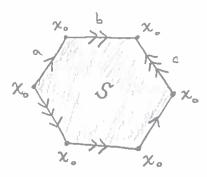
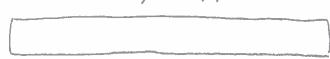
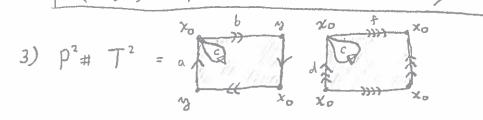
Consider the "mystery surface":



1) Find X(S).



2) Find a presentation for T, (5).

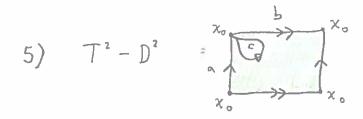


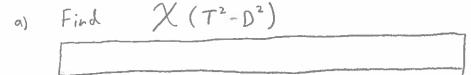
a) Find X (P2 # T2).



b) Find a presentation for T, (P2# T2)

Find X (K2 # T2).





b) Find a presentation of π , (T^2-D^2)

(a,b,c)

6) Recall: X and T, are homotopy invariants, and thus also homeomorphism invariants.

That means, from (4), $S \neq K^2 \# T^2$, and $S \neq K^2 \# T^2$.

However, X and TI, don't tell us which spaces are homeomorphic. A cut-and-glue sequence allows us to construct a homeomorphism.

