

King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics
STAT-319-Term162
Quiz #4

Name:

ID:

Serial:

Q 1: A manufacturer claims that the average life of its light bulb is 1,200 hours. Assume that the life of all such bulbs has a normal distribution with mean 1,200 hours, and standard deviation 70 hours. Determine the probability the mean life time of a random sample of 9 bulbs will be at least 1,180 hours

Q 2: A recent study in Riyadh has concluded that the distance that workers daily travel to work averages 19.3 km with a standard deviation of 5.6 km. Assuming these values correspond to the parameters of a population,

- What is the probability that a sample of 49 yields a mean less than 20 km?
- What is the value of the sample mean such that 97% of the mean above this value?