MATH 10
ASSIGNMENT 22: SURFACES
APR 24, 2022

Homework

1. What do you get if you cut a Möbius strip in thirds (similar to our experiment in class)? What about if you cut in n-ths?

2. Suppose one cuts out a disc from a sphere and glues a Möbius strip in its place. What is the resulting surface?

3. Prove that the connected sum of two surfaces is a surface and that, for any surface S, the connected sum of S with the sphere is homeomorphic to S.

4. What surface is obtained if one shrinks the boundary circle of a Möbius strip to a point?