

MATH 10
ASSIGNMENT 23: TRIANGULATIONS
MAY 8, 2022

HOMEWORK

1. 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 .
2. What surface is obtained if one shrinks the boundary circle of a Möbius strip to a point?
3. Find a triangulation of the projective plane.
4. Which of these are triangulated surfaces?
 - (a) ABD,BCD,ACD,ABE,BCE,ACE
 - (b) ABE,BCE,CDE,ABF,BCF,ADF,AEF,ADE
 - (c) ABC,BCD,CDE,ADE,ABE,CEF,BEF,BDF,ADF,ACF