KFUPM | Term 171 | Date: 24/12/2017

Mathematical Sciences | STAT 211 | Duration: 25 minutes

Quiz# 6

Name: ID#: Serial#:

Show your work in detail and write neatly and eligibly

1. A buyer for a manufacturing plant suspects that his primary supplier of raw materials is overcharging. In order to determine if his suspicion is correct, he contacts a second supplier and asks for the prices on various identical materials. He wants to compare these prices with those of his primary supplier. The data collected is presented in the table below.

Material	1	2	3	4	5	6
Primary Supplier	\$55	\$48	\$31	\$83	\$37	\$55
Secondary Supplier	\$45	\$47	\$32	\$77	\$37	\$54

a. What is the point estimate for the mean price difference between the two suppliers?

b. If the buyer wants to be 91% confident that the true mean price difference falls between two numbers, what is the maximum error of his interval estimation?

c. Construct a 91% C.I. estimate for the true mean price difference between the two suppliers?

d. What is(are) the needed assumption(s) to construct the interval in c?

P.T.O. ➔

2. The dean of a college is interested in the proportion of graduates from his college who have a job offer on graduation day. He is particularly interested in seeing if there is a difference in this proportion for accounting and economics majors. In a random sample of 100 of each type of major at graduation, he found that 65 accounting majors and 52 economics majors had job offers.

   a. What is the standard error of the difference between the proportions of accounting and economics majors?

   b. Do you think that there is a difference in the proportion for accounting and economics majors at the 93% level of confidence? Explain in detail.

   c. Under what assumptions your answer to part b is valid?

With My Best Wishes