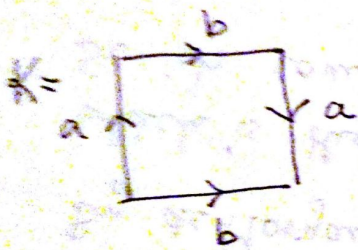


b) We will show the Klein bottle can be cut up into two Möbius strips along a circle.



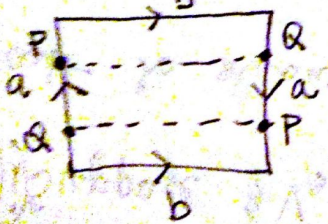
which is shorthand for

$$[0,1] \times [0,1] / \begin{matrix} (0,y) \sim (1,1-y) \\ (x,0) \sim (x,1) \end{matrix}$$

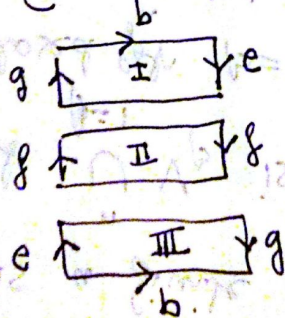
Now consider the subset

$$C = ([0,1] \times \{1/3\}) \cup ([0,1] \times \{2/3\}) / \begin{matrix} (0,1/3) \sim (1,2/3) \\ (0,2/3) \sim (1,1/3) \end{matrix}$$

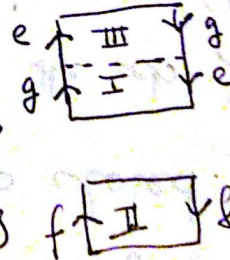
~~the~~ and cut along C



⇒



⇒
glue
along
b



⇒

