

Q1 (10 degree)//from the following analysis:

Summary Statistics for MPG City

Drive Train	Count	Average	SD	CV
all	10	20.5	5.58	27.23%
front	67	23.5224	5.81	24.73%
rear	16	18.6875	1.81	9.71%
Total	93	22.3656	5.61	25.12%

Table for MPG City by Drive Train

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Between groups	340.916	2	170.458	5.98	0.0036
Within groups	2564.65	90	28.4962		
Total (Corr.)	2905.57	92			

- Choose the Correct answer for the following questions:

1	What test is used for this analysis?		
	A- paired sample t-test	B- ANOVA	C- Independent sample t-test
2	Which variables are less variation?		
	A- front	B- rear	C- all
3	The Sample size equal to?		
	A- 91	B- 92	C- 93
4	How you can compute the (F-Ratio) (5.98)?		
	A- (MS.BG/MS.WG)	B- (MS.WG/MS.BG)	C- (MS.BG/MS. Total)
5	What is the meaning (p-value=0.0036)?		
	A- Significant because (p>0.05).	B- Significant because (p≤0.05).	C- Not Significant
6	What is the type of variables in analysis?		
	A- Ordinal	B- Nominal	C- Scale
7	How many variables do you need to run this analysis?		
	A- One	B- Two	C- More than two
8	From above (test) we.....		
	A- Don't reject H ₀	B- Reject H ₀	C- Not of them
9	Write the two hypothesis test?		
	H ₀ :	H ₁ :	
10	Write the steps for applying the analysis above in Statgraphics?		

Q3(10 degree): The local ice cream shop keeps track of how much ice cream they sell versus the temperature on that day, here are their figures for the last 12 days:

Temperature (C°)	14.2	16.4	11.9	15.2	18.5	22.1	19.4	25.1	23.4	18.1	22.6	17.2
Sales(\$)	215	325	185	332	406	522	412	614	544	421	445	408

Required

1. Complete the summary statistics

	Count	Average	Median	Mode
<i>Temp.</i>				
<i>Sales</i>				

2. Calculate the Pearson coefficient Correlation between (Temp. & Sales)?

a) Pearson coefficient Correlation=.....

b) Type of Correlation=.....

c) Write the test hypothesis?

H₀:

H₁:

d) Is this correlation Significant or Not? Why?

3. Estimate the Regression Equation (Temp /Sales)?

a-Write the Regression Equation.....

b- In general Significant model or not?

c- R²=.....

d- F-test =.....p-value=.....

Good Luck



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