Listed under Homework #3 on our class page is a link to a plain text data file. This is the survey data from the British Election Study (BES) examining voting behavior in the 2010 election we saw in the lab. The second page of this homework lists the variables available in this data – feel free to recode these variables as necessary. Download these data and write an R script file to do the following problems (you can use the script we used in the lab as a template for your own script).

(1) Estimate an ordered logit or ordered probit model (your choice) with “natecon” as the dependent variable and three independent variables of your choice. Explain the model results as far as you can.

(2) Use the “Zelig” package to define a hypothetical individual and calculate the probability that this individual would fall into each of the three categories of the dependent variable. Describe your hypothetical individual and the results.

(3) For one of the three independent variables, calculate how the probability of being in each category of the dependent variable would change as you change the value of the variable from the baseline value you selected in (2) to some other reasonable value. Describe your results, and whether the change in probability for each variable is statistically significant at the 5% level.

(4) Do a likelihood ratio test where you test the hypothesis that you can drop two of the variables in the model. Explain what the results of this test tell you.

(5) Repeat problems (1) through (3), but this time switch the type of model you use (to ordered logit if you used ordered probit, etc.), and use new dependent and independent variables.

Once you complete this homework, email me your writeup (about 1 paragraph per question) and the R script file you wrote to produce the results. I should be able to run the R script file and replicate your results.
Codebook for Homework #3

- **app.Brown**: A scale from 0 to 10, higher numbers mean greater approval of Gordon Brown (the incumbent Labour PM).

- **app.Cameron**: A scale from 0 to 10, higher numbers mean greater approval of David Cameron (the Conservative leader).

- **app.Clegg**: A scale from 0 to 10, higher numbers mean greater approval of Nick Clegg (the Liberal Democrat leader).

- **persfin**: Personal finances in the last year (1 = much worse, 2 = worse, 3 = stayed the same, 4 = better, 5 = much better).

- **natecon**: National economy in the last year (1 = much worse, 2 = worse, 3 = stayed the same, 4 = better, 5 = much better).

- **affect.fc**: Affected by the financial crisis? (1 = strongly, 2 = somewhat, 3 = hardly, 4 = unaffected).

- **app.Afgh**: Approves of war in Afghanistan (0 = no, 1 = yes).

- **MP.resign**: Members of Parliament caught in the expenses scandal should resign (1 = yes, 2 = maybe, 3 = no).

- **gender**: 0 = male, 1 = female.

- **age**: In years.

- **rent.own**: 0 = homeowner, 1 = renter.

- **memb.union**: 0 = not a union member, 1 = union member.

- **income**: A scale from 1 through 15, with higher numbers indicating greater income.

- **vote.intent**: 1 = will vote Labour, 2 = will vote Conservative, 3 = will vote Liberal Democrat.