Stat 171 - Worksheet for Chapter 6 review

Name: _____

1. In a random sample of 60 refrigerators, the mean repair cost was \$150.00. Assume the population standard deviation is \$15.50. Construct a 99% confidence interval for the population mean repair cost. Interpret the results.

2. For Problem 1, determine the minimum sample size required when you want the to be 95% confident that the sample mean is within one unit of the population mean.

3. In a random sample of 60 refrigerators, the mean repair cost was \$150.00 and the standard deviation was \$15.50. Construct a 99% confidence interval for the population mean repair cost. Interpret the results.

4. In a survey of 2230 U.S. adults, 1272 think that air travel is much more reliable than taking cruises. Construct a 95% confidence interval for the population proportion of U.S. adults who think that air travel is much more reliable than taking cruises. Interpret the results.

5. With the preliminary estimate given by the sample in problem 4, determine the minimum sample size required when you want the to be 95% confident that the sample proportion is within 2% of the population proportion.

6. A magazine includes a report on the energy costs per year for 32-inch LCD televisions. The article states that 14 randomly selected 32-inch LCD televisions have a sample standard deviation of \$3.90. Assume the sample is from a normally distributed population and construct 99% confidence intervals for the population variance σ^2 and the population standard deviation. Interpret the results.