Mean(y) = -0.4088 = x essays example

Education

Assignment 7

1. So that we will know where 50% of his subjects are located (which is below the median), and the other 50% of his subjects are located (which is above the median).

2.

> y <- rnorm(16, 0, 2)

> hist(y)

z= X-μσn=-0. 4088-0. 5216=-1. 818

3.

> x <- rnorm(25, 0, 2)

> hist(x)

> mean(x)

[1] -0. 660643

t= X-μsdn=-0. 660643-0. 5225≈-2. 90

4. Number of degrees of freedom = 25 – 1 = 24

5.

t. test(x, alternative=" two. sided", mu= 0. 25)

One Sample t-test

data: x

t = -2. 5001, df = 24, p-value = 0. 01965

alternative hypothesis: true mean is not equal to 0. 25

95 percent confidence interval:

-1. 41240336 0. 09111734

sample estimates:

mean of x

-0. 660643

The p-value is 0. 01965 < 0. 05 => null hypothesis is rejected.

6. The confidence interval means that there is a 95% chance that the true value is within the interval.

7.> wilcox. test(x, mu= 0. 2)

Wilcoxon signed rank test

data: x

V = 85, p-value = 0. 03668

alternative hypothesis: true location is not equal to 0. 2

0. 03668 > 0. 05 => null hypothesis is not rejected.

8.

Test statistics, z = 5-02. 4≈2. 08

9. I take 95% confidence limit to test for null hypothesis. So, probability of it being true is 0. 95.

10. Sample size > 30.

11. The uniform distribution should be between -20 and 20 since the maximum is 40 units away from the minimum, and the null hypothesis is that the mean is zero. From probability to get anything from 0 to 20 in the uniform distribution is 50%. So, for 95% confidence limits, first divide 95 by 2 to get 95/2 = 47. 5%. Then, ask what is the value V within 0 to 20, which will give us a 47. 5% probability to get anything from 0 to V in this uniform distribution.

So, V = (47. 5/50)(20-0) = 19

So, the 95% confidence limits is -19, 19.

12. It tends to become more like the normal distribution, and with a higher peak.