

## EXTRA CREDIT HOMEWORK, DUE JUNE 2, 2010

You may do some or all of the following questions for "extra credit" in Math 75. Some of these questions were initially assigned homework problems which turned out to be rather difficult. Some are difficult questions which were never assigned to begin with.

These problems have no numerical score assigned to them. Instead, I will use them to possibly increase grades by one increment (say, from B+ to A-, or A- to A) if I feel that the solutions to these problems justify such an increase. The grading on these problems will be substantially harsher than normal homework questions, in the sense that substantial gaps in the solution will result in almost no partial credit being awarded. (Basic arithmetic errors or other trivial mistakes which do not dramatically affect the solution will still only result in minor deductions.) A corollary to this is that you should not turn in solutions which are not well-written and most likely correct.

Since these questions are meant to be difficult and are optional, I will not give out much assistance towards solving these problems. (Probably in some situations I have not even solved the problem so I would only be able to give you suggestions.) You should not feel obliged to answer these questions – even if you choose to turn in none of the problems on this sheet, there is no way this can negatively affect your grade. Even if every other student turned in complete and correct extra credit assignments, your grade would not go down. However, aside from the benefit of a possibly higher grade, many of these questions illustrate calculations which are of importance in mathematics, so they have great educational value.

- (1) Exercise 2.5bc from the text.
- (2) Exercise 3.2b from the text.
- (3) Exercise 4.6. In particular, parts d and f.
- (4) Exercise 4.21. This problem is not particularly hard but does require a computer.