

**Economics 381, Fall 2017**

**Problem Set 5 – Model Selection**

**Due Date: October 17**

**Instructions:** Complete the problem set answers in the spaces given. Include a professionally formatted output (graphs, regression tables, etc.) as a separate sheet, and **staple** the sheets together.

**Name (printed):**

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Download the gss381.dta dataset from Canvas. This is a modified form of the General Social Survey that I have cleaned for you.

Q1. How many observations are there from 2008?

Q2. What is the age of the oldest person in the data?

Q3. Generate a `hist` of how many siblings people have.

Q4. What percent of respondents think their federal income tax burden is too low?

Q5. What is the average age of people who think radical Muslim clergymen should be allowed to speak freely?

Q6. What is the average age of people who do NOT think radical Muslim clergymen should be allowed to speak freely?

- Q7. What is the standard deviation of the age of people who voted for Obama as President in 2008?
- Q8. Is there a positive or negative correlation between ideology (as measured by 'polviews') and happiness (as measured 'happy')? Interpret this result: who consider themselves more happy, liberals or conservatives?
- Q9. What is the coefficient of correlation between ideology and income? Who is richer, liberals or conservatives?
- Q10. What is the coefficient of correlation between ideology and education? Who is more educated, liberals or conservatives?
- Q11. What is the coefficient of correlation between income and education?
- Q12. Draw a scatterplot of the relationship between income and education. On the same graph, include a line of best fit between these variables.
- Q13. Put some effort into this last question, and take it as an opportunity to use the skills you have learned in the class. Run a regression with people's views about their federal tax burden being the dependent variable. The choice of independent/explanatory variables is yours. Type a paragraph or two justifying your model selection, and evaluate your model.