

## Zadatak ANOVA 4

1)

Ho: sve dijete su podjednako efikasne, tj. Srednje vrednosti gubitka kilograma za sve dijete su jednake.

Ha: barem dve dijete su različite

$\alpha=0.05$

## One-way ANOVA: Dijeta 1, Dijeta 2, Dijeta 3, Dijeta 4, Dijeta 5

Method

Null hypothesis All means are equal  
Alternative hypothesis At least one mean is different  
Significance level  $\alpha = 0.05$

Equal variances were assumed for the analysis.

Factor Information

Factor	Levels	Values
Factor	5	Dijeta 1, Dijeta 2, Dijeta 3, Dijeta 4, Dijeta 5

Analysis of Variance

Source	DF	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Factor	4	26273810	46.65%	26273810	6568452	6.56	0.001
Error	30	30050782	53.35%	30050782	1001693		
Total	34	56324592	100.00%				

Model Summary

S	R-sq	R-sq(adj)	PRESS	R-sq(pred)
1000.85	46.65%	39.53%	40902454	27.38%

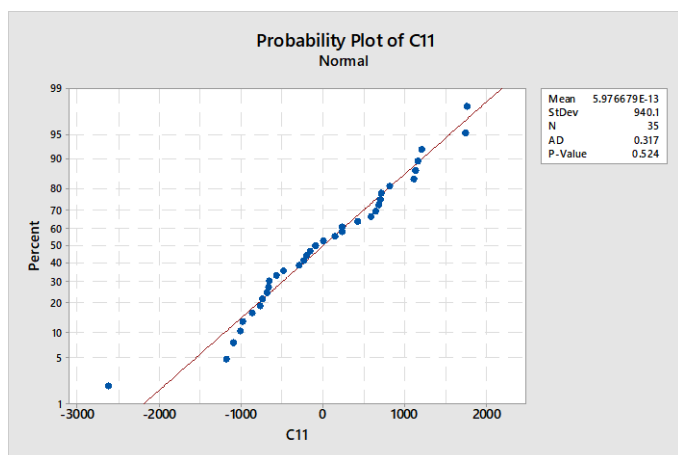
Means

Factor	N	Mean	StDev	95% CI
Dijeta 1	7	4534	834	(3761, 5307)
Dijeta 2	7	6078	1382	(5305, 6850)
Dijeta 3	7	4514	851	(3742, 5287)
Dijeta 4	7	6387	624	(5614, 7159)
Dijeta 5	7	4386	1136	(3613, 5158)

Pooled StDev = 1000.85

Pošto je  $p=0,01$  manje od  $\alpha=0.05$ , odbacujemo Ho i zaključujemo da su barem dve dijete različite.

2)



Reziduali imaju normalnu raspodelu.

3)

## Tukey Pairwise Comparisons

Grouping Information Using the Tukey Method and 95% Confidence

Factor	N	Mean	Grouping
Dijeta 4	7	6387	A
Dijeta 2	7	6078	A B
Dijeta 1	7	4534	B C
Dijeta 3	7	4514	C
Dijeta 5	7	4386	C

Means that do not share a letter are significantly different.

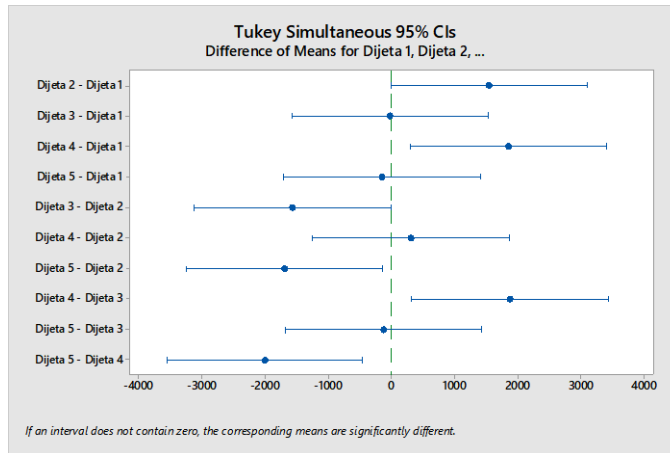
Razlikuju se:

Dijeta 1 i 4

Dijeta 2 i 5

Dijeta 3 i 4

Dijeta 4 i 5



4)

Najefikasnija je dijeta 4 jer je srednja vrednost gubitka kilograma posle 30 dana najveća.

5)

Snaga testa da bude 0,9, potrebno je po 9 osoba da drži svaku od dijeta.

## Power and Sample Size

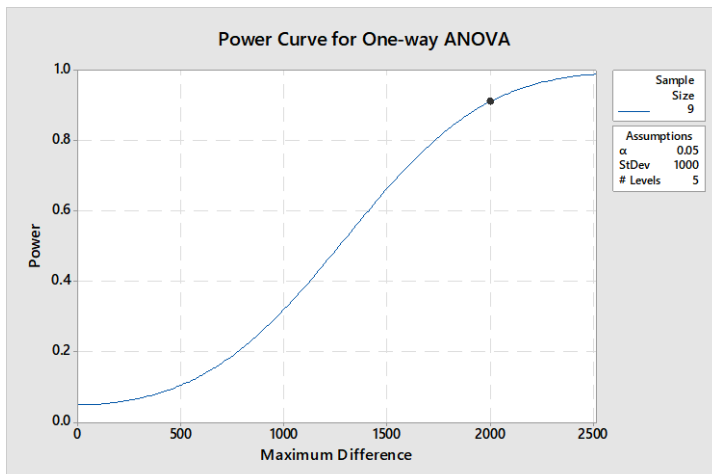
One-way ANOVA

$\alpha = 0.05$  Assumed standard deviation = 1000

Factors: 1 Number of levels: 5

Maximum Difference	Sample Size	Target Power	Actual Power
2001	9	0.9	0.911869

The sample size is for each level.



6)

95% interval poverenja za najbolju i najmanje efikasnu dijetu:

Najefikasnija je dijeta 4, interval poverenja je

Dijeta 4 7 6387 624 **(5614, 7159)**

Najmanje efikasna je dijeta 5, interval poverenja je

Dijeta 5 7 4386 1136 **(3613, 5158)**