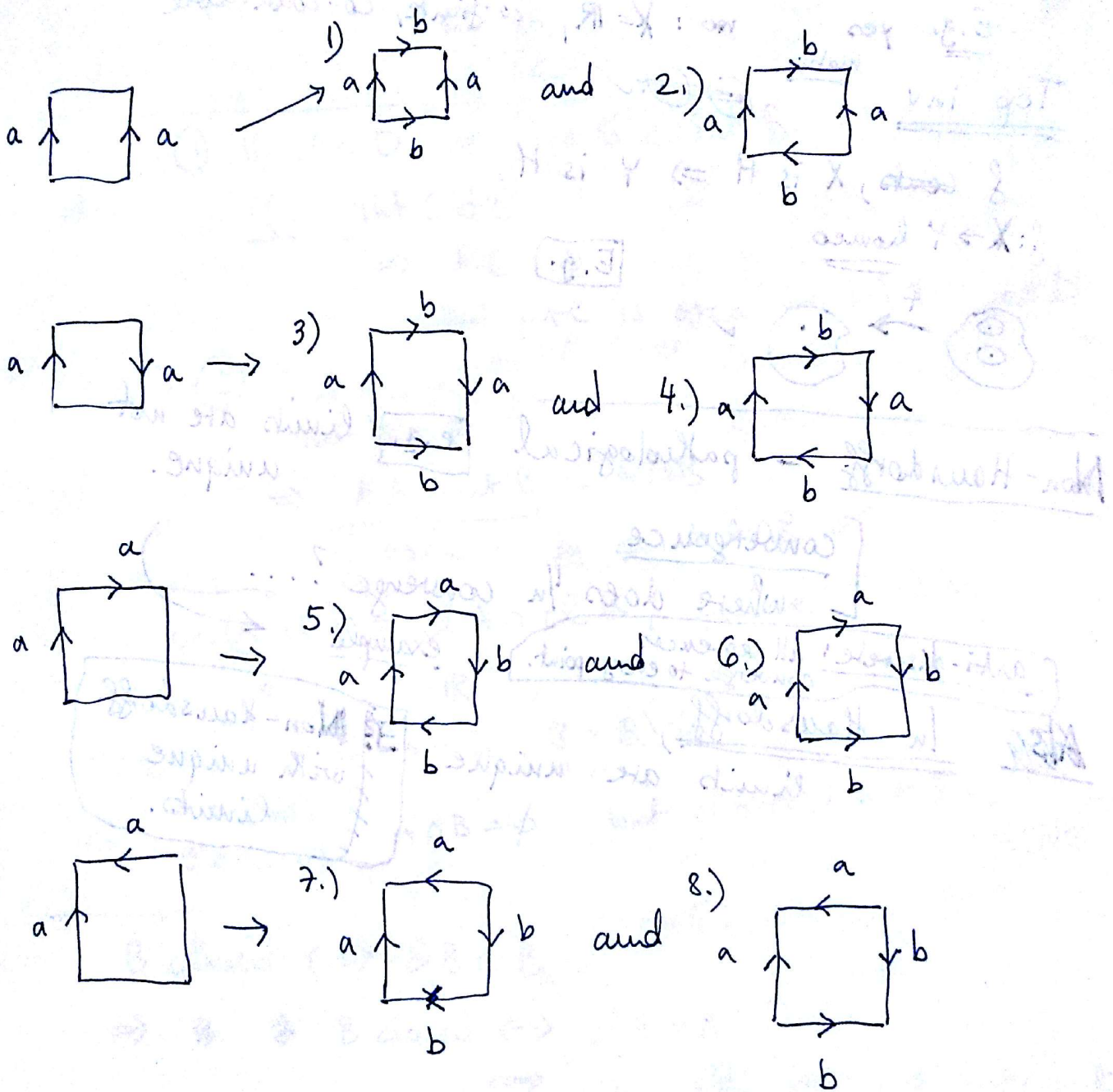



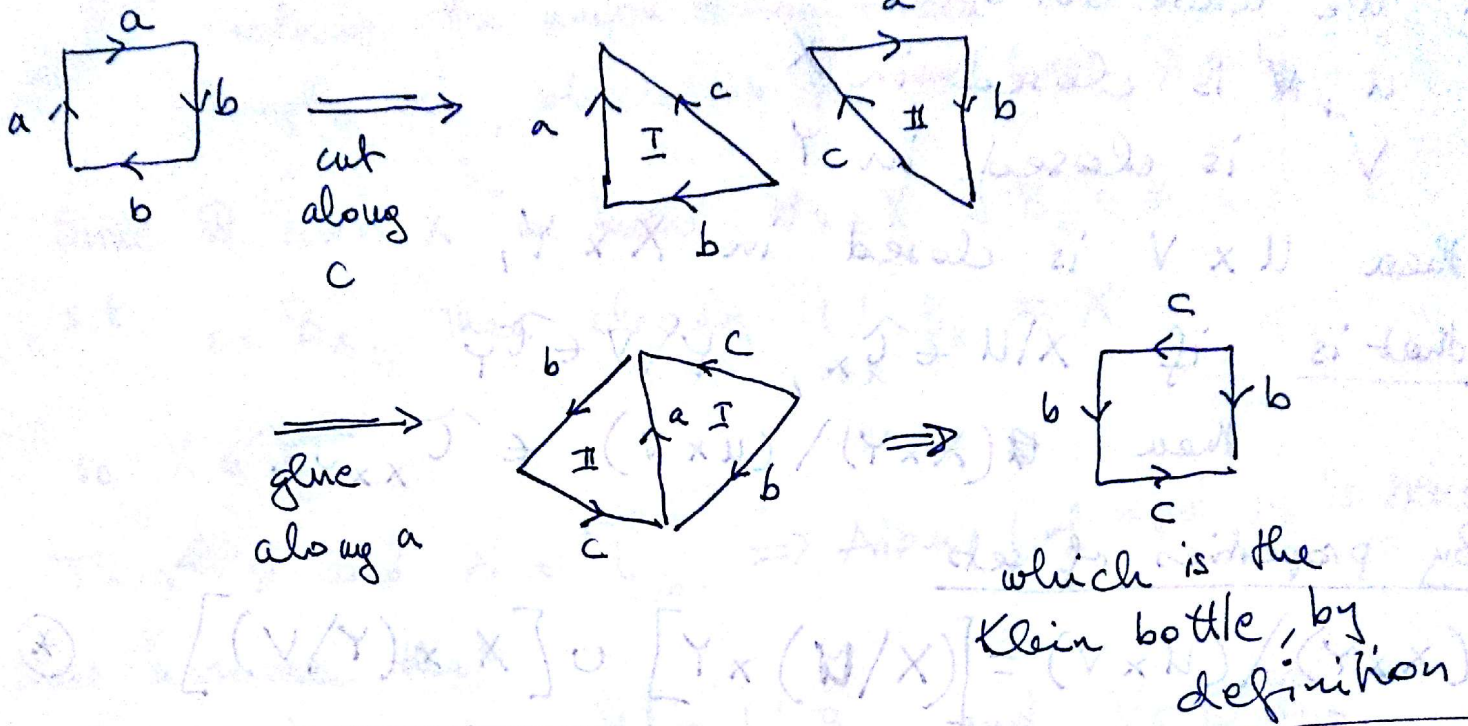
(#1) Up to rotations and edge reversing (of all edges) we have the following combinatorially different case:



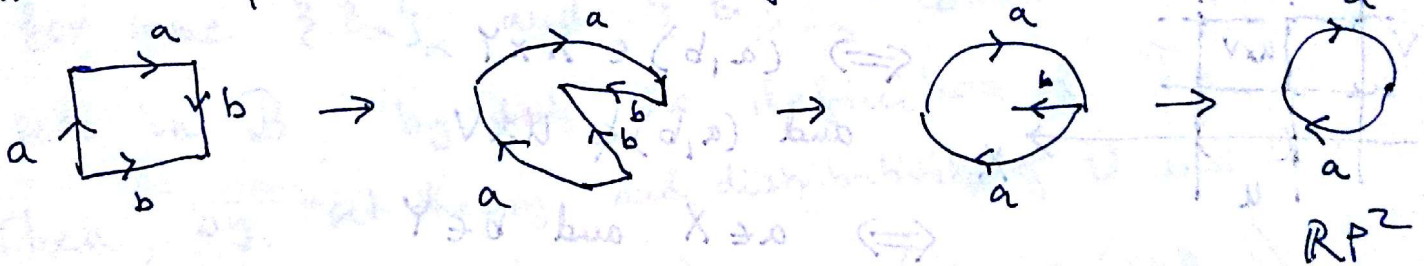
These are

- 1 - torus, by definition
- 2 - Klein bottle, by definition
- 3 - Klein bottle, by definition
- 4. -  $\mathbb{RP}^2$ ; by setting  $c=ab$ , get  which is  $\mathbb{RP}^2$  by definition

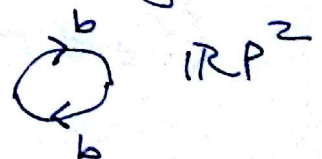
5 - a Klein bottle, by a cut-and-paste argument:



6.  $\mathbb{R}P^2$ , since the  $bb^{-1}$  glues up



7.  $\mathbb{R}P^2$ , just like in 6.  $aa^{-1}$  glues up, giving



8.  $S^2$ , when  $aa^{-1}$  and  $bb^{-1}$  are glued you get

