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Question: Six subjects were exposed to 4 treatments and the following ...

Six subjects were exposed to 4 treatments and the following data were recorded.

Subjects	Treatments			
	T1	T2	T3	T4
1	9	5	6	2
2	10	10	3	5
3	8	7	9	10
4	5	6	3	4
5	10	9	8	7
6	5	6	8	9

Test at 0.05 level of significance to test the null hypothesis that there is no significant difference among the six subjects on four different treatments. Use 2 decimal places in the final answer

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Expert Answer



Darshan Mahajan answered this
160 answers

Was this answer helpful?



The details solution solved in Minitab software given below.

For comparing the four different treatment then we use the **ANOVA (Analysis of variance)**

Ho: There is no significance difference among the six subject on four different treatments

H1: There is significance difference among the six subject on four different treatments

Minitab Output:

One-way ANOVA: T1, T2, T3, T4

Method

Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	$\alpha = 0.05$

Equal variances were not assumed for the analysis.

Factor Information

Factor Levels Values

Factor	4	T1, T2, T3, T4
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Welch's Test

Source	DF Num	DF Den	F-Value	P-Value
Factor	3	10.9730	0.55	0.656

Means

Factor	N	Mean	StDev	95% CI
T1	6	7.833	2.317	(5.402, 10.264)
T2	6	7.167	1.941	(5.130, 9.203)
T3	6	6.17	2.64	(3.40, 8.94)
T4	6	6.17	3.06	(2.95, 9.38)

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We can conclude that there is no significance difference among the six subject on four different treatments at 0.05 level of significance.

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Q: Six subjects were exposed to 4 treatments and the following data were recorded. T4 Subjects 1 2 3 4 5 6 Treatments T1 9 10 8 5 10 5 T2 5 10 7 6 9 6 T3 6 3 9 3 8 8 2 5 10 4 7 9 Test at 0.05 level of significance to test the null hypothesis that there is no significant difference among the six subjects on four different treatments. Use 2 decimal places STATISTICS COMPUTED VALUE...

A: [See answer](#) 100% (1 rating)

Up next for you in Statistics and Probability

Sum of Degrees of Mean Squares Freedom 2,073.6 6,000.0 Source of Variation

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Between Treatments	2,073.6	3	691.2	1.288
Between Subjects	6,000.0	20	300	
Total		23		

1. The null hypothesis for this ANOVA problem is _____.

2. The main effect between treatments is significant at the 0.05 level of significance (F(3,20) = 1.288, p > 0.05).

3. The main effect due to error is significant _____.

[See answer](#)

If the coefficient of determination is a positive value, then the regression line _____.

If the coefficient of determination is a positive value, then the regression line _____.

- could have either a positive or a negative slope
- must have a positive y intercept
- must have a positive slope
- must have a negative slope

[See answer](#)

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Q: Six subjects were exposed to 4 treatments and the following data were recorded. T4 Subjects 1 2 3 4 5 6 Treatments T1 9 10 8 5 10 5 T2 5 10 7 6 9 6 T3 6 3 9 3 8 8 2 5 10 4 7 9 Test at 0.05 level of significance to test the null hypothesis that there is no significant difference among the six subjects on four different treatments. Use 2 decimal places STATISTICS COMPUTED VALUE...

A: [See answer](#) 100% (1 rating)

Q: 8. There are five students in a class and the number of students who will participate in annual day every year is a Poisson random variable with mean 3. What will be the probability of more than 3 students participating in annual day this year? (a) A math teacher gave her class two tests. 35% of the class passed both tests and 52% of the class passed the first test. What percent of...

A: [See answer](#)

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