

PROBLEM SET #5

MA 109C: INTRODUCTION TO GEOMETRY AND TOPOLOGY

Due on Friday May 26, 2024

Solve the following problems from the textbook *Differential Topology* by V. Guillemin and A. Pollack. You may only use the relevant course material described below.

- Chapter 3, section 3, exercises 1, 14,¹ 17
- Chapter 3, section 4, exercises 7, 8, 11

Relevant course material for this homework: Up to page 125 of section 4 of Chapter 3.

You may not search the solutions to the homework problems from any source and you must write the homework in your own words. If you collaborated with other students, you must list their names on the solutions.

¹Note that the conditions of the problem do not guarantee that X is orientable. You may assume that X is orientable.