# ASSIGNMENT 9

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**SUBJECT: MAT1011 L4**
**Registration no.:19BCI7005**
**SLOT : L4**

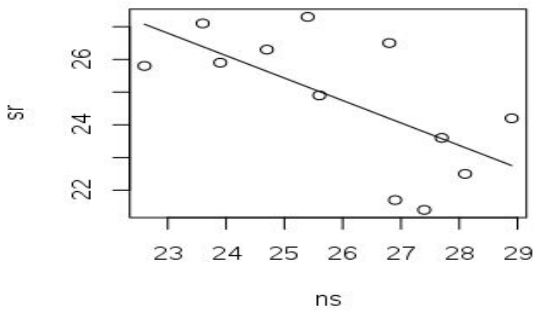
1. Metal Test specimen..

```
ns=c(26.8,25.4,28.9,23.6,27.7,23.9,24.7,28.1,26.9,27.4,22.6,25.6)
> sr=c(26.5,27.3,24.2,27.1,23.6,25.9,26.3,22.5,21.7,21.4,25.8,24.9)
> model=lm(sr~ns)
> model

Call:
lm(formula = sr ~ ns)

Coefficients:
(Intercept)           ns
    42.5818      -0.6861

> plot(ns,sr)
> y=42.5818-0.6861*ns
> lines(ns,y,type="l")
> y1=42.5818-0.6861*24.5
> y1
[1] 25.77235
```



2.Model the relationship between age and lung capacity with lung capacity as outcome/dependent variable(Y) LungCap vs Age (X) and estimate the Lung capacity for an 15 years old person

```
lc=c(6.475,10.125,9.55,11.25,4.8,6.225,4.95)
> age=c(6,18,16,4,5,22,8)
> model=lm(lc~age)
> model

Call:
lm(formula = lc ~ age)

Coefficients:
(Intercept)          age
    7.01018      0.05448
>plot(age,lc)
> y=7.01018+0.05448*age
> lines(age,y,type="l",col="green")
> y1=7.01018+0.05448*15
> y1
[1] 7.82738
```