

## INSTRUCTIONS FOR MIDTERM EXAM POINT RECOVERY IN MATH 251

This sheet describes how you can recover up to half the points lost on Midterm 2.

You may use your book, notes, and a graphing calculator. You may not use a calculator equipped with a computer algebra system. You may **not** get any outside help from any source, or talk to anyone about these or related problems with anyone, except me. Prohibited sources include, but are not limited to, tutors (paid or not), classmates, friends, other instructors, internet websites, family members, strangers, and fire breathing monsters from the planet Yuggxth.

For each problem on which you lost points, you must first explain what your error was, and why it is wrong. You might do this by giving counterexamples, or by explaining the true meaning of incorrect notation.

Then, you must write a fully correct detailed solution, with no irrelevant material. You must show all steps, at about the level of solution sheets previously distributed or posted on the course website. This is much more detail than is normally expected on exams or homework. For example, if one of the steps is to differentiate  $f(x) = \sin(x^2)$ , you should show:

$$f'(x) = \sin'(x^2) \frac{d}{dx}(x^2) = \cos(x^2) \cdot 2x = 2x \cos(x).$$

Just writing down the derivative is not sufficient. Your solutions must also contain all the words needed to explain what you are doing.

Moreover, the notation in your solution must be completely correct. As just some examples, all fractions must be completely unambiguous, the symbol “=” must appear everywhere that it should and in no places that it shouldn’t, and the symbol “lim” must appear everywhere that it should and in no places that it shouldn’t.

Finally, your solutions must be neatly written, so that they are easy to read.

Altogether, your solutions must be written in such a way that someone who does not know how to do the problem can learn all the required steps from them. You must convince me that you know the solution so well that you won’t get this kind of problem wrong again.

For the purposes of these instructions, different parts of a single numbers problem are separate problems. For example, if you got Problem 2a correct but Problem 2b wrong, you need not resubmit Problem 2a in order to get points back on Problem 2b.

Extra credit problems will be considered only if your original score was at least passing, the reworking of missed regular problems is essentially perfect, and the reworking of the extra credit problem involved is essentially perfect.

Write each redone problem on a separate sheet of paper (*not* on your exam paper), and return them to me, *together with your exam*, in class on Wednesday 5 March.