

STA3007: Tutorial 7

Yue Ju, Yanmeng Wang

School of Science and Engineering
The Chinese University of Hong Kong, Shenzhen

November 11, 2020

1 Question 1

2 Question 2

Question 1

Use the nonparametric test (Friedman, Kendall-Babington Smith test) for **general** alternatives in RCBD to test H_0 .

Table 7.2 Effect of Experimental Ozone Exposures on Airway Resistance (cm H_2O /s)

Subject	After .1 ppm	After .6 ppm	After 1.0 ppm
1	−.08	.01	.06
2	.21	.17	.19
3	.50	−.11	.34
4	.14	.07	.14

Source: J. R. Goldsmith and J. A. Nadel (1969).

Question 2

Table 7.6 gives the number of dysfluencies under each condition. On the basis of the conditions, and prior to looking at the data, we might expect a deviation from H_0 to be in the direction $\tau_R < \tau_A < \tau_N$. Perform Pages test using this postulated ordering.

Table 7.6 Influence of Rhythmicity of Metronome on Speech Fluency

Subject	Dysfluencies under Each Condition		
	R	A	N
1	3	5	15
2	3	3	11
3	1	3	18
4	5	4	21
5	2	2	6
6	0	2	17
7	0	2	10
8	0	3	8
9	0	2	13
10	1	0	4
11	2	4	11
12	2	1	17

Source: J. P. Brady (1969).

Block	R	A	N
1	3(1)	5(2)	15(3)
2	3(1.5)	3(1.5)	11(3)
3	1(1)	3(2)	18(3)
4	5(2)	4(1)	21(3)
5	2(1.5)	2(1.5)	6(3)
6	0(1)	2(2)	17(3)
7	0(1)	2(2)	10(3)
8	0(1)	3(2)	8(3)
9	0(1)	2(2)	13(3)
10	1(2)	0(1)	4(3)
11	2(1)	4(2)	11(3)
12	2(2)	1(1)	17(3)
R_j	$R_1=16$	$R_2=20$	$R_3=36$

Table: Unadjusted estimators of simple contrasts