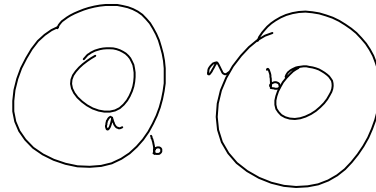
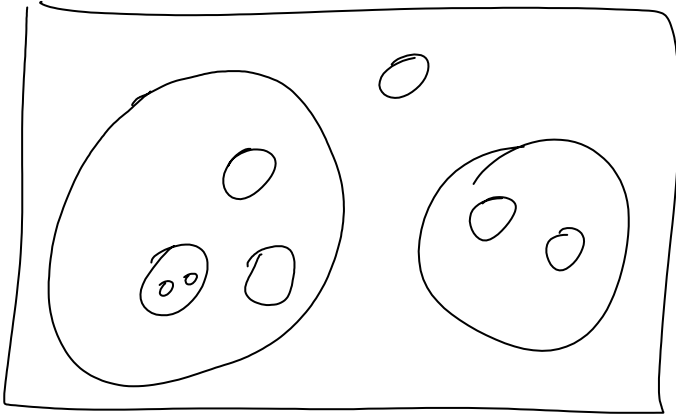


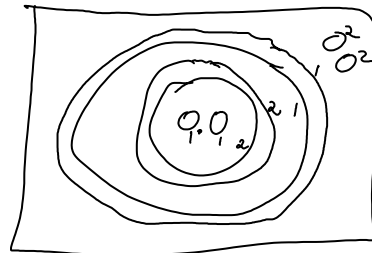
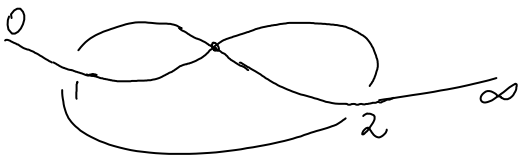
(Thoughts on Hebiro, Kanenobu, Shima)
- FT of ribbon 2-knots I



cannot be immersed.

circles with an asymmetric pairing.

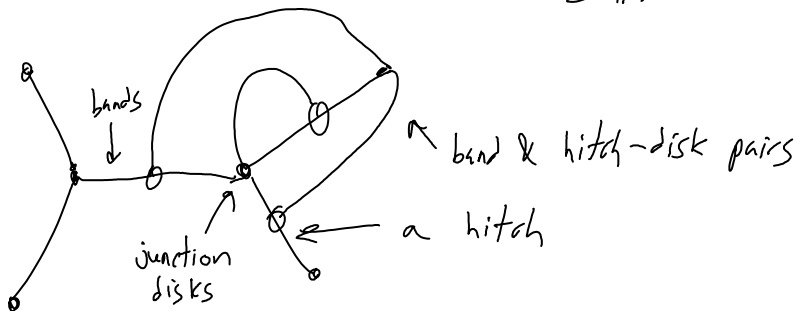
Question Given a configuration of pairs of circles on S^2 , when can it be realized as the singularity set of an immersion of S^2 into \mathbb{R}^3 ?



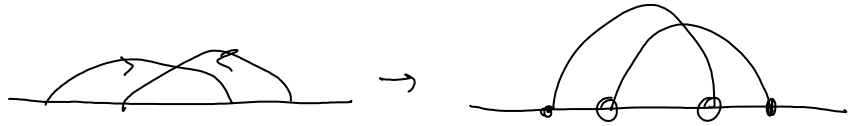
Question In a 4D language, what is the notion which corresponds to the AKT-defined notion of a "ribbon w-knot"?

A combinatorial theory of simple ribbon handlebodies:

SRH



$W \rightarrow$ SRH:



Is this onto?

Note also 2008-09 / [Trinion Vertices \(provisional naming\)](#).