## OA-4603 DL EXAM II

Name: \_Steve Mazza\_

14. (15 pts) The following is a 2<sup>4</sup> Half Fractional Test Design. Determine Contrasts, SS, MSE, Fs, Fα, factor effects, and Acceptance or Rejection of the Null Hypothesis for Main factors A & B and Interaction CD. Test the Hypothesis Ho: A = B = CD = 0 at a level of significance of .05 i.e. no significant difference in factor levels or interaction. The Residual/Sum of Squares Error (SSE) is given below. (Show All Work)

 $SumSq = \frac{(Contrast)^2}{n^{2^k}}$ 

## 24 Half Fractional Test Design

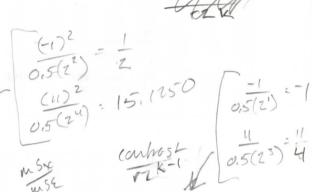
		A (-)		A (+)		Row	
		B (-)	B (+)	B (-)	B (+)	Sum	
C (+)	D (+)	24			25	49	
	D (-)		23	16		39	
C (-)	D (+)		20	21		41	
	D (-)	17			21	38	
Column Sum		41	43	37	46	167	



Contrasts: sum +; -A: -41-43+37+46 = -11 B: -41+43-37+46= 11

1=4

49-39-41+38= CD:



Fill in Blanks with Answers Here

I III III Dialiks with Allsweis field.											
Source	Deg. Of Freedom	Contrast	Sum Squares	Mean Squares	Fs	F <sub>.05</sub>	Factor Effect	Accept/Reject Ho:			
Main Factors							والبياري				
Α	1	-1	.0.5	0.5	0.0833	10.10	-	veg			
В	1	11	15.1250	15,1250	2.5208	10,10	2.75	rei			
Interactions											
C-D	1	7	0.875	0.875	0.1458	10.10	1,75	re (			
Residual (SSE)	3		6.0	6.0		in the					

15. (5 pts) Calculate and plot the AD Interaction. (Show Y-axis scaling). Would you expect this

interaction to be significant? Why or why not?

AD Interaction: (5)
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- 24 F20 = -44/2=-22 | 25 + 21 = 46/2= 23 23 + 17 = 40/2=20 | -16 - 21 = -37/2=-18,5

