1. Describe the result of cutting a band with \( m \) twists along \( n \) lines parallel to its edge.

![Band with twists](image)

2. Find the genus and the number of boundary components of the surface.

![Surface with genus and boundary components](image)

3. Consider the surface consisting of two discs and \( m \) twisted bands between them. Is it orientable? Find the genus and the number of boundary components.

4. Find the numbers of cross-caps and the numbers of boundary components for the following surfaces.

![Surfaces with cross-caps and boundary components](image)

5. Prove that the Euler characteristics \( \chi \) and the genus \( g \) of a closed orientable surface are related as \( \chi = 2 - 2g \).

6. Prove that the Euler characteristics \( \chi \) and the number of cross-caps \( \mu \) of a closed non-orientable surface are related as \( \chi = 2 - \mu \).

7. Find a minimal triangulation of a torus.

8. Find a minimal triangulation of a Klein bottle.