DEPARTMENT OF MATHEMATICS

MATHS 190 Lecture 20 Summary

We considered some unusual geometric objects, such as the Möbius band (which has one side and one edge). To make one: take a strip of paper, give it half a twist, and stick the ends together. We saw that when you cut a Möbius band along its center you do not get two bands, but one. This was explained using a diagram.

We noted that the sphere has two sides and no edges. We also met the Klein bottle, which has one side and no edges.

Before you come to the next lecture: You should spend an hour or two thinking and reading about the ideas presented in the lecture. You should also:

- Read section 5.2 and 5.3.

Other activities you could do if you have time are:

- Make a Möbius band at home – show your friends and family. See if you can explain to them why cutting along the center still only gives one band and why cutting close to one edge makes 2 linked bands.