Due: Wednesday, November 7, 2:45 PM

HMC Math 142 Fall 2011
Prof. Gu
Problem Set 7

Start this assignment as soon as possible!

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

B: Problems for understanding course materials

   - 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.