1)

Independent Variable : The congruent dataset word is our independent variable.
Dependent Varaible : The incongruent dataset word is our dependent variable as it will change time participents took to respond.

2)

Hypothesis
Ho = The congruent dataset and in-congruent dataset statistically same at an alpha of 0.05
Ha = The congruent dataset and in-congruent dataset statistically different at an alpha of 0.05

Paired t-test, used to compare the means between two related groups of samples. Since the two groups are related in this case paired t-test be done.

Dependent when the same subjects take test twice. In our case too the subjects take the same test twice.

Therefore we will perform dependent paired t-test.

3)

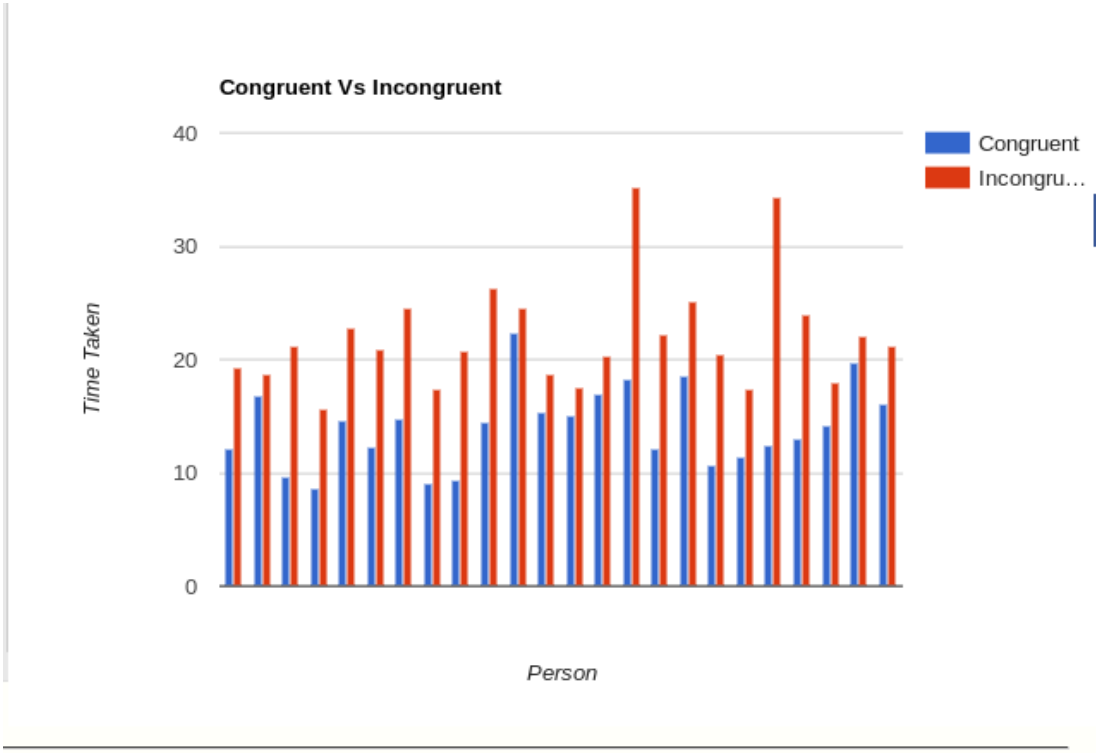
Central Tendency:
Mean for Congruent dataset: 14.051125
Mean for Incongruent dataset: 22.05326087

Median for Congruent dataset: 14.3565
Median for Incongruent dataset: 21.0175

Variablity:
Variance for Congruent dataset: 12.66902907
Variance for Incongruent dataset: 23.01321226

SD for Congruent dataset: 3.559357958
SD for Incongruent dataset: 4.797208799

4)



As we can see that time taken by people in in-congruent data set is way more than people in congruent data set.

5)

Statistical Test:

Alpha: 0.05 or Confidence level: 95%
Degree of freedom: 23
T-Critical: +2.069 and -2.069

Point estimate: -7.964791667
sample deviation: 4.86482691

T-statistical: -8.020706945

Confidence Interval: -10.01936791,-5.91021542

Since T-statistical is past the critical region we reject the hypothesis.

I have played an android game on stroop effect. Thus I was aware of the outcome.