Due: Monday, November 8, 1:15 PM

HMC Math 142 Fall 2004
Prof. Gu
Problem Set 7

Start this assignment before Sunday night!

Read:

• Baby Do Carmo, Differential Geometry of Curves and Surfaces: Sections 3-2, 3-3 of Chapter 3.

• Review handouts 11, 12 and 13.

• Lecture Notes.

Do:

A: Problems on Reviewing of Self-Adjoint Linear Maps.

• a) Carry out the supplementary exercise that you have gotten in the class.

• b) Write up a proof for the Key Theorem on page 216, Baby Do Carmo.

B: Problems from Lectures

• a) Carry out the details for Example 5, page 162, Baby Do Carmo. (Including the application to a geometric interpretation of the Dupin indicatrix, that is from page 164 to 165, Baby Do Carmo.)

C: Other Problems

• a) Problem 2 on page 151, Section 3-2, Baby Do Carmo.

• b) Problem 6 on page 151, Section 3-2, Baby Do Carmo.

• c) Problem 8 on page 151, Section 3-2, Baby Do Carmo.

• d) Problem 17 on page 152, Section 3-2, Baby Do Carmo.
Note: From now on our problem session will be changed to 8:00–9:00 pm Sunday at same place since I will have to run another problem session for math12 from 9:00–10:00 Sunday night. Thanks!

- Problem Session: Sunday 8:30–9:30 pm, BK 134