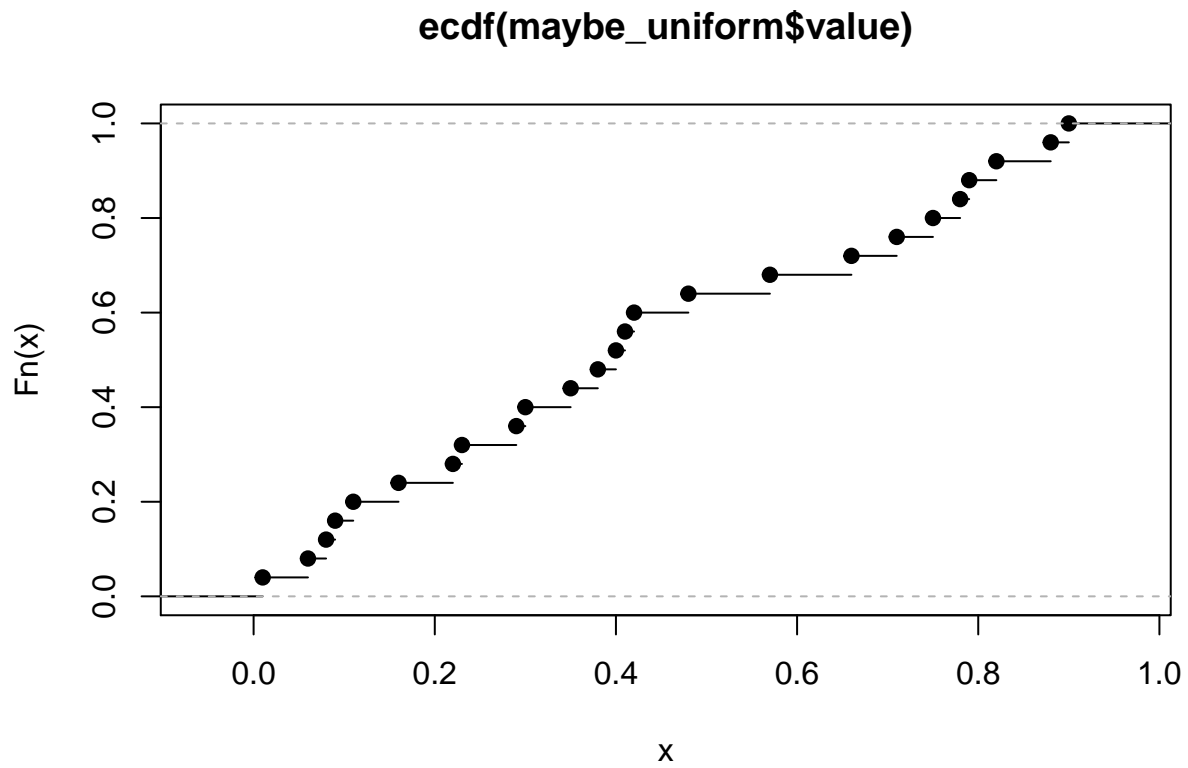


Homework

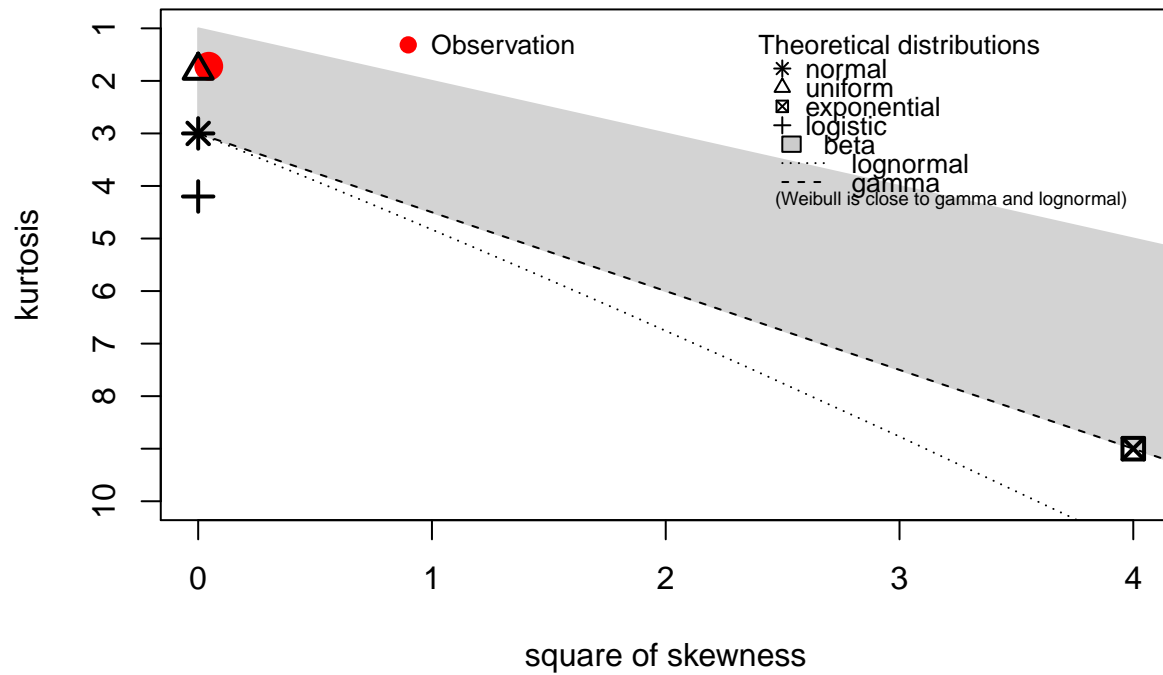
Angela Zhai

3/8/2019

1.

