

Homework 1

July 2, 2008

The homework is due in class (BEFORE the lecture begins) on **Tuesday, 8th July**. As mentioned in the course syllabus, there are no electronic submissions and no late homeworks will be accepted unless you have an illness spanning the full period from the time the homework was assigned until it was due (and I shall need to see a medical practitioner's certificate to that effect). Standard academic honesty rules apply. You can discuss problems but the solutions turned in should be entirely your own. Cases of plagiarism will be dealt with strictly.

Most of the problems are from the book by Stewart, 6th Edition.

1 Compulsory Problems

1. Section (1.1), problem 44.
2. Section (1.2), problem 9. [Hint: Start off by saying that $f(x) = ax^3 + bx^2 + cx + d$. You are given values of $f(x)$ at four values of x . Use them to solve for the four coefficients].
3. Section (1.3), problem 36.
4. Section (1.3), problem 66.
5. Section (1.6), problem 58.
6. Sketch the graph of the function $f(x) = 1 + 2\ln|x|$ where \ln stands for the natural logarithm.

2 Optional Problems

You do not have to submit these, but these are some problems from the book for your own practice.

1. Problems 47 to 50, section 1.6.
2. Problems 61 to 65, section 1.3.