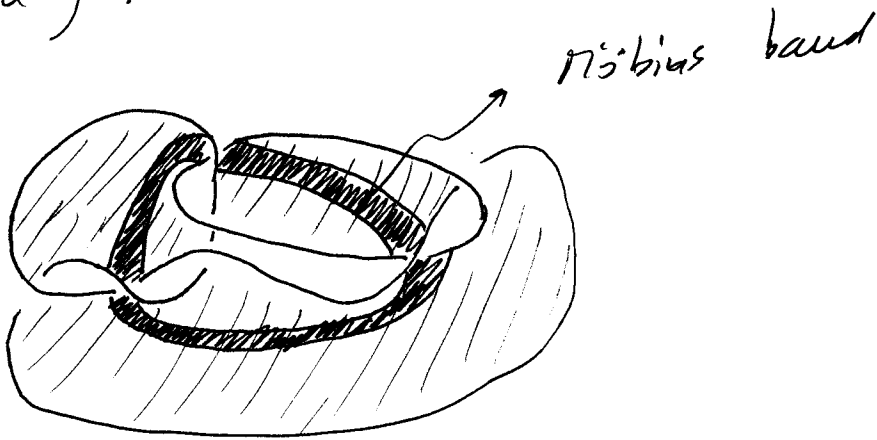


②

Second surface:

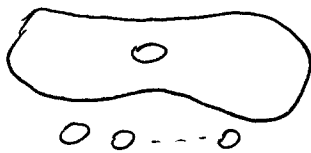
This one is not orientable since it contains a Möbius band (a band with a triple twist which is homeomorphic to Möbius band; see picture).



② Exercise 4.22:

First note that twist knots are alternating, so the genus of the Seifert surface of the standard projection will be the actual genus of the knot.

If the twist knot has n crossings, then there will be $n-1$ Seifert discs:



So

③ ~~scribble~~

$$\chi(\text{Seifert surface}) = \cancel{\text{Euler}} \quad S - L = (n-1) - n = -1$$

But

$$2 - 2g(\text{Seifert surface}) - 1 = \chi(\text{Seifert surface})$$

$$\Rightarrow g(\text{Seifert surface}) = g(\text{link}) = 1.$$