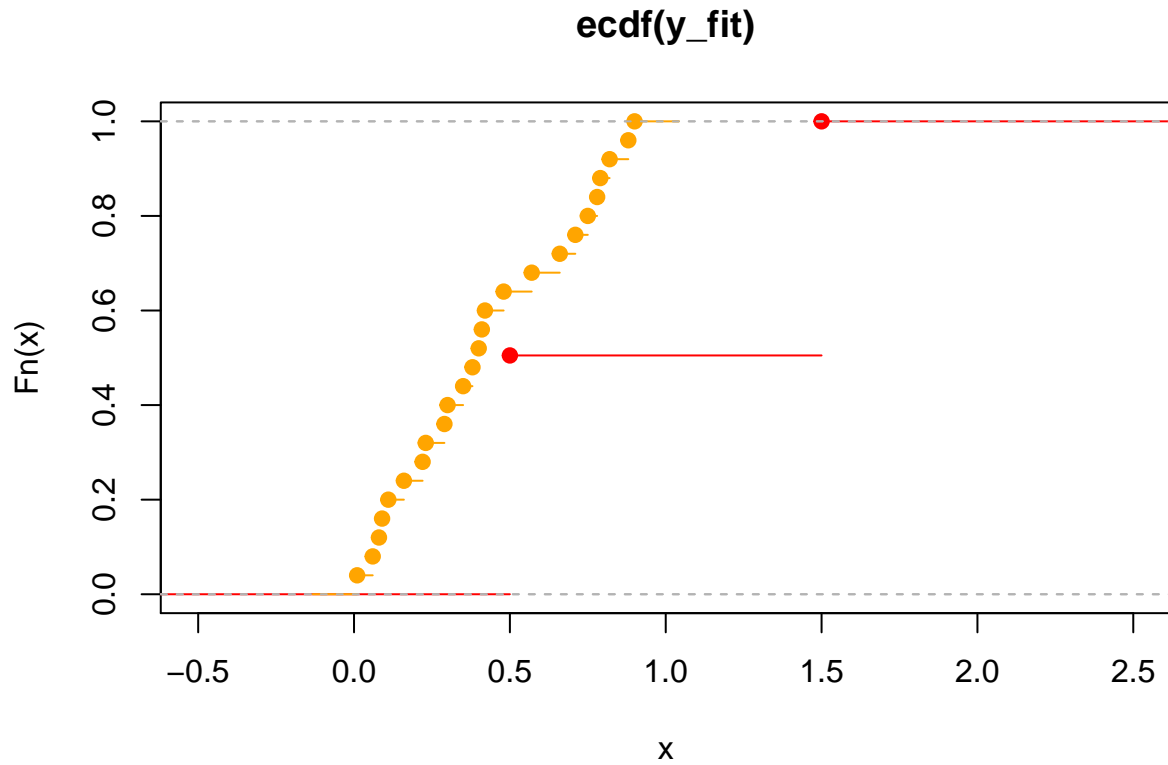


Cullen and Frey graph



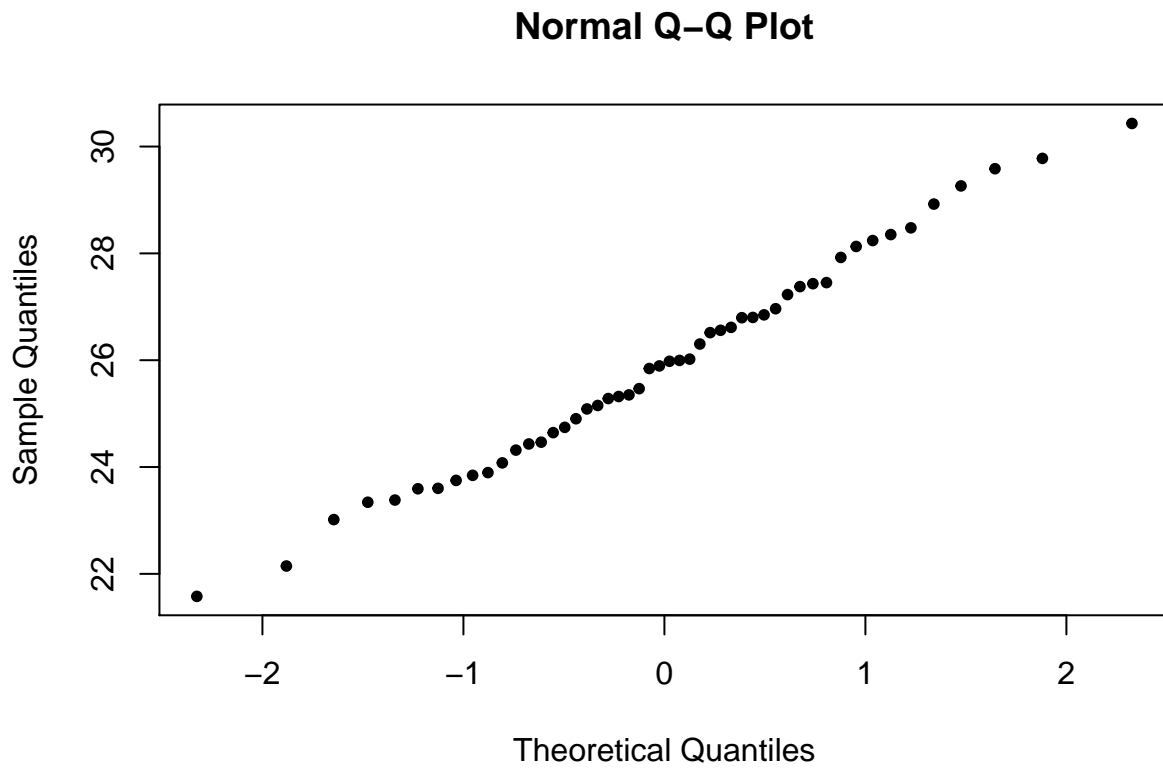
```
## summary statistics
## -----
## min: 0.01  max: 0.9
## median: 0.4
## mean: 0.434
## estimated sd: 0.284356
## estimated skewness: 0.2127721
## estimated kurtosis: 1.721164
```

