Econ 325 Section 003: Worksheet for Sample Distribution[1]

Name and Student No._____

Question 1 *30% of all voters support ballot proposition A. Let $\hat{p}$ be the sample fraction of voters who support proposition A in a sample of $n = 100$. What is the value of a such that $P(0.3 - a < \hat{p} < 0.3 + a) = 0.95$?*

Answer

Question 2 *A commercial freezer must hold a selected temperature with little variation. Specifications call for a standard deviation of no more than 2 degrees. A sample of 10 freezers is to be tested. Suppose that the population variance is 4. What is the upper limit (K) for the sample variance such that the probability of exceeding this limit is less than 0.05?*

Answer

Question 3 *What is the value of b such that $P(\chi_1^2 > b) = 0.05$?*

Answer