

MATH 216 PROBLEM SET 14: QUASICOHERENT SHEAVES (LINE BUNDLES; QUASICOHERENT SHEAVES ON PROJECTIVE SCHEMES; AND PUSHFORWARD AND PULLBACKS)

This set is due at noon on Friday, March 5. Hand it in to my mailbox by 4:15 pm. You can also give it to me in 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 thirteen solutions, where each "-" problem is worth half a solution, each "+" problem is worth two solutions, and the "++" problems are worth three 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. Starred problems and topics are not necessarily harder or less important, but might be less central to where we are going. 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 25 version of the notes: 15.2.A-, 15.2.B-, 15.2.C-, 15.2.D-, 15.2.E+, 15.2.F+, 15.2.G, 15.2.H+, 15.2.I, 15.2.J, 15.2.K, 15.2.L, 15.2.M, 15.2.N, 15.2.O, 15.2.P, 15.2.Q, 15.2.R, 15.3.A, 15.3.B+, 15.3.C, 15.3.D, 16.1.A, 16.1.B, 16.1.C-, 16.1.C, 16.1.D, 16.1.E, 16.1.F, 16.1.G, 16.2.A, 16.2.B, 16.2.C, 16.2.D, 16.3.A-, 16.3.B-, 16.3.C-, 16.3.D-, 16.3.E++, 16.4.A, 16.4.B, 16.4.C, 16.4.D, 16.4.E+, 16.4.F, 16.4.G, 16.4.H, 17.2.A, 17.2.B, 17.3.A+, 17.3.B-, 17.3.C-, 17.3.D, 17.3.E++ (three parts = 1 solution), 17.3.F-, 17.3.G, 17.4.A, 17.4.B, 17.4.C, 17.4.D, 17.4.E, 17.4.F, 17.4.G, 17.4.H, 18.1.A, 18.1.B+, 18.1.C, 18.1.D, 18.1.E, 18.1.F, 18.1.G.

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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