MATH 1342
Quiz 7.3

A statistics class with a large number of students has scores on an exam that are normally distributed. A sample of 13 of these students are chosen at random, and for the sample, the mean for the exam is 72.5 and the standard deviation is 9.6. Note: The sample is small and σ is not known and the scores are normally distributed, so use the Student's t-statistic.

(1) Construct the 95% confidence interval for the mean of the entire statistics class.

(2) A second investigator constructs another confidence interval using the above sample. If the interval generated was (67.755, 77.245), then what was the confidence level?

(3) Construct the confidence interval for the mean of the entire statistics class with $\alpha = .01$. What is the confidence level?