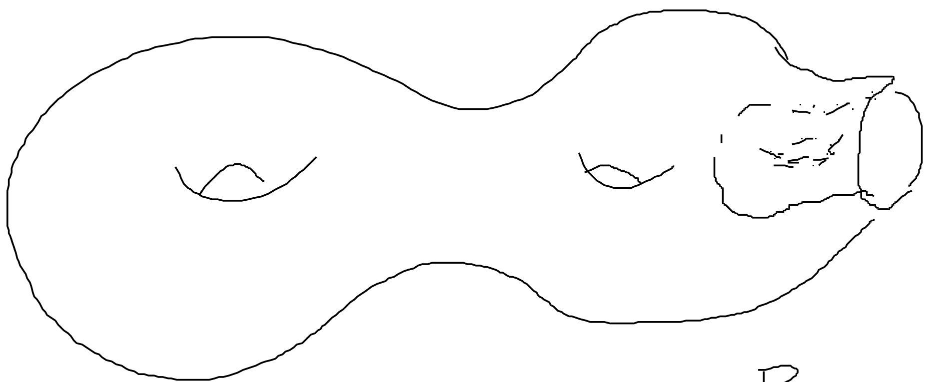
$$\pi_1(S^2, x_0) \cong \pi_1(D^2, x_0) * \pi_1(D'^2, x_0)$$

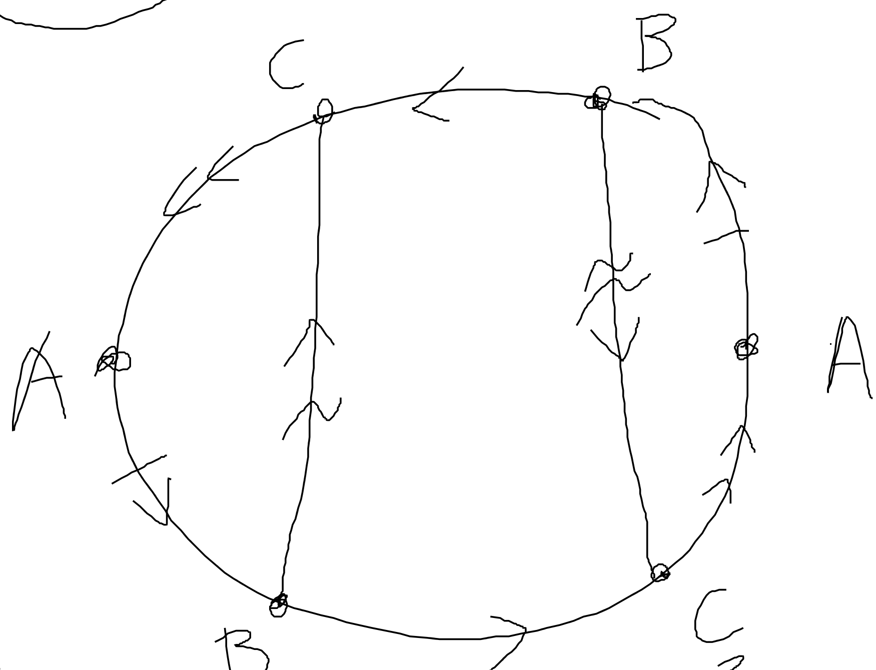
$$(\pi_1(S^1, x_0), i_\#, \mu_\#)$$

$$S^1 \xrightarrow{i} D^2 \quad \text{in}$$

$$\pi_1(S^1, x_0) \xrightarrow{i_\#} \pi_1(D^2, x_0)$$

$$\cong \mathbb{Z} \longrightarrow \cong 0$$




C
B
A
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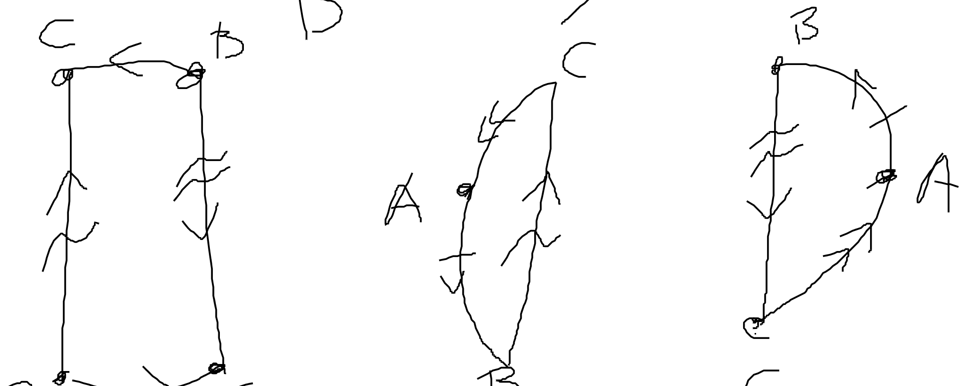
C


