KFUPM Term 122, STAT 319 Date: 3/4/2013

Mathematics & Statistics Quiz #4 Duration: 25 minutes

Name: ID #: Section 2 Serial #:

***Q*1.** An article describes several characteristics of fuel rods used in a reactor owned by an electric utility in Norway. Measurements on the percentage of enrichment of 12 rods were reported as follows:

2.94 3.00 2.90 2.75 3.00 2.95 2.90 2.75 2.95 2.82 2.81 3.05

a. Construct a 99% confidence interval for the mean percentage enrichment. State any necessary assumptions.

b. Given that the standard deviation of the percentage enrichment of All the fuel rods is 1.1, compute the maximum error in estimating the mean percentage enrichment with a 99% confidence level. State any necessary assumptions.

***Q*2.** A study is to be conducted of the percentage of homeowners who own at least two television sets. How large a sample is required if we wish to be 95% confident that the error in estimating this quantity is less than 0.017?

With My Best Wishes