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2054201001

1). Mahasiswa	MTK	Statistika	Limnologi	MKA	Total
Andi	68	57	73	61	259
Rina	83	94	91	86	354
Budi	72	81	63	59	275
Siska	55	73	77	66	271
Dina	92	68	75	87	322
Total	370	373	379	359	1481

$$B: Jkt = 68^2 + 83^2 + 72^2 + 55^2 + 92^2 - \frac{1481^2}{20} = 2772,92$$

$$- JKB = \frac{259^2 + 354^2 + 275^2 + 271^2 + 322^2}{4} - \frac{1481^2}{20} = 1618,7$$

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$$- JKK = \frac{370^2 + 373^2 + 379^2 + 359^2}{5} - \frac{1481^2}{20} = 42,15$$

$$- JKG = 2772,92 - 1618,7 - 42,15 = 1112,07$$

A. ked Matkul itu mempunyai kesulitan yg sama.

Sumber Ketegaman	Jumlah kuadrat	Derajat bebas	kuadrat tengah	F hitung
Nilai tengah baris	1618,7	4	404,675	9,3667
Nilai tengah kolom	42,15	3	14,05	0,1516
Galat	1112,07	12	92,6725	
Total	2771,92	19		

2). Jenis Pakan	A	B	C	Total
Pakan A	180	200	220	570
	190	240	170	600
	120	180	140	440
	170	240	260	670
Pakan B	100	180	190	470
	130	220	210	560
	90	120	100	310
Pakan C	120	150	50	320
	60	100	80	240
Pakan D	140	210	190	540
	80	160	150	390
	110	140	120	370
Total	1460	2140	1880	5480

Jumlah	A	B	C	Total
PA	460	620	530	1612
PB	400	640	660	1700
PC	240	460	230	930
PD	336	510	460	1306
total	1460	2140	1880	5480

$$JK_t = 180^2 + 190^2 + 120^2 + \dots = \frac{5480^2}{36} = 72847.7$$

$$JK_B = \frac{1612^2 + 1700^2 + 930^2 + 1306^2}{3} - \frac{5480^2}{36} = 691625.1$$

$$JK_k = \frac{1460^2 + 2140^2 + 1880^2}{3} - \frac{5480^2}{36} = 759462.7$$

$$JK(BK) = \frac{460^2 + 400^2 + \dots + 460^2}{36} - \frac{5480^2}{36} = 501047.7$$

$$JK_G = 72847.7 + 691625.1 + 759462.7 + 501047.7 = 1508516.2$$

Sumber Variasi	Jumlah kuadrat	Df	Kuadrat T	F hitung	F tabel
Nt Baris	691625.1	5	$s_1^2 = \frac{691625.1}{5}$	$F_1 = \frac{s_1^2}{s_2^2}$	
Nt kolom	759462.7	4	$s_2^2 = \frac{759462.7}{4}$	$F_2 = \frac{s_2^2}{s_3^2}$	
Interaksi	501047.7	20	$s_3^2 = \frac{501047.7}{20}$	$F_3 = \frac{s_3^2}{s_4^2}$	
Galat	1508516.2	$K(n-1)$	$s_4 = \frac{1508516.2}{r-1}$		
total	165.863.489	25			