STAT 312 – Quiz 1
Statistical Studies

Taken on Tues Sept 22. You may work with a group of as many as 3 students, submitting one quiz with all names, provided that you all contribute to the work. Please write “quiz 1” along with your name(s) and section number (section 74 for 3-4pm, 75 for 4-5pm). You may use your notes.

For questions 1-2, suppose that I want to investigate whether the color of paper on which an exam is printed (white, yellow, green) has an impact on students’ exam scores.

1. Identify the explanatory variable in this study, and classify it as quantitative or categorical.
2. Identify the response variable in this study, and classify it as quantitative or categorical.

For questions 3-4, consider all cars parked on campus today as the observational units in a study.

3. Identify one quantitative variable that could be recorded on these observational units.
4. Identify one categorical variable that could be recorded on these observational units.

5. In a study published in a 2007 issue of the journal *Preventive Medicine*, researchers found that smokers were more likely to have used candy cigarettes as children than non-smokers were. When hearing about this study, John responded: “But isn’t the smoking status of the person’s parents a confounding variable here?” When Karen asked what he meant, John said: “Children whose parents smoke are more likely to become smokers themselves when they become adults.” What else does John need to say in order to explain how the parents’ smoking status can be a confounding variable in this study?