

Written Homework Problems

Math 244

Due April 29, 2010

1. Consider the space that is formed by identifying the boundary circle of a Möbius band to the boundary circle of a disk, D^2 . Use cut-and-paste techniques to show that the resulting space is homeomorphic to the real projective plane.
2. Consider the space that is formed by identifying the boundary circles of two Möbius bands together. What space is this homeomorphic to? (Hint: Cut one Möbius band in half before pasting it to the other one.)