q3

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My questions:

The initial questions about this A/B testing are as following:

1 Is there only one change per scenario or not? 2 Are the test cases randomly assigned throughout the week or are they done one by one?

The second question is very important because the Quote giving rates might have different some timely (seasonal) pattern. I am assuming that there is uniform distribution of the different scenarios per weekday. Also I am assuming that each scenario is separated by only one change from another scenario.

Due to lack of information about the variances of each scenario results, I will use the ChiSquared test. Chi-squared test compares the frequencies and does not have an assumption regarding the distribution of the results.

We have the following data:

```
mytbl <- read.csv("./tests.csv")
mytbl
```

```
##        Bucket Quotes Views
## 1    Baseline     32   595
## 2 Variation 1     30   599
## 3 Variation 2     18   622
## 4 Variation 3     51   606
## 5 Variation 4     38   578
```

My null hypothesis is that the differences in the results are not caused by random errors. Performing the Chi-Squared test:

```
mytest <- chisq.test(mytbl[2:3])
```

Since the p-value for this test is 0.0018913 is smaller than 0.05, we can propose that with 95% confidence, the differences are significant and it is very unlikely that the observation is merely the result of fluctuations.

It is worth noting that the confidence level should have been set (i.e. 95% vs 99%) before the testing was performed (at the time of desgining the experiment). Also the sample sizes could have been more uniform.