Quiz on Confidence Intervals

1. A teacher selects 4 exams at random from a very large class. The scores were:

   70, 95, 83, 69

   a) What is your best guess for the unknown population mean, i.e. the average score of all students in the class, if you had to guess a single number?

   b) Find the standard error?

   c) Find a 95% confidence interval for the unknown population mean.

2. In a study to determine the normal temperature of a healthy human being, 130 healthy individuals were investigated and there temperatures were recorded. The data is as follows: N = 106, $\bar{x}$ = 98.2, and s = 0.6229. Based on this research, compute a 90% confidence interval about the unknown population mean.

3. If we computed a 90%, 95%, and 99% confidence interval from a given random sample, which of these three intervals would be the widest? Explain.