

## PROBLEM SET #4

MA 109C: INTRODUCTION TO GEOMETRY AND TOPOLOGY

**Due on Friday May 17, 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 2, section 4, exercise 14 (you do not need to show the part after “However, ...”.)
- Chapter 3, section 2, exercises 3, 4, 18 (the definition of triviality of normal bundles is given in exercise 19 of section 3 of Chapter 2.)
- Chapter 3, section 3, exercises 8, 9

**Relevant course material for this homework:** Up to page 111 of section 3 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.