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:

According to some investors, foreign stocks have the potential for high yield, but the variability in their dividends may be great. Let's say we take a random sample of 10 foreign stocks and assume that they come from a normal distribution. The data produce a sample mean of \$1 dividend per share with a sample standard deviation of \$2.

Find a 95% CI for the true SD (i.e., σ) associated with dividends on foreign stocks.

Hint: you will need to use the χ^2 distributions and one of the statistics discussed last week to start the problem. Try writing an equation of the following form:

$$P(\text{a number} \leq \text{statistic and the parameter of interest} \leq \text{another number}) = 0.95.$$