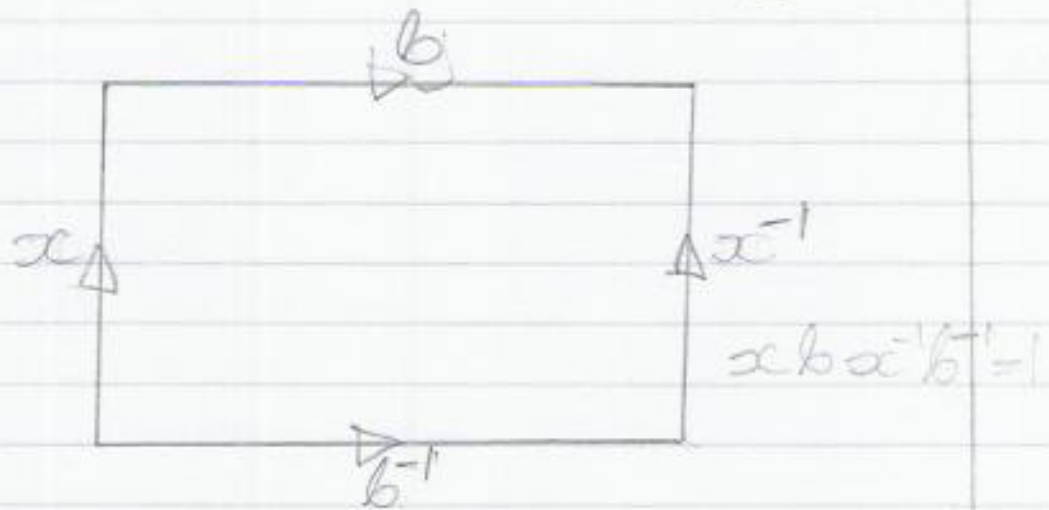


Deforming ① and renaming b as y and eliminating the edges c, c' (which cancel) gives



which is a torus

iii) $abaccb = 1$ represents a Klein bottle.

or maybe: $baacba = 1$
 $x^{-1} x$

$$accb = xc \Rightarrow b = c^{-1}c^{-1}a^{-1}x$$

$$ac^{-1}c^{-1}a^{-1}xx = 1$$

$$w = c^{-1}a^{-1} \quad c^{-1} = wa$$

$awawxx = 1$ (I could rename aw here)

$$aw = y \quad a = yw^{-1}$$

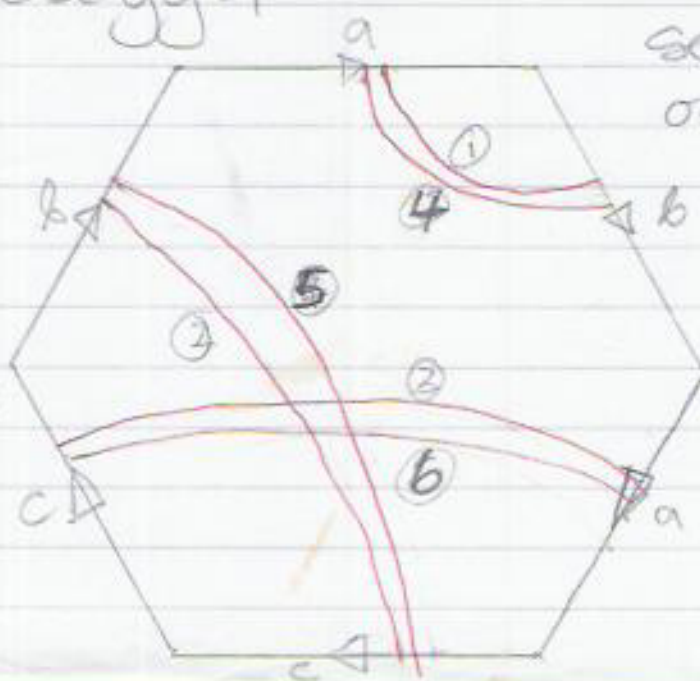
$$yyw^{-1}wxx = 1$$

$$yyxx = 1$$

By trivial equivalence

$$xxyy = 1$$

see also i) b)
one of several possibilities



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