[redacted] CHALLENGE PROBLEM 1.

An experiment was conducted to determine the effects on yield (Y) of a crop by two factors: fertilizer type (FERT) and level of fertilizer application (LEV). FERT had three levels (brands 1,2,3) and LEV had five levels, where LEV=1 means no fertilizer was applied and LEV=2,3,4,5 means, repsectively, 100,200,300 and 400 pounds/acre. The design was a CR design. The data are given below.

Data:

FERT	LEV	Y
1	1	10.1
1	1	12.2
1	2	15.1
1	3	16.2
1	3	16.9
1	4	15.8
1	5	13.2
2	1	10.5
2	2	13.6
2	2	14.4
2	3	15.5
2	4	15.6
2	5	13.8
3	1	11.0
3	1	9.4
3	2	11.1
3	3	12.4
3	4	13.0
3	5	10.8

Problem: Propose an analysis strategy for analyzing the effects of these two factors, in light of the fact that each (LEV,FERT) combination in the set {(1,1),(1,2),(1,3)} represents the SAME experimental condition. Bear in mind that the usual comparisons of all levels of each factor (one at a time) are of interest, as well as information regarding interaction of the two factors.