MATH 216 PROBLEM SET 6

This set is due by noon on Friday, November 11. Hand in your homework to me by email.

Please *read all of the problems*, and ask me about any statements that you are unsure of, even of the many problems you won't try. Many of you have seen much of this material, and I don't want you to waste your time; please just work on problems that you haven't thought through before. Conversely, you should be familiar with all the results, so if you are stuck on any problems (including ones not assigned), please come and talk with me.

Hand in at least **ten** solutions, where each "-" problem is worth half a solution. If you are ambitious (and have the time), go for more. If you have already seen this material before (graduate students only!), then you need only do five problems, but they should be five very interesting problems. (If you have seen everything before, just talk to me, and I'll excuse you completely.) You should try the starred problems unless you have seen them before. Try to solve problems on a range of topics (e.g. at least one from each section you haven't seen). You are encouraged to talk to each other, and to me, about the problems. Some of these problems require hints, and I'm happy to give them!

Problems (from the **October 30 version**): 6.5.C-F*, 6.5.H, 6.5.J-O*, 6.5.P, 7.3.B-, 7.3.C, 7.3.E*, 7.3.F**, 7.3.L, 7.3.M-, 7.4.A*, 7.4.D, 7.4.G (just because it is fun), 7.5.A-, 7.5.B-, 7.5.C, 7.5.F, 7.5.G, 7.5.I, and (just because they are fun) 7.5.J and K.

Feel free to do problems from 7.6 if you'd like. (I'm not sure if I'll get to it on Friday.) Also, I am very interested in whether the problems in 6.5 are well chosen, so please try them.

If you feel like other problems are interesting enough that they should be done, please do them, and I'll count them for half a problem or a whole problem (depending on how hard *you* think they are).

Finally, here is a new, **mandatory,** question. (A sentence for each suffices.) (a) Which problems did you particularly like, and why? (b) Which ones did you like less? (c) What is the most confusing topic so far?

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