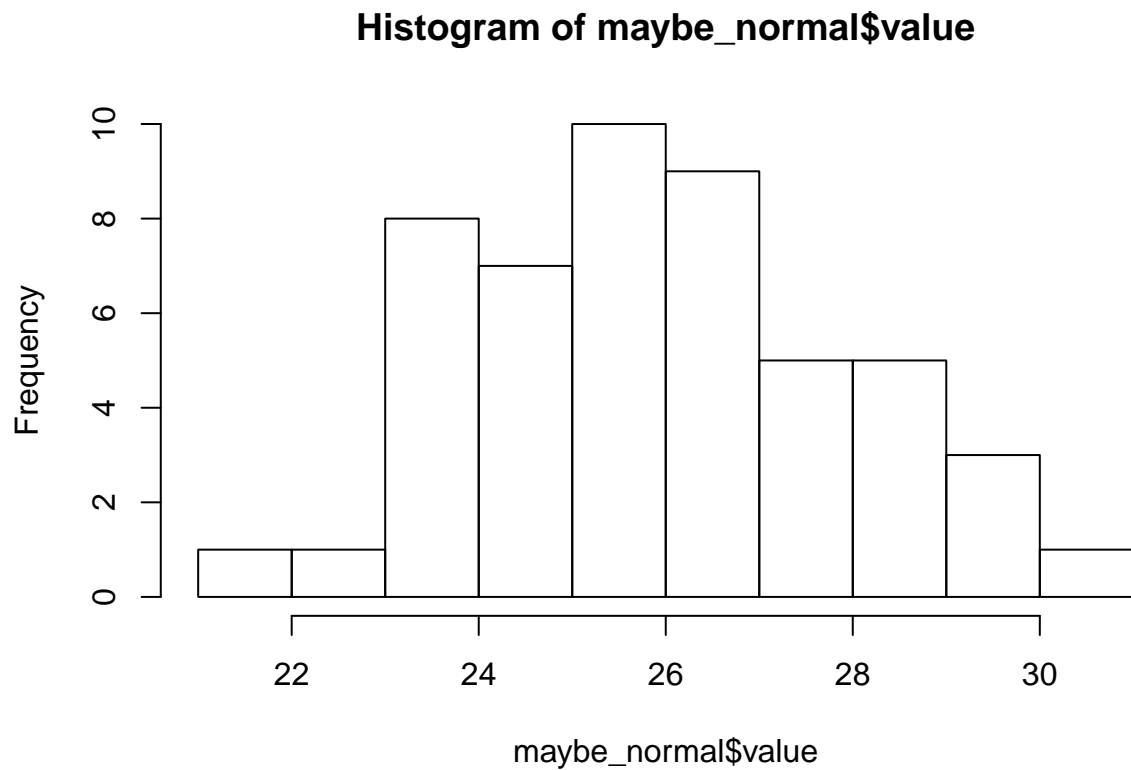
From the cumulative distribution plot and the plot used to check distribution, this data looks following uniform distribution.



From the plot above, orange points are cumulative distribution of the data in txt file and red points are cumulative distribution of the data generated by the model. The model not looks like a good fit for the data.

