Due: Monday Nov 13

HMC Math 142   Fall 2023
Prof. Gu
Problem Set 8

Start this assignment before Sunday night!

Read:

- Baby Do Carmo, Differential Geometry of Curves and Surfaces: Sections 3-4, 3-5 of Chapter 3.

- Review your recent handouts

- Lecture Notes.

Do:

A: Problems on Reviewing of Vector Fields.

- a) Fill out all the details on the handout of reviewing vector fields.

B: Problems from Lectures

- a) Carry out the details for the proofs of the lemma on page 177 and the key theorem on page 182. Just write on your handout on vector field (do not have to turn in).

C: Other Problems

- a) Problem 5 on page 168, Section 3-3, Baby Do Carmo.

- b) Problem 1 on page 185, Section 3-4, Baby Do Carmo.

- c) Problem 2 on page 185, Section 3-4, Baby Do Carmo.

- d) Problem 5 on page 186, Section 3-4, Baby Do Carmo.

- e) Problem 8 on page 187, Section 3-4, Baby Do Carmo.

D: Extra Credit Problems

- a) Problem 10 on page 187, Section 3-4, Baby Do Carmo.

- b) Problem 11 on page 187, Section 3-4, Baby Do Carmo.

- c) Problem 12 on page 187, Section 3-4, Baby Do Carmo.