Math 3592H Honors Mathematics I Fall Semester 2017

Assignment 1 - Due Thursday 9/14/2012. There will be a quiz on this day on this homework.

FAQs about the learning process:
Two things: 1. What are the expectations for the class sessions on MWF compared to the recitation sections on Tu and Th? I will teach the material we are due to cover from the book on MWF. You do not have to have read the book beforehand. On these assignment sheets I will write 'Read: Sections x and y' and the intention of this is to record which sections we are studying, and also to suggest that you read them at some point. In recitations new material will usually not be taught. They are occasions to practice the material and become more confident and fluent with it. Both the class sessions on MWF and recitations on TuTh are good times to ask questions about the mathematics.
2. Should I take notes? Do consider taking notes on MWF. You may come with the expectation that you will understand and remember everything immediately, in which case you may be in for a surprise. It is not my expectation that you understand everything at once. It often takes several attempts, and to expect this is helpful. Because of this, it is very useful to have notes written down from class. Keep them in an organized fashion: in a book you have bought, or in a file.

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.

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*