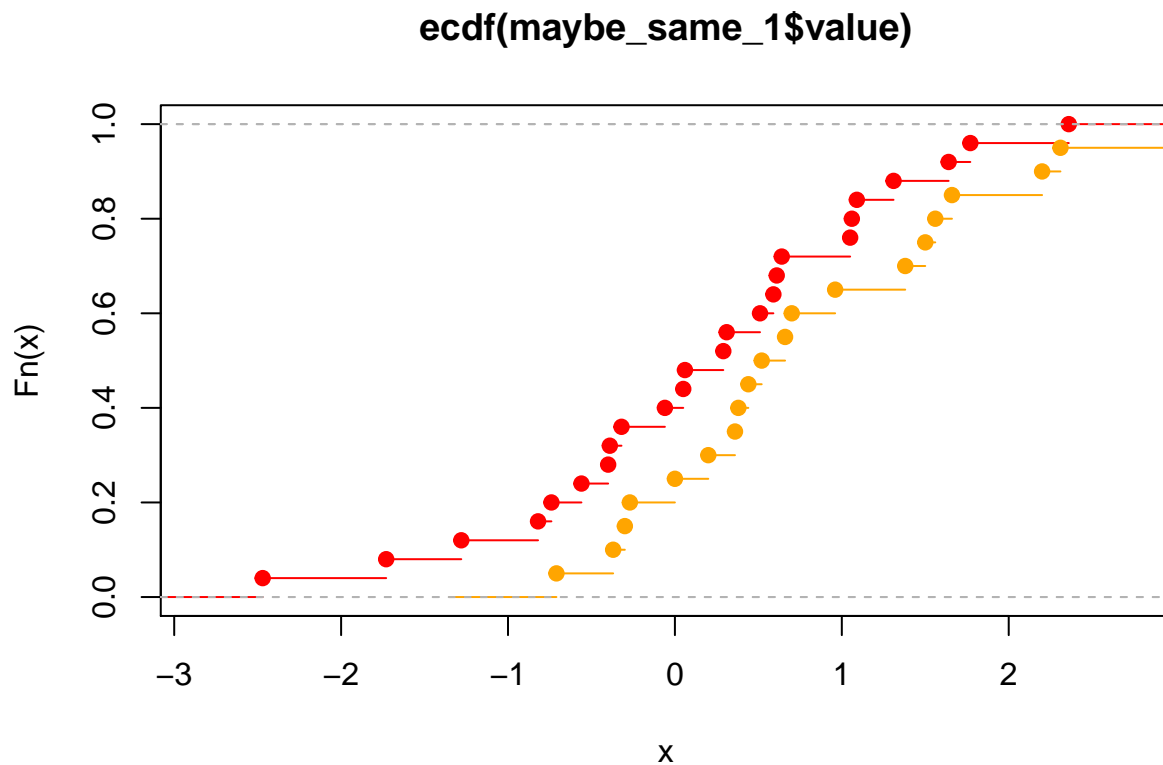
2.





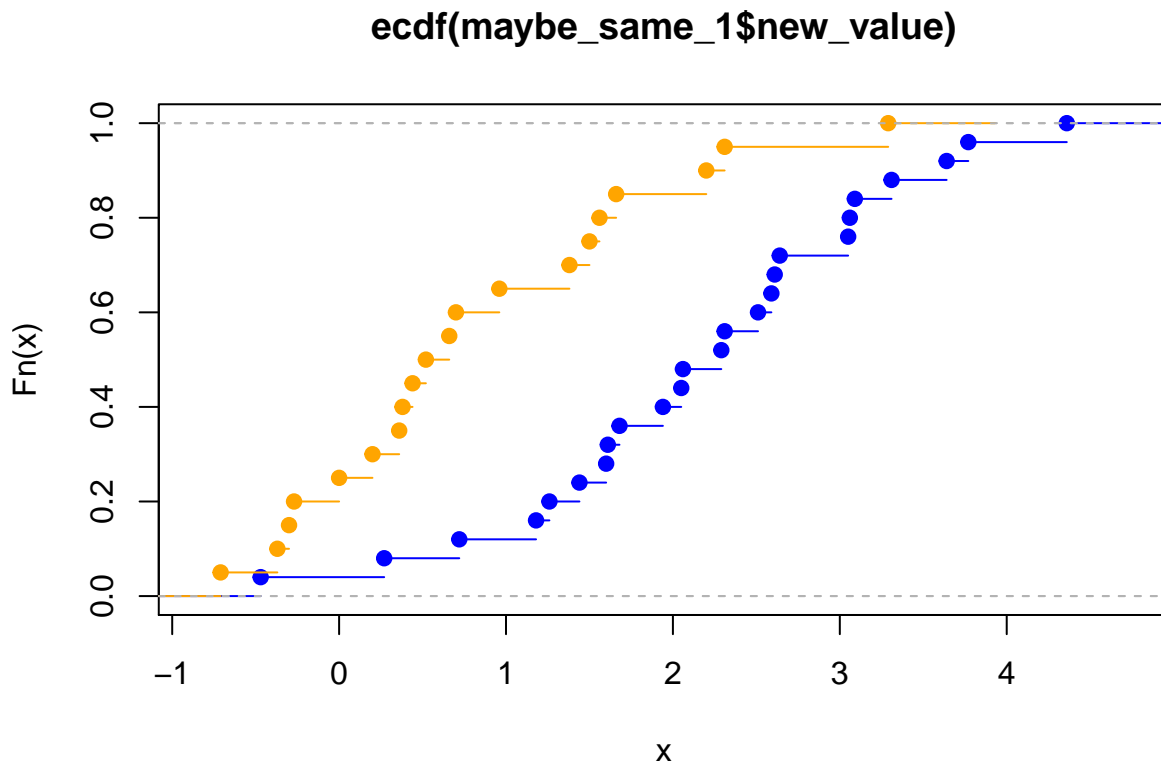
From the qqnorm plot, we can see the data fits normal distribution. From histogram plot, the mean is around 26, and the standard error is around 2 which means variance is around 4.

