

Sample Quiz 7

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Question 1-7: Management of a soft-drink bottling company wished to develop a method for allocating delivery costs to customers. Although one cost clearly relates to travel time within a particular route, another variable cost reflects the time required to unload the cases of soft drink at the delivery point. A sample of 22 customers was selected from routes within a territory. The delivery time (in minutes) and the numbers of cases delivered were measured. These data are partially presented in the table with the following results: $SST=2500$, $SSR=2320$, $\sum(X_i - \bar{X})^2 = 3906.25$ and $\hat{Y} = 25.00 + 0.12X$.

Customer	Number of Cases (X)	Delivery Time(Y)
1	52	32.1
2	64	34.8
:	:	:
22	298	67.3

- Which of the following statement is correct, when we interpret the meaning of the slope b_1 .
 - for each additional minute, the estimated case increases 0.12
 - for each additional case, the estimated delivery time increases by 0.12 minutes
 - for each additional minute, the estimated case decrease 0.12
 - for each additional case, the estimated delivery time decreases by 0.12 minutes
- If the company wants to test the significance of a linear relationship between X and Y. The value of the test statistic t_{cal} is _____.
 - 2.852
 - 3.000
 - 2.400
 - 2.500
- For the test with $\alpha = 0.05$, which of the following represents the result of the relevant hypothesis test?
 - reject H_0
 - fail to reject H_0
 - can't find the level of significance.
 - no decision
- The 95% confidence interval estimate for the population slope is _____ to _____.
 - 0.017 to 0.317
 - 0.020 to 0.220
 - 0.034 to 0.206
 - 0.092 to 0.189
- The predicted delivery time for a customer who receiving 160 cases of soft drink is _____.
 - 44.2 min
 - 47.5 min
 - 50.5 min
 - 25.0 min
- Which of the following statement is correct for the coefficient of determination?
 - 96.33% of the variation in the delivery time can be explained by the variation in the number of cases.
 - 96.33% of the variation in the number of cases can be explained by the variation in the delivery time.
 - 92.80% of the variation in the delivery time can be explained by the variation in the number of cases.
 - 92.80% of the variation in the number of cases can be explained by the variation in the delivery time.
- The 95% confidence interval estimate of the average delivery time for customers that receive 160 cases of soft drink (use $\bar{X}=169.9$) is from _____ to _____.
 - 41.23 to 47.77
 - 40.50 to 51.58
 - 42.54 to 45.86
 - 42.50 to 45.90

Question 8-9: Use the sample data below to test the hypotheses

H0: $p_1 = p_2 = p_3$

H1: Not all population proportions are equal

Response	1	2	3	Totals
Yes	150	150	96	396
No	100	150	104	354
Totals	250	300	200	750

8) What is the test statistic ?

A) 8.277

B) 7.993

C) 13.628

D) 8.972

9) To perform a chi-square test using a level of significance of 0.01, what decision should you make?

A) Reject H0.

B) Can't find α .

C) No decision.

D) Fail to reject H0.

Answer Key

Testname: SAMPLE_QUIZ7.TST

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) B
- 2) D
- 3) A
- 4) B
- 5) A
- 6) C
- 7) C
- 8) B
- 9) D