

## MATH 216 PROBLEM SET 13: QUASICOHERENT SHEAVES AND LINE BUNDLES

**This set is due at noon on Friday, February 19. Hand it in to my mailbox by 4:15 pm. You can also give it to me in class.**

*Please read until the end of Chapter 15. I probably won't get there during Friday's class.*

Please *read all of the problems*, and ask me about any statements that you are unsure of, even of the problems you won't try. Hand in at least twelve solutions, where each "-" problem is worth half a solution, and each "+" problem is worth two solutions. If you are ambitious (and have the time), go for more. Up to two can be from earlier problem sets if you'd like. Try to solve problems on a range of topics. You are encouraged to talk to each other, and to me, and to anyone else, about the problems. Some of these problems require hints, and I'm happy to give them!

Problems from the February 3 version of the notes: 14.2.A-, 14.2.B, 14.2.C, 14.3D, 14.3E+, 14.3F-, 14.3.G+, 14.4.A+, 14.4.B, 14.5.A, 14.5.B, 14.5.C, 14.5.E, 14.5.F, 14.5.G+ (might be hard; I have to think about it more), 14.5.H, 14.5.I-, 14.6.A, 14.6.B, 14.6.C, 14.6.D, 14.6.E-, 14.6.F, 14.6.G, 14.6.H (this geometric fact came up in a discussion with Melanie on Wednesday), 14.7.A-14.7.T (each worth a half; only for non-Noetherian people, who might want to try all 20), 14.8.A, 14.8.B+, 14.8.C-, 14.8.D, 14.8.E, 14.8.F, 14.8.G, 14.8.H+, 15.1.A+, 15.1.B, 15.1.C+, 15.2.A-, 15.2.B+, 15.2.C, 15.2.D, 15.3.A, 15.3.B+, 15.3.C+, 15.3.D, 15.3.E-, 15.3.F, 15.3.G, 15.3.H, 15.3.H, 15.3.I.

(Note: the 14.2 problems on this set are different than the 14.2 problems on the previous set, due to evolution of the notes.)

The usual additional (mandatory!) question: (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? (Thanks to everyone who has answered this question in the past!)

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