

StatCrunch Lab 13 for Statistics 301

Topics: one way analysis of variance (ANOVA)

One Way Analysis of Variance Test.

Fifteen different patients, chosen at random, subjected to three drugs. Test if at least one of the three mean patient responses to drug is different at $\alpha = 0.05$.

drug 1	drug 2	drug 3
5.90	5.51	5.01
5.92	5.50	5.00
5.91	5.50	4.99
5.89	5.49	4.98
5.88	5.50	5.02
$\bar{x}_1 \approx 5.90$	$\bar{x}_2 \approx 5.50$	$\bar{x}_3 \approx 5.00$

Blank data table. Relabel var1 drug 1, var2 drug 2, var3 drug 3. Type data into these three columns. Data, Save data, 13.1.1 drug same data.

1. *Statement.*

H_0 : means same vs H_1 : at least one of the means different

2. *Test.*

p-value = 0.00

Stat, ANOVA, One Way, choose Compare selected columns drug 1, drug 2, drug 3, Calculate.

Level of significance $\alpha = 0.05$

3. *Conclusion.*

Since p-value = 0.00 < $\alpha = 0.05$, reject null, so H_0 : means different.