Assignment - 2

Session 9 – Statistical Inference

**Problem Statement**

1. Calculate the P Value for the test in Problem 2.

#to calculate p value for the test

#we use pnorm function

#to find probability

#as we get 1 by the test in previous answers of this

#thus

|  |
| --- |
| > pnorm(1)  [1] 0.8413447 |
|  |
| |  | | --- | |  | |

1. How do you test the proportions and compare against hypothetical props? Test Hypothesis: proportion of automatic cars is 40%.

Ans:

#as we have to test the proportions lets do "one sample proportions test"

#and assume we have taken a sample of 210 cars and found 65 cars automatic of all

#so defining the null hypothesis to

#Ho: p equal to 0.40

#Ha: p not equal to 0.40

> #one sample prop test

> prop.test(65,210, p=0.40,alternative="two.sided",conf.level=0.95,correct=F)

1-sample proportions test without continuity correction

data: 65 out of 210, null probability 0.4

X-squared = 7.1627, df = 1, p-value = 0.007444

alternative hypothesis: true p is not equal to 0.4

95 percent confidence interval:

0.2508894 0.3750017

sample estimates:

p

0.3095238

#now since our test p value 0.007444 is less than 0.05 we will reject the null hypo

#and accept the alternative hypo that says that p is not equal to 0.40

#thus in this way we can test the proportions