

This homework is not handed in. It's just a few study questions that I thought up.

A. Compute the Euler characteristic of every compact connected surface. Describe the cases where two non-homeomorphic surfaces have the same Euler characteristic.

B. By cutting and pasting a polygonal region, show that cutting a small disk from a real projective plane produces the Möbius strip. (I haven't done this in years, and I don't remember how hard it is. It's not trivially easy. Give it a try.)