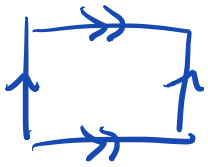
You can think of the torus as $S^1 \times S^1$ or as

$$I \times I \Big/ \begin{matrix} (0,t) \sim (1,t) \\ (t,0) \sim (t,1) \end{matrix}$$

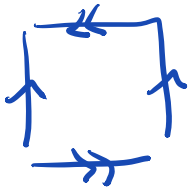
In the second case we draw this



& you identify matching arrows (so the arrowheads point in the same direction)

the Klein bottle is $I \times I \Big/ \begin{matrix} (0,t) \sim (1,t) \\ (t,0) \sim (1-t,1) \end{matrix}$

So I draw this



(note the top & bottom arrows point in opp onto directions)

So if I want to define a map from the torus to the Klein bottle I can define a map $I \times I \longrightarrow I \times I$ compatible with the identifications.