3.



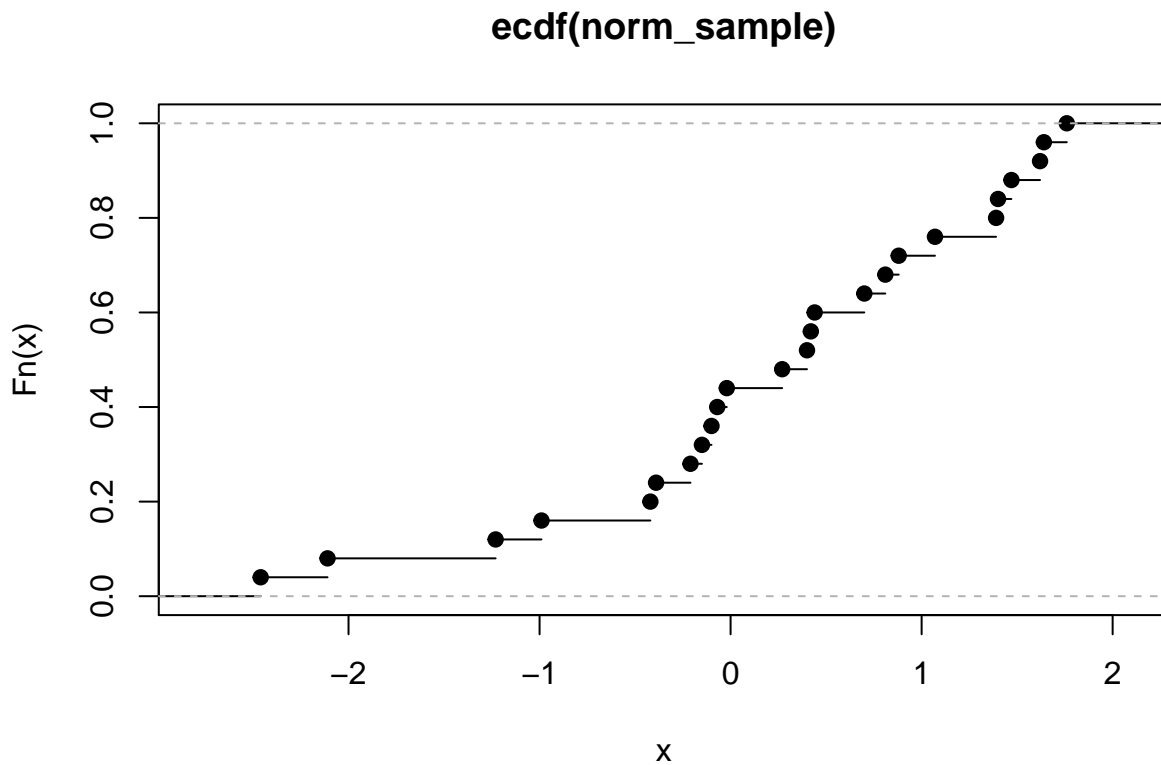
From the culumative distribution plot, red points are from X and orange points are from Y. Those two

