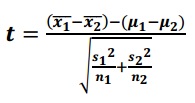
**t – Statistics**

Researcher wanted to find out the effect of one medicine on attention span of chidren. 20 children were selected as sample. They were randomly divided into two groups.

Group 1 = Placebo, Group 2 = = The medicine.

Assuming normality find out statistically the effect of medicine, if any, and comment on the result where greater the score signifies better attention

Formula for ‘t’ statistics



**Where µ1 - µ2 = 0 and**

**∑ (X1-M1)2  + ∑(X2 – M2)2**

**S2 = -------------------------------------**

**n1 + n2 - 2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X1 | X2 | X1 – M1 | X2 – M2 | (X1 – M1)2 | (X1 – M1)2 |
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**Model of ANOVA – F ratio**

The researcher wanted to find out the efficacy of audiovisual method on learning. Four groups were taken

GR. A – Audiovisual session, Gr. B- Lecture (audio) session, Gr. C- Interactive session , Gr.D- self reading.

Same numbers of sessions were conducted on a same topic. After completion of scheduled sessions, tests were taken. Assuming normality find out the statistical difference, if any among the methods. Comment on the result .

**A B C D**

7 4 8 6

5 3 7 4

6 4 9 5

7 4 7 6

8 5 9 5

Formula – N = 20, K= treatment= 4, Kn = Number in each treatment = 5

Steps for ANOVA calculations

            [A]       Calculate the correction factor

http://www.kean.edu/~fosborne/bstat/px/ANOVAeqA.gif

            [B]       Calculate the Sum of Squares Total value (SS Total)

                        TSS = x2 - CF

            [C]       Calculate the SS Group value

  Kss Group = 22 2 2

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - CF

Kn

[D]    Calculate the SS Error value

                        WSS Error = SS Total - SS Group

            [E]       Calculate MS Group value

http://www.kean.edu/~fosborne/bstat/px/ANOVAeqE.gif

            [F]       Calculate MS Error value

http://www.kean.edu/~fosborne/bstat/px/ANOVAeqF.gif

            [G]       Calculate F value (V.R.)

http://www.kean.edu/~fosborne/bstat/px/ANOVAeqG.gif

*Final appearance of sample ANOVA calculation table.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source | df | SS | MS | F |
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**Correlation** –

Below are the scores of Vernacular and English of one group of students. Assuming normality, find out the correlation between and comment on the result.

Vernacular = X English= Y

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| --- | --- | --- | --- | --- |
| X | Y | X2 | Y2 | X Y |
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