MATH 216 PROBLEM SET 16: DERIVED FUNCTORS

This set is due by the end of the day on Friday, April 16. E-mail me the list of problems you can solve, plus answers to the three mandatory questions. Likely near the end of the quarter, I will pick three or four of the problems you have named, and ask you to write them up. Or I may pick one in each set over the course of the quarter.

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. Solve 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. They can be from earlier problem sets if you'd like. (I'd especially encourage you to try some of the applications of cohomology in sections 19.4–19.6, if you haven't already.) 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 April 9 version of the notes:

20.1.A (only if you haven't seen it before), 20.1.B, 20.1.C, 20.1.D, 20.1.E, 20.1.F-, 20.1.G, 20.2.A-, 20.2.B, 20.2.C-, 20.2.D-, 20.2.E, 20.2.F-, 20.2.G, 20.2.H+, 20.2.I+, 20.3.A, 20.3.B, 20.3.C, 20.3.D++, 20.4.A, 20.4.B, 20.4.C-, 20.4.D-, 20.4E+, 20.5.A, 20.5.B, 3.6.H+ (newly inserted), 20.5.C, 20.5.D, 20.5.E, 20.5.F+, 20.5.G++, 20.5.H+, 20.5.I, 20.5.J+.

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!)

E-mail address: vakil@math.stanford.edu

Date: April 8, 2010.