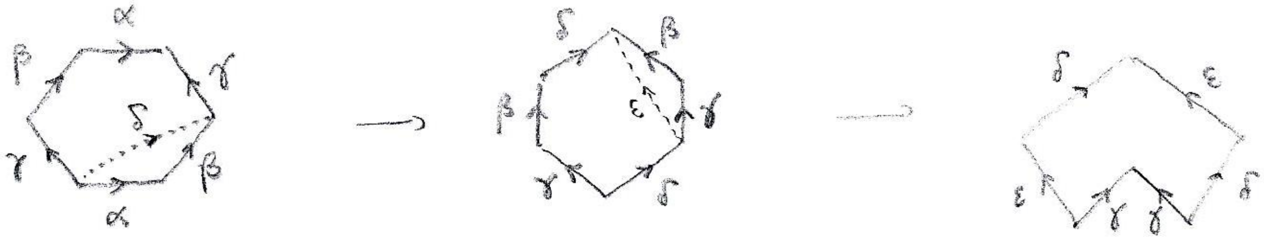
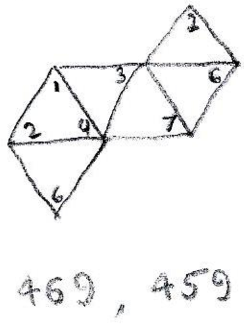
10.2. We apply Step 26, from page 40. We can skip the first two parts because by comparing $A C_k F a G b H a^{-1} I b^{-1} J$ we see that A, C_k, F, G and I are empty.



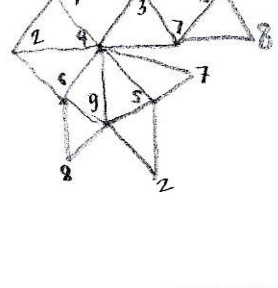
$\alpha\beta H \alpha^{-1}\beta^{-1} J$ $\qquad$ $\delta H \beta \delta^{-1}\beta^{-1} J$ $\qquad$ $\delta \varepsilon \delta^{-1} \varepsilon^{-1} H J$.

We can "zip up" $\gamma\gamma^{-1}$ to obtain $\delta\varepsilon\delta^{-1}\varepsilon^{-1}$, the standard symbol for the torus.

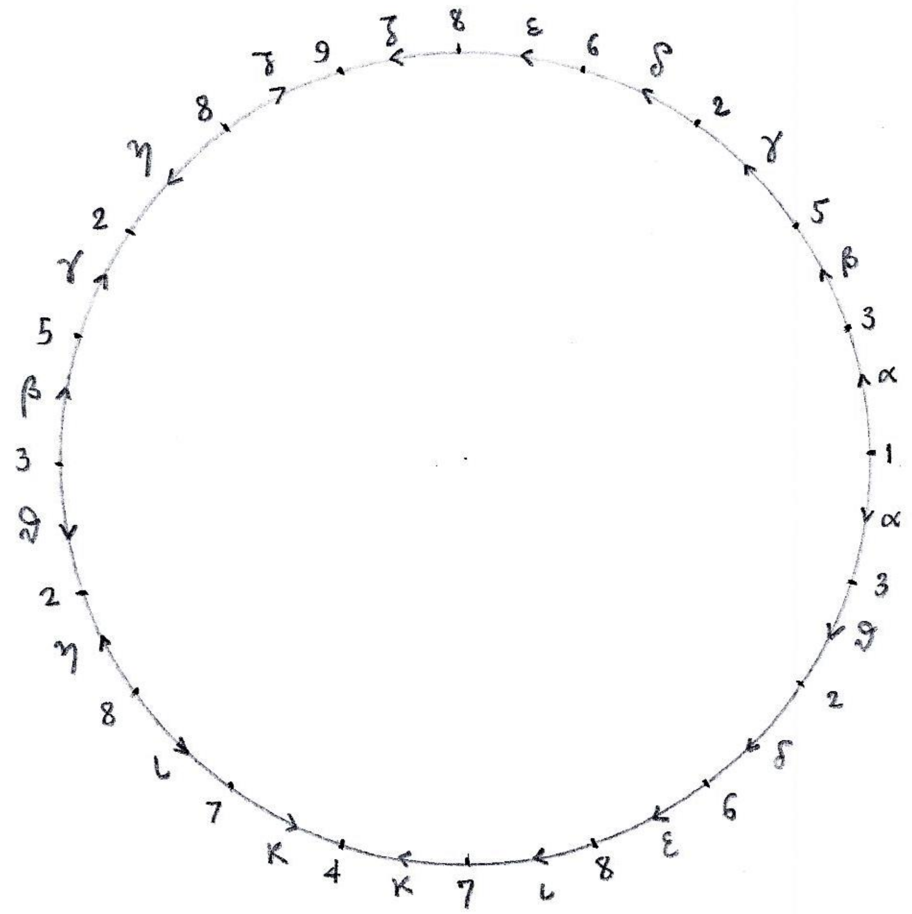
10.4. We construct the polygon by pasting triangles along <u>only</u> <u>one</u> side to the piece of the polygon we have already constructed. For example, starting with 124 we may add successively 134, 246, 347, 367, 236, to obtain



and then 469, 459, 698, 678, 457, 259 to obtain



and then the rest of the triangles to obtain the icosagon with sides labeled α, α^{-1} to κ, κ^{-1}:



The symbol of this icosagon is

$$\alpha\beta\gamma\delta\varepsilon\zeta\zeta^{-1}\eta\gamma^{-1}\beta^{-1}\vartheta\eta^{-1}\iota\kappa\kappa^{-1}\iota^{-1}\varepsilon^{-1}\delta^{-1}\vartheta^{-1}\alpha^{-1}.$$

We check that there are no similar pairs. The first interlocked reversed pair is $\beta\ldots\delta\ldots\beta^{-1}\ldots\delta^{-1}$.

So we have a symbol of the form

$$F\,\beta\,G\,\delta\,H\,\beta^{-1}\,I\,\delta^{-1}\,J$$

where $F=\alpha$, $G=\gamma$, $H=\varepsilon\zeta\zeta^{-1}\eta\gamma^{-1}$,

$I=\vartheta\eta^{-1}\iota\kappa\kappa^{-1}\iota^{-1}\varepsilon^{-1}$ and $J=\vartheta^{-1}\alpha^{-1}$.

By the moves of Step 2b, this is transformed to

$$\lambda\mu\lambda^{-1}\mu^{-1}F\,I\,H\,G\,J,$$

that is $\lambda \mu \lambda^{-1} \mu^{-1} \alpha \vartheta \eta^{-1} \iota \kappa \kappa^{-1} \iota^{-1} \varepsilon^{-1} \varepsilon \zeta \zeta^{-1} \eta \gamma^{-1} \gamma \vartheta^{-1} \alpha^{-1}$.

We check that there are no more interlocked reversed pairs, and all the remaining pairs disappear by transformations of type 3. In the end we are left with the symbol $\lambda \mu \lambda^{-1} \mu^{-1}$, that is a torus.