C
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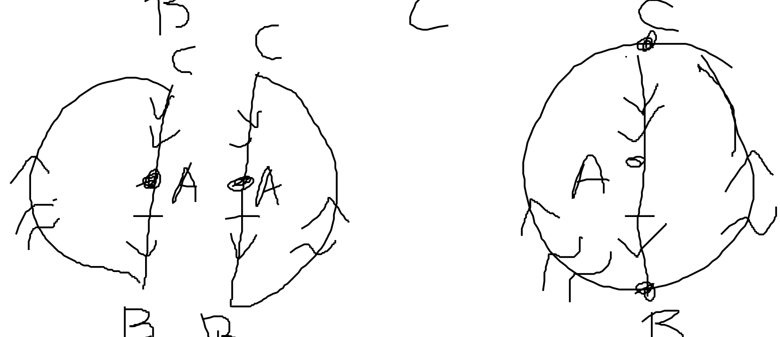
C


C
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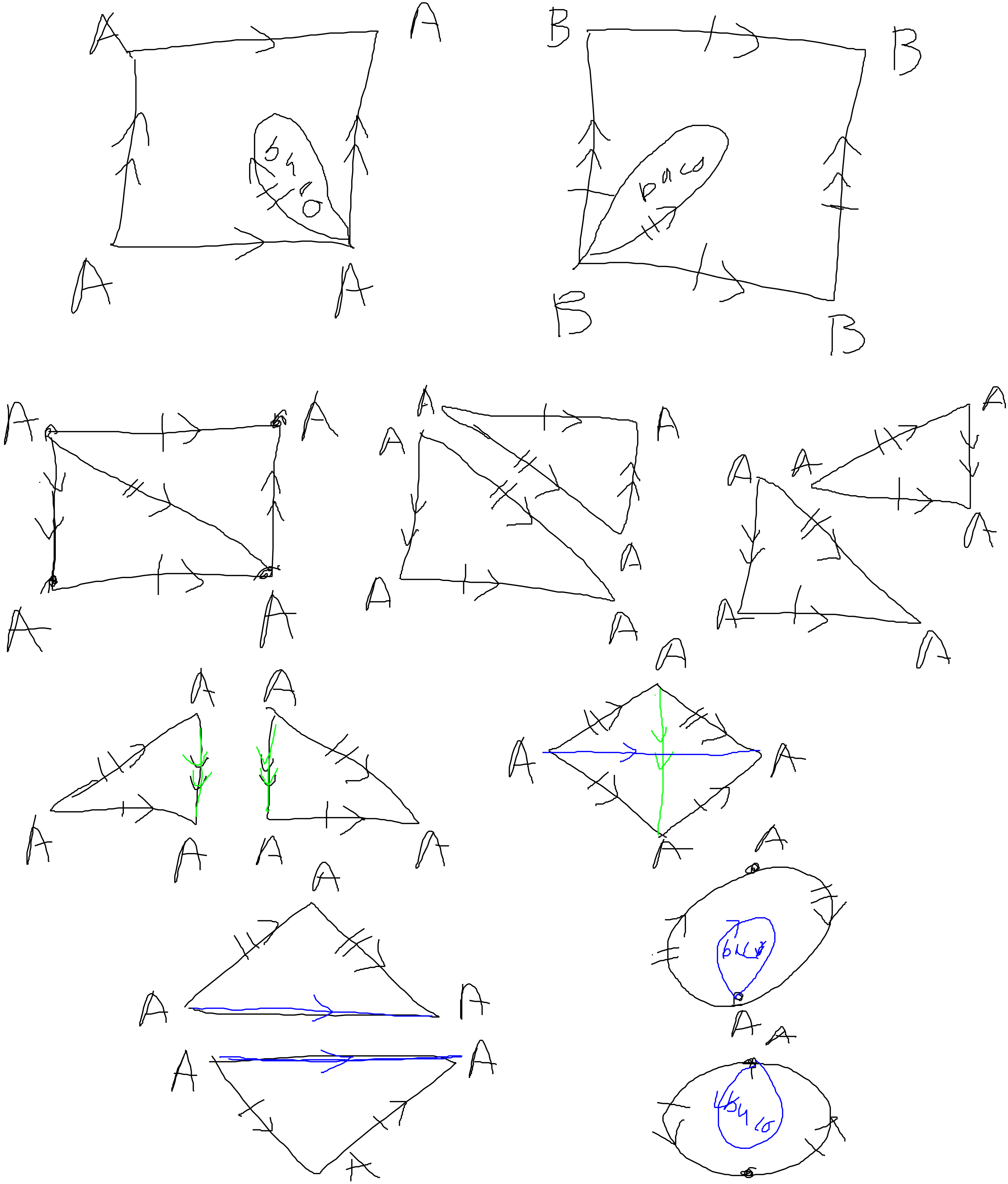
B


A
B

Nodo: (S^3, K) $K \cong S^1$

(S^3, K_1) equivalente a (S^3, K_2) $\overset{def}{\iff}$ $\exists$ omeo $f: S^3 \to S^3$ t.c.

$$f(K_1) = K_2$$

Concatenazione:

$$(S^3, K) \quad K \cong \bigsqcup_{i=1}^{h} S^1$$

equivalenza: idem

$$(S^3, K_1) \text{ equiv? } (S^3, K_2)$$

$$\Updownarrow \text{ nodo}$$

$$S^3 - K_1 \cong ? \; S^3 - K_2$$

$$\Downarrow$$

$$\pi_1(S^3 - K_1, x_0) \cong ? \; \pi_1(S^3 - K_2, x_0)$$

$$\Downarrow$$

pol. di Alexander$(K_1) \overset{?}{=}$ pol. d. Alex.(K_2)