

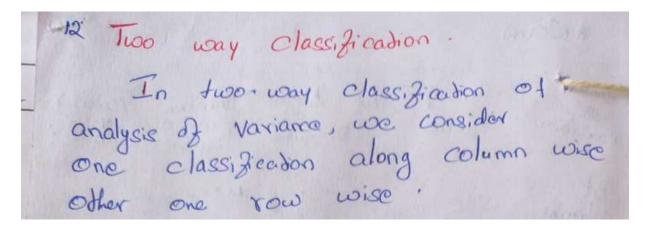
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Topic: 2.6 – Two-way classification-Randomized block design



RBD [Randomised Block Design]

K treatments given to k plotsin a perfectly random manner, such
that each treatment occurs only once
in each block.

Monds (Advantages.

The design controls the Variability in the openimental units and give the treatments equivalence to show their effects.

The analysis of the design is simple and straight toward.



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Working Procedure

Ho: There is no significant difference

Iti: There is significant difference.

Find N

Find T

$$C \cdot F = T^2$$
 $TSS = \sum x_1^2 + \sum x_2^2 + \sum x_3^2 + \cdots - T^2$

$$SSC = (\underbrace{\Xi X_{1}})^{2} + \underbrace{(\underline{\Xi X_{2}})^{2}}_{N_{1}} + \underbrace{(\underline{\Xi X_{2}})^{2}}_{N_{1}} + \underbrace{(\underline{\Xi X_{2}})^{2}}_{N_{1}} + \underbrace{(\underline{\Xi X_{2}})^{2}}_{N_{1}} + \underbrace{(\underline{\Xi X_{2}})^{2}}_{N_{2}} + \underbrace{(\underline{\Xi X_$$



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Sources of Variation	Sum	dof	Mean Surn of Squares	Variance Rasio	Table value.
Between		C-1	MSC	MSC>MSE Fe= MSC MSE	Fe()
Between	SSR	Y-1	MSR	MSR> HSE	F2()
	SSE	N-c-r +1	MSE	FR = MSR MSR	
	C.V	LT acce	opted.	in the second	

1) Perjoin below:	te	Do-way		IA for	the gn
The factor of		Treatment			H
Plots of land	A	3	C	D	
I	38	40	41	39	4
Ti	45	42	49	36	5
TI.	40	38	42	42.	- 64



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	Solution.									
	Shift the origin to 40.									
1		X,	1×2	×3	X4	T	X,2	×2	X3	×42
			1		-1	-		1		1
	42	5	2	9	-4	12	25	4	81	16
	43	0	-2	2	2	2	0	4	4	4
N	1	.3	0	12	-3	12	29	8	86	21

Ho: There is no significant dissovence between column as well as row.

Hi: There is significant dissovence between Column or row.

$$N = 12$$
 $T = 12$.

 $C \cdot f = \frac{T^2}{N} = 12$.

 $T = 12$.



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$$SSC = (2 \times 1)^{2} + (2 \times 2)^{2} + (2 \times 3)^{2} + (2 \times 3)^$$

$$SSE = TSS - SSC - SSR$$

$$= 132 - 42 - 26 = 64$$

$$MSC = \frac{SSC}{c+1} = \frac{42}{3} = 14$$

$$MSR = \frac{SSR}{r-1} = \frac{26}{9} = 13$$

$$MSE = \frac{SSE}{r-1} = \frac{64}{6} = 10.67$$

$$ro-c-r+1$$



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Source	Sum of Squares	dot	Mean Sum of Squares	Variation radio.
Bł	SSC	C-1	MSC	MSC>MSE
Columns	= 42	=3	=14	FC = MSC MSE
Bt	SS R = 26	x-1 = 3-1 = 2	MSR =13	= 14 = 1:31
Crrol	SSF = 132	N-C-Y+) = 6	HSE =1064	MSR>MSF FR= MSR MSF
		DE		= 13 = 1.22

T.V Fe (3,6)=4.76 FR (2,6)=5.14

FC C.V T.V

1.31 Z. 4.76

FR C.V T.V

1.22 Z 5.14.

Ho accepted Column wise and row wise.