```
> #calculate p value for the test in prob 2.
> #We know calculated z as per 9.1 question 2 is  zcalc is -1.680919. As this
is a one tailed
> #test (lower tailed)below is the p value
>
> z <- -1.680919
> pnorm(z)
[1] 0.04638932
> #p value is 0.04638932
>
> #How do you test the proportions and compare against hypothetical props?
> #z value for proportions is  z= (pbar-p)/sqrt((p(1-p))/n). Based on this we
compare with the
> #z value of significance level and check if null hypothesis is accepted or
rejected.
>
> #Test hypothesis : proportion of automatic cars is 40%
>
> prop.test(table(mtcars$am)[2], nrow(mtcars), p = 0.4, alternative = "less",
conf.level = 0.99, 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
```