Information about Midterm 1

The first midterm will be on **11th October** from 3.30pm to 4.30pm in the usual classroom MATX 1100. We will have 15 minutes of lecture after it.

The material for the midterm is everything since the beginning of the term; namely

§2.1 The Tangent and Velocity Problems

§2.2 The Limit of a Function

§2.3 Calculating Limits Using the Limit Laws

§2.5 Continuity

§2.6 Limits at Infinity; Horizontal Asymptotes

§2.7 Derivatives and Rates of Change

§2.8 The Derivative as a Function

§3.1 Derivatives of Polynomials and Exponential Functions

§3.2 The Product and Quotient Rules

§3.3 Derivatives of Trigonometric Functions

§3.4 The Chain Rule

§1.6 Inverse Functions and Logarithms (only e^x and $\ln x$ and a^x and $\log_a x$)

How to Best Prepare for the Midterm? What to Learn?

For each section of the book there are usually two or three major points to know and master. Thus it is important to recognize these items and focus on them!

For example, in Section 2.5 (about continuity), what are the main concepts/results? First, clearly the definition of continuity p.118 (be able to explain it, to use it, to connect is to other notions seen in the course). Next, Theorems 4, 7 & 9 give a list of continuous functions

and how to construct new continuous functions from the ones we already know. Finally the Intermediate Value Theorem p.125 is definitely an important result of this section (be able to explain it, know how we use it).

Obviously the definition of continuity and the IVT are the two main points that are going to be asked in a way or another whereas Theorems 4, 7 & 9 will more be used as a justification of why such or such function is continuous.

These are the points you should focus on for this section! Also, you can use the learning objectives to help you determine what the most important points are.

How Will the Questions Look Like?

- The most difficult questions of the assignments and the questions of the first quiz are pretty close to questions that will be on the midterm.

- I have posted last year midterm on the website so that you can have a look at it and try to solve the questions.