GBS 221 Name _____

Trollen

Chapter 7 Worksheet 3

1) The distribution of miles driven by the population of Sky Harbor taxi drivers is positively skewed with a mean of 32,000 miles/year with a standard deviation of 6,700. If a sample of 40 drivers is selected, what is the probability the sample's mean will exceed 35,000 miles?

2) Suppose the actual distribution of daily household water consumption in Dry Hole, Texas, is uniformly distributed with a mean of 18.9 gallons and a standard deviation of 3.6 gallons. The Utilities Commissioner wants to estimate this mean by using a sample of 100 households. How likely is it that the sampling error will exceed 0.5 gallons?

3) Mega Corp has just received a shipment of 5,000 RAM chips from its supplier. Unknown to Mega Corp, 15% of these chips are defective. If a sample of 50 items is selected, what is the probability the sample contains *fewer* than 5% defectives?

4) It is estimated that 25% of SCC students receive financial aid. Assuming this is true, what is the probability that a sample of 100 students would yield *more* than 40% who were on financial aid?