A.

The following data shows a record on total Fe for 3 types of iron formation.

	silicate	magnetite	carbonate
Number of observations	3	3	3
Sum of observations for each type $\left(\sum_j x_{ij}\right)$	73.15	85.33	75.62
Sum of squares for each type $\left(\sum_j x_{ij}^2\right)$	1784.5529	2429.7505	1971.162

Assuming the normality and $\alpha = 0.01$, make an appropriate conclusion based on an ANOVA.

a. Complete the table by providing appropriate values for blanks in the table:

Source of variation	Degree of freedom	Sum of squares	Mean square	F
Treatment				
Error				
Total		96.2643		

b. Determine the rejection region: (,)

c. What conclusion can you draw about the null hypothesis?

Select an answer

Do not round in between steps. (Type oo for Infinity and -oo for Negative Infinity)

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a. Complete the table by providing appropriate values for blanks in the table:

Source of variation	Degree of freedom	Sum of squares	Mean square	F
Treatment	2	27.637488888888	13.818744444444	1.2081643504085
Error	6	68.626811111112	11.437801851852	
Total	8	96.2643		

b. Determine the rejection region: ([10.92,10.93] , oo)

c. What conclusion can you draw about the null hypothesis?

Select an answer

We don't have enough evidence to conclude that the total Fe are significantly different for 3 types of iron formatio

B.

An electronics engineer is interested in the effect on tube conductivity of three different types of coating for cathode ray tubes in a telecommunications system display device. 10 tubes were randomly chosen and treated by each types. The engineer has collected the data and reported some summary statistics as below.

	Type 1	Type 2	Type 3
Number of tubes	10	10	10
The average conductivity	$\bar{y}_A = 148.3$	$\bar{y}_B = 149.4$	$\bar{y}_C = 148.8$
The average conductivity of the entire dataset: $\bar{y} = 148.8333$			
The sum of squares: $\sum_{i=1}^{30} y_i^2 = 664581$			

1. Use the given information to complete the table of the analysis of variance.

Source of variation	SS	df	MS	F
Treatment				
Error				
Total				

2. Hence, we conclude that at the $\alpha = 0.1$ level of significance,

Select an answer

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1. Use the given information to complete the table of the analysis of variance.

Source of variation	SS	df	MS	F
Treatment	6.0666666999999	2	3.03333335	
Error	34.397666600828	27	1.2739876518825	2.3809754714009
Total	40.464333300828	29		

2. Hence, we conclude that at the $\alpha = 0.1$ level of significance,

Select an answer

the coating type doesn't affect the conductivity of cathode ray tubes in a telecommunications system display device.