

**MATH 145B INTRODUCTION TO TOPOLOGY, SUGGESTED
EXERCISES**

- (1) Prove that $K^2 \# \mathbb{R}P^2$, $T^2 \# \mathbb{R}P^2$, and $\mathbb{R}P^2 \# \mathbb{R}P^2 \# \mathbb{R}P^2$ are homeomorphic.
[This ends up to be fairly hard to do, using the methods from class! Think about it in terms of removing a disk and attaching a Möbius strip, rather than taking the connected sum with $\mathbb{R}P^2$.]
- (2) Convince yourself that removing a disk from $\mathbb{R}P^2$ results in a Möbius strip.