Your Name: _____

Names of people you worked with: _____

Instructions: Work on this problem in class with your group (if you are attending class synchronously) or out of class (hopefully with a person or two! if you are attending class asynchronously). The problem should be done on a piece of paper with a pencil or on some kind of tablet. The problem should **not** by typed up or done in LaTeX.

Work for a *maximum* of 15 minutes on the problem (regardless of what time you are working). *Do not* come back to the problem to "fix it up" or "finish it." Be sure to write down the names of the people you worked with during class (or outside of class).

Take a picture of your work and use a scanning app to create a pdf (or create a pdf directly from your tablet). Upload your work to Gradescope (via Sakai) within 24 hours of class.

Task: Consider the article from *Wired* on the AstraZeneca vaccine, `https://www.wired.com/story/the-astrazeneca-covid-vaccine-data-isnt-up-to-snuff/`. For the British study, answer the following questions:

- What is an observational unit?

- What are the variables? Which one is the explanatory variable and which is the response? Are there other variables that were measured? What are they? Do you consider them to be explanatory or response variables?

- Describe the sample in a few words.

- Describe the population of interest in a few words.

- What is the statistic reported in the article? Give the numerical value. (Note: you probably don't yet know how that number was calculated, we'll get to its calculation in a few weeks.)

- What is the parameter of interest? Describe it in words. (Remember, a parameter is a number that measures an entire population, and we almost never know the population value!)

- Is the sample representative of the population? Why or why not?

- If we reject chance as the causal mechanism, can we say that it was the vaccine that **caused** the lower Covid-19 rates?