Define the term “sample frame”.

What is a stratified random sample?

What is cluster sampling? [Sampling from selected geographical areas for practical reasons.]

Give an example of a nonrandom sampling method and explain how it works. [availability sampling: elements are selected because they are available or easy to find quota sampling: availability sampling with quotas to make the sample representative of the target population across some dimension(s) snowball sampling: used for hard-to-reach populations where members of the population know each other, i.e. drug dealers, prostitutes, etc. purposive sampling: each sample element is selected for a purpose, i.e. to get a range of viewpoints on the issue of study]

What is the advantage of a random sample?

What is a control variable?

Conceptualization of a variable versus Operationalization of a variable

What is generalizability (same thing as external validity)?

What are the potential problems with the following data collection methods for the generalizability of a study?

- Mail survey
- Telephone interview
- Focus groups
- In-person interview
- Any of these repeated for longitudinal study

What are some common mistakes in survey question design? [avoid words in question text that trigger biases make sure to provide balanced numbers of positive and negative answers avoid making either disagreement or agreement disagreeable
minimize fence-sitting (neutral responses)
minimize floating (where respondents answer substantively even though they don’t know)
make sure response choices are exhaustive and mutually exclusive
avoid double negatives
avoid double-barreled questions (asking two questions but allowing one answer)
avoid technical terms in questions]

What’s wrong with the following survey questions or agree/disagree statements?

- When you bike to campus, do you wear a helmet? [double-barreled]
- What do you think should be done about the thoughtless people who drive a car rather than bike to campus? [biased question]
- I like to bike to campus because it’s good for the environment. [disagreement is disagreeable here]
- Levels of service influence my mode choice. [technical terms in question]

What is the difference between qualitative research and quantitative research?
We’ll be giving you two articles to read tomorrow and much of the final will ask questions about these articles.

Some practice with abstracts…

**Abstract #1.** Suburban development in the US is widely criticized for its contribution to automobile dependence and its consequences. Not surprisingly, then, a return to more urban-style development, where potential destinations are closer to home, is often put forth as a strategy for reducing automobile dependence. This paper evaluates the possibility that providing local shopping opportunities will help to reduce automobile dependence by exploring how residents of existing neighborhoods make use of the local shopping opportunities currently available to them. Using both quantitative and qualitative evidence for six neighborhoods in Austin, TX, we address two sets of questions. First, to what degree do residents choose local shopping over more distant opportunities and why? What are the implications for vehicle travel? Second, to what degree do residents choose to walk rather than drive to local shopping and why? What are the implications for vehicle travel? The results of this exploration suggest that local shopping will not prove a particularly effective strategy for reducing automobile dependence in the typical US city by either reducing travel distances or encouraging alternative modes of travel. Residents of such places choose more distant stores enough of the time that they increase total driving significantly, and they don’t choose alternative modes enough of the time that they reduce total driving significantly. But while local shopping may not do much to reduce driving it does give residents the option to drive less and this option is something residents clearly value. Local shopping does not show great promise as a strategy for reducing automobile use, but it does show promise as a strategy for enhancing quality of life in neighborhoods, at least partly by making driving once again a matter of choice. (Handy, 2001)

**Abstract #2.** Income has often been pointed to as the determinant of car ownership, which in turn is a major determinant of carbon emissions from transport. As a result, many analysts have considered the link between carbon emissions from transport and income growth to be unbreakable. This paper offers a multivariate analysis of carbon emissions from urban transport using a number of variables in addition to the income variable. Although rising incomes clearly lead to rising carbon emissions from transport, the present analysis shows that other variables are also important. The analysis uses worldwide city-level data from 1990, and the key explanatory variables are Gross City Product per capita, the price of gasoline, the population density, and a variable that measures the amount of transit service available in the city. A linear ordinary least squares regression analysis using this data yields an adjusted R-squared statistic of 0.89, and a log linear analysis yields an adjusted R-squared statistic of 0.93. This type of analysis can be extremely useful to indicate which variables have the greatest impact on carbon emissions so that more directed policies could be implemented. (Salon, 2002)
What is the main research question?

What is the larger societal issue that the researchers are interested in? (Why should we care about this paper?)

What is the unit of analysis?

What is the researchers’ hypothesis?

What data was used?

What is the unit of observation?

How was the data collected?

What is the population that the researchers are interested in?

What sample frame do they use?

What was the sampling method?

Are there any problems with internal validity?

What implications does the sampling method have for external validity?

Identify the dependent variable.

Identify the independent variables.

Identify the control variables.

What are the results?

If you were to draw a (tentative) big-picture conclusion from the results, what would it be?

What (if any) further research questions are inspired by this study?