MATH 216 PROBLEM SET 18

This set is due by noon on Friday, May 25. 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. 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 three problems, but they should be very interesting problems. You should try the starred problems unless you have seen them before. Problems marked with a "-" are worth half a problem. Problems marked with a "+" are worth two problems. 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 **May 16 version**): 25.5.A-, 25.5.D, 25.5.F*, 25.5.H, 25.5.I, 25.5.J, 25.5.K, 25.5.L-, 25.6.A-, 25.6.B+, 25.6.C+, 25.6.G+, 25.7.B*, 25.7.H, 25.8.A-, 25.8.B-, 25.8.C-, 25.8.D-, 25.9.E+, 25.9.F+, 25.10.A-, 25.0.B-, 17.7.A, 17.7.B, 17.7.C, 17.7.G+, 17.7.I-, 17.7.J, 25.10.C-, 25.10.E+, 25.10.H+. If you want to prove the Cohomology and Base Change Theorem instead, go ahead and do that; each exercise in the proof, in §25.9, is worth two problems.

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, the usual **mandatory** question. (A sentence for each part suffices.) (a) Which problems did you particularly like, and why? (b) Which ones did you like less? (c) What is the most confusing topic we've discussed recently?

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Date: Wednesday, May 16, 2012.