Problem session 4 PSYC 5301

The following data were obtained from a repeated-measures study comparing three treatment conditions:

Person	Tmt 1	Tmt 2	Tmt 3
A	0	4	2
В	1	5	6
\mathbf{C}	3	3	3
D	0	1	5
${ m E}$	0	2	4
F	2	3	4

- Write the full model for the data, specifiying point estimates for the grand mean μ , treatment effects α_j , and subject effects π_i .
- Test the constrained model \mathcal{H}_0 : $\alpha_j = 0$ against the full model in part (a). Report both a *p*-value and a Bayes factor.
- What can you conclude from part (b)?

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The following data were obtained from a repeated-measures study comparing three treatment conditions:

Person	Tmt 1	Tmt 2	Tmt 3
A	6	2	3
В	5	1	5
\mathbf{C}	0	5	10
D	1	8	2

- Write the full model for the data, specifying point estimates for the grand mean μ , treatment effects α_j , and subject effects π_i .
- Test the constrained model \mathcal{H}_0 : $\alpha_j = 0$ against the full model in part (a). Report both a *p*-value and a Bayes factor.
- What can you conclude from part (b)?

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The following summary table presents the results from a repeated-measures ANOVA comparing three treatment conditions with a sample of N=11. Fill in the missing values in the table.

Source	SS	df	MS	F
Between tmts				5.00
Residual	60			
Between subj	20			
Total				

The following summary table presents the results from a repeated-measures ANOVA comparing four treatment conditions with a sample of N=12. Fill in the missing values in the table.

Source	SS	df	MS	F
Between tmts			18	6
Residual				
Between subj				
Total	194			