datasets are not from the same distribution.



From the above plot, blue points are from $X+2$ and orange points are still from Y . Still not from the same distribution.

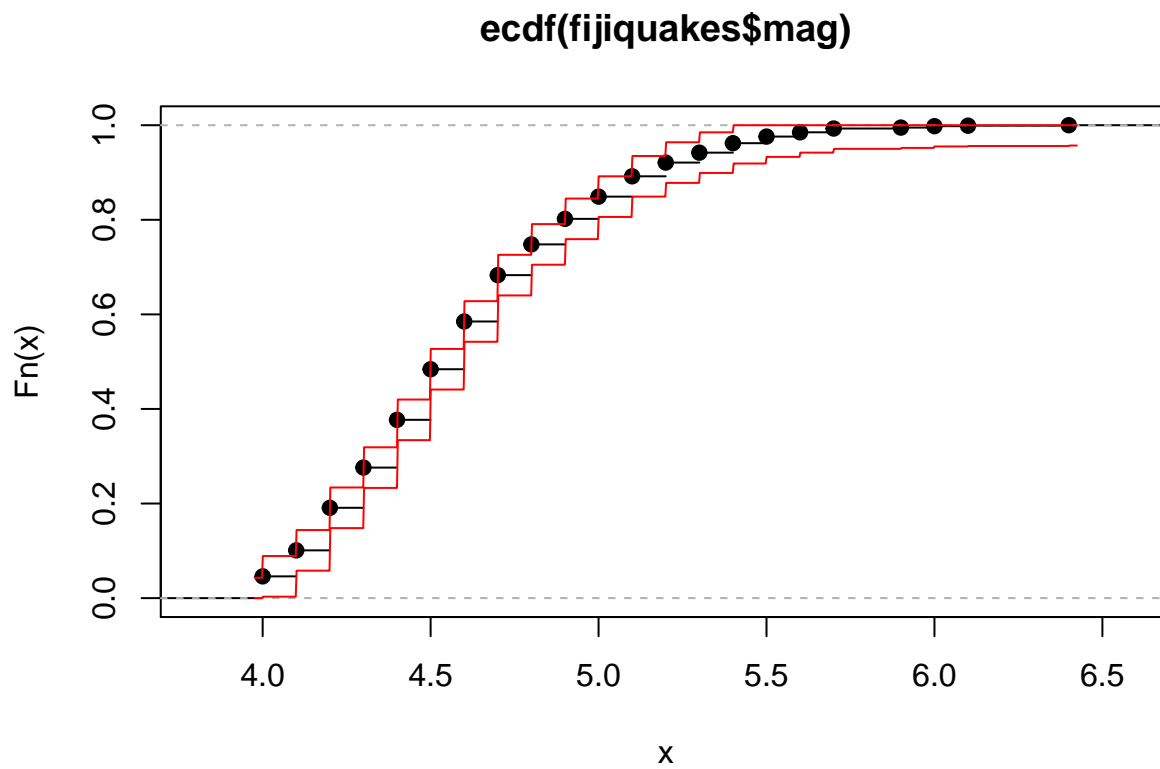
4.



```
##
## Two-sample Kolmogorov-Smirnov test
##
## data: norm_sample and compare_test
## D = 0.187, p-value = 0.3611
## alternative hypothesis: two-sided
```

KS test shows this data follows standard normal distribution.

5.



```
## [1] 0.526
```

