

Math 541: Hyperbolic 3-Manifolds
Homework 3

1-5. Do Exercises 3.8, 3.12, 3.13, 4.13, 6.3 from Purcell.

6. Show that if $g, h \in \text{Isom}^+(\mathbb{H}^3)$ commute and are not both order-2 elliptics, then either g and h are parabolics with a common fixed point, or g and h are loxodromic and/or elliptic and have the same axis.