

Assignment 1 - Due Thursday 9/16/2010

Read: Hubbard and Hubbard Sections 1.1 and 1.2.

I also find that the first half of Section 0.1 on page 2 is good to read, if you find yourself browsing through the book, and Section 0.2 is fun. These sections in Chapter 0 are not a high priority.

Section 1.1 is long-winded, and mostly tells you things you probably know already. Be prepared to skim it. Look at the exercises listed below first to see if you can do them already. If you can't, focus attention on the part of the text which deals with that issue. The authors make some distinctions which I would not make myself and which I think add unnecessarily to the complication of the material being presented. They distinguish between a point in Euclidean space and a vector, the latter being something with magnitude and direction, and use round or square brackets to indicate a difference. I would use the same notation myself in both cases (probably round brackets), and not make the distinction. In the text they do indicate how it is that a point can be regarded as a vector, once the origin of the coordinate system has been chosen.

Section 1.2 is more condensed, and worth looking at more closely.

We are starting with vectors and matrices in part because the book starts there, but also because I am not sure of your background in analysis (sequences and series etc.). With vectors and matrices I assume you know nothing about them, and that makes it easier for me! The point of the exercise you did on Tuesday was to give me some idea of what you already know about analysis, and if necessary I can supplement what is in the book to bring you up to speed in that area.

Exercises:

Hand in only the exercises which have stars by them. The remaining questions are listed because you should get practice multiplying matrices etc. if you have not already had practice doing this. On Thursday when you hand in this homework there will also be a quiz, and it will be based on the homework questions listed below, including the ones you are not asked to hand in.

Section 1.1: 1, 2, 4b*, 5ab, 6bcfg, 7b*, 8*

Section 1.2: 2abde, 3ab, 4, 5, 6bcgh, 7, 8*, 10, 11, 13, 15, 16, 17*, 20, 23*