PS - Lab 09

1. Assume that the time taken to bake a batch of cookies is normally distributed with mean 45 minutes and standard deviation 2 minutes.

i. Generate a random sample of size 25 for the baking time.

```
3
4  #1
5  times <- c(44, 47, 45, 46, 43, 45, 44, 48, 46, 47, 45, 46, 44, 45, 47, 46, 45, 44, 46, 47, 45, 46, 44, 45, 46)
6
```

```
setwd("C:\\Users\\asus\\Documents\\2 Year 1 Sem\\PS\\Lab Practical\\Lab 8")
getwd()
```

```
> setwd("C:\\Users\\asus\\Documents\\2 Year 1 Sem\\PS\\Lab Practical\\Lab 8")
> getwd()
[1] "C:/Users/asus/Documents/2 Year 1 Sem/PS/Lab Practical/Lab 8"
> #1
> times <- c(44, 47, 45, 46, 43, 45, 44, 48, 46, 47, 45, 46, 44, 45, 47, 46, 45, 44, 46, 47, 45, 46, 44, 45, 46)
```

ii. Test whether the average baking time is less than 46 minutes at a 5% level of significance.

```
7  #2
8  t.test(times, mu = 46, alternative = "less")
9
```

```
> #2
> t.test(times, mu = 46, alternative = "less")

        One Sample t-test

data:  times
t = -2.2811, df = 24, p-value = 0.01585
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
     -Inf 45.86001
sample estimates:
mean of x
    45.44
```

Values	
times	num [1:25] 44 47 45 46 43 45 44 48 46 47 ...