

Problem Statement

1. Calculate the p-value for the test in Problem no 2.

Answer :

```
> #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%

Answer :

```
> prop.test(table(mtcars$am)[2], nrow(mtcars), p = 0.4, alternative = "less", conf.level = 0.9, correct = FALSE)

1-sample proportions test without continuity correction

data:  table(mtcars$am)[2] out of nrow(mtcars), null probability 0.4
X-squared = 0.0052083, df = 1, p-value = 0.5288
alternative hypothesis: true p is less than 0.4
99 percent confidence interval:
 0.0000000 0.6070996
sample estimates:
      p
0.40625

>
```