MATH 17: KNOT THEORY
WINTER 2018
HOMEWORK #5

Problem 0. Solve, but do not submit: find a triangulation and compute the genus for the torus, as well as for the torus with one disk removed.

Problem 1. Chapter 4, Exercise 1.2

Problem 2. Chapter 4, Exercise 1.3 (only do the 7-crossing knots)

Problem 3. Prove the theorem from class stating that if a connected, orientable surface S is a union of disks with bands attached, then
$$g(S) = \frac{2 - \#\text{disks} + \#\text{bands} - \#\text{boundary components}}{2}.$$

Problem 4. Chapter 4, Exercise 2.6