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
```

2. 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