Due: Monday November 29, 1:15 PM

HMC   Math 142   Fall 2004
Prof. Gu
Problem Set 10

Start this assignment before Sunday night!

Read:

- Baby Do Carmo, Differential Geometry of Curves and Surfaces: Sections 4-3, 4-4 of Chapter 4, Appendix of Chapter 5 starting on page 456, and Section 5-2 of Chapter 5.

- Read and fill out the blanks for the most recent handouts.

- Lecture Notes.

Do:

A: Problems on Reviewing of Point-Set Topology of Euclidean Spaces.

- a) What do we mean by a set is open, closed, bounded, compact, or connected? Give definitions.

- b) Find all possible "if and only if" conditions to characterize a set being compact.

B: Problems from Lectures

- a) Carry out all the details in finding the Christoffel symbols of a surface of revolution.

C: Other Problems

- a) Problem 1 on page 237, Section 4-3, Baby Do Carmo.

- b) Problem 3 on page 237, Section 4-3, Baby Do Carmo.

- c) Problem 4 on page 237, Section 4-3, Baby Do Carmo.

- d) Problem 6 on page 237, Section 4-3 Baby Do Carmo.

- e) Problem 8 on page 237, Section 4-3, Baby Do Carmo.

- f) Problem 9 on page 237, Section 4-3, Baby Do Carmo.

E: Reminder

- Problem Sessions: Sunday 8:30–9:30 PM, BK 134.