



3 different instrumental methods measure the same thing.

Are all of the resultant values "the same"??

We want to compare three means:
$$\mu_1, \mu_2, \mu_3$$

What is the correct null hypothesis?
A) $\mu_1 = \mu_2 = \mu_3$ one possibility
B) $\mu_1 \neq \mu_2 \neq \mu_3$ one possibilities
B) $\mu_1 \neq \mu_2 \neq \mu_3$ one possibilities
C) $\mu_1 > \mu_2 > \mu_3$
D) $\mu_1 < \mu_2 < \mu_3$
E) $\mu_1 > \mu_2 = \mu_3$

Zar example:

4 groups of pigs are given different types of feed, and the pigs are weighed.

grupi grups total grups goof, group4 gooli groupi Feed 1 Feed 2 Feed 3 Feed 4 Pig: 87.9 60.8 68.7 102.6 6.21 57.0 67.7 102.1 84.2 pig2 65.0 74.0 83.1 100.2 58.6 66.3 96.5 85.7 61.7 69.8 90.3 total group each group Xi X2 χ, Sample: "group studes" studen e (x; -X;)² S = N-1 all the data hasa Mean

* Assumptions ! 1) each group from a normally-distr. population 2) all groups have the same true o Two major types of variation I. variation within a group $SS = \Sigma (x_i - X_i)^{*}$ (deviation from the group mean in a group Degrees of Freedom sum of squares for all groups: $\sum_{i=1}^{k} \sum_{j=1}^{n_{i}} (x_{ij} - X_{ij})^{2}$ within I group = N-k all groups Degrees of Freedum = N-1 (K-1 ? from (K-1 ? gor) II. variation between groups $SS = \frac{k}{2} n_{i} \left(\chi_{i} - \overline{\chi} \right)^{2}$

F = 164Fuit= 3.2 F77 Fuit Ho is also Newman rejected 9 Newman Kuels Takey Test (igor) Sptstakey Test (igor) SD Xsmall gist Xlorge look @ every diff if diff big => diff Xlarge X. X. Xsmall

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