

Questions to try to answer as you study for the final exam

1. What are the pitfalls of sampling?
2. How does one discover seeming relationships between variables? Are there appropriate and inappropriate uses of data?
3. What are the ways one uses sampled data to infer information about populations?
4. On what basis can such inferences be made? What are *sampling distributions*, and what role do they play? What assumptions are made to arrive at these distributions? How do we determine if these assumptions are in place? Do we have other options when they are not?
5. What are the various sample statistics we have learned how to calculate during the semester? Which ones are *resistant*?
6. What forms do the null and alternative hypotheses take for the various tests of significance we have learned? For which tests can we find corresponding confidence intervals? How are the types of inference procedures related?
7. In what settings does one use 1-sample proportion methods? 2-sample proportion? 1-sample z, t ? 2-sample t ? chi-square? 1,2-way ANOVA? linear regression? (Of course, you should be able to carry out the details of such procedures.)