MATH 285Z Assignment 4

This assignment is due at 11:59 pm on Wednesday, Apr. 3, 2024.

Problem 1: Let $L(p,q)$ be the lens space with $p > 0$ odd. How many flat $SU(2)$ connections on $L(p,q)$ up to conjugation?

Problem 2: Suppose S is a properly embedded surface in a balanced sutured manifold (M,γ) as a decomposition surface. Let S^+ and S^- be the positive and negative stabilization of S near ∂S. Show that decomposing along S and S^+ produces diffeomorphic sutured manifolds, while decomposing along S^- produces a nontaut sutured manifold.