Practice Examples

1. Median is robust to extreme values

   TRUE / FALSE

2. For right-skewed data, median > mean

   TRUE / FALSE

3. When p-value is 0.04, we always reject the null hypothesis

   TRUE / FALSE

4. When performing unbalanced 2-way ANOVA, inferential conclusions from Type 1 and Type 3 SS tests will be always same

   TRUE / FALSE

5. If the ANOVA model is significant with very small p-value like 0.00001, this model will always show very large R-square

   TRUE / FALSE

6. When using the Type 3 SS for unbalanced ANOVAs: if we change the order of the variables in the model, then the Type 3 SS will change

   TRUE / FALSE

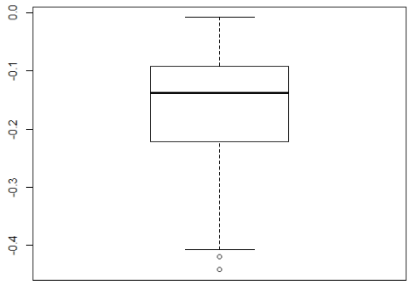
7. In forward selection, if we increase the p-value cut-off, the final model will get larger

   TRUE / FALSE

8. In 1-way ANOVA, although model turns out to be insignificant, we need to perform post-hoc test

   TRUE / FALSE

9. how the data is skewed?



10. Below is a result for the equal variance test to perform two-sample t-test. State which test you choose (pooled t-test? Or Satterthwaith test?)

```
        F test to compare two variances

data:  July$Wind and Aug$Wind
F = 0.8857, num df = 30, denom df = 30, p-value = 0.7418
alternative hypothesis: true ratio of variances is not equal to 1
```

11. Below is a result for the equal variance check (Levene's test) for ANOVA. State which test you choose between ANOVA and Welch's ANOV.

```
Levene's Test for Homogeneity of Variance (center = median)
      Df F value Pr(>F)
group  2  0.6457 0.003
      57
```

12. 4 assumptions of ANOVA

13. What is the goal of ANOVA?

14. Why we perform post-hoc test?

15. Interpretation of post-hoc test result

16. Check quiz questions

17. Able to Interpret R outputs in HW.