Math 2573H   **Honors Calculus III**   **Fall Semester 2018**

Assignment 3 - Due Thursday 9/27/2018

Exercises from Colley:
1.7: 2, 4, 9, 12, 18, 26, 27, 32, 42
2.1: 4, 10, 13, 29
2.2: 7, 8, 10, 18, 28, 30, 34, 35, 41, 43, 39, 20

Notes:
I think we should postpone the HW for section 1.7 from Assignment 2 to Assignment 3. There will be no question on 1.7 in the quiz on Thursday 9/20/2018.

I am going to leave the exact arrangements to your TA for when section 1.7 should be due.

In many sections of the book there are extra things that I do not think we need to do, and which may even be counterproductive. In section 1.7 there are formulas for conversion between different coordinate systems. I don't like this. It suggests that we should work from a formula, and possibly that the formula should be memorized, or that it is material for a formula sheet. My view is: don't work from the formula. Ignore it. You should have a knowledge of how the different coordinate systems are constructed. Now work out the conversion between different systems for yourself. If you go from a formula I think you will be more likely to get it wrong. Also, ignore pages 71 and 72 which are about 'standard bases'.

In section 2.1 you should know something about sketching surfaces, including the information given by considering level curves and contours, but I am not going to test you on the specific meanings of level curve or contour, or on the names or form of the quadric surfaces on pages 94 and 95, beyond what you can figure out about them for yourself. Don't memorize those quadric surfaces!

In section 2.2 I am not going to ask you about the topological terms on pages 101-103.

Be guided by what is asked in the questions about all this. There are many things we do that are foundational theory, but about which no question are asked. The book sometimes is also very lengthy about points that can be explained quickly. If you can do questions on a topic without reading a lengthy explanation, then I suggest you move on.