

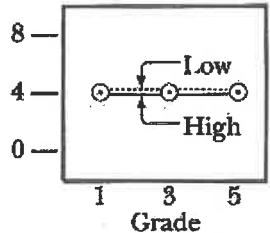
What type of Factorial design is this? MALONE

Psy 633 Understanding & Describing the Factorial Effects

Suppose an experiment was conducted in which children from three different grades in school (first, third, and fifth grades) were given a reading test with instructions designed to produce either low or high motivation in the children. Possible outcomes of the study are presented below. In each case, the cell means are presented on the left, with spaces provided for you to write in the row and column means. You should plot the results of each example in the blank graph presented to the right of the cell means. Finally, indicate which of the factorial effects—main effect of grade, main effect of motivation, and the interaction of grade and motivation—appear to be present in the results.

a.

		Grade			
		b ₁	b ₂	b ₃	
		1	3	5	
a ₁ Low		4	4	4	4
a ₂ High		4	4	4	4
		4	4	4	



Main Effect of Grade? No

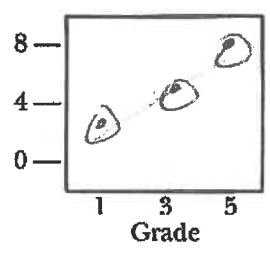
Main Effect of Motiv.? No

Interaction? No

• Low
• High

b.

		Grade			
		1	3	5	
Low		2	4	6	4
High		2	4	6	4
		2	4	6	



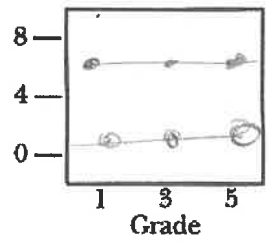
Main Effect of Grade? Yes

Main Effect of Motiv.? No

Interaction? No

c.

		Grade			
		1	3	5	
Low		6	6	6	6
High		2	2	2	2
		4	4	4	



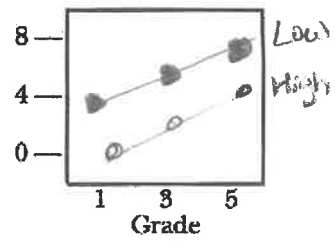
Main Effect of Grade? No

Main Effect of Motiv.? Yes

Interaction? No

d.

		Grade			
		1	3	5	
Low		4	6	8	6
High		0	2	4	2
		2	4	6	



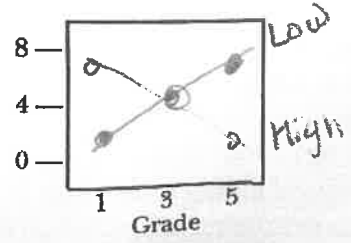
Main Effect of Grade? Yes

Main Effect of Motiv.? Yes

Interaction? No

e.

		Grade			
		1	3	5	
Low		2	4	6	4
High		6	4	2	4
		4	4	4	



Main Effect of Grade? No

Main Effect of Motiv.? No

Interaction? Yes