```
> data(cheddar, package="faraway")
> lmod=lm(taste~Acetic+H2S+Lactic, cheddar)
> summary(lmod)

Call:
lm(formula = taste ~ Acetic + H2S + Lactic, data = cheddar)

Residuals:
    Min      1Q  Median      3Q     Max
-17.390  -6.612  -1.009   4.908  25.449

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) -28.8768    19.7354  -1.463  0.15540
Acetic        0.3277     4.4598   0.073  0.94198
H2S           3.9118     1.2484   3.133  0.00425 **
Lactic       19.6705     8.6291   2.280  0.03108 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 10.13 on 26 degrees of freedom
Multiple R-squared:  0.6518,    Adjusted R-squared:  0.6116
F-statistic: 16.22 on 3 and 26 DF,  p-value: 3.81e-06
```

```
> cor(fitted(lmod), cheddar$taste)
[1] 0.8073256
> 0.8073256^2
[1] 0.6517746
>
```

```
> lmod1=lm(taste~0+Acetic+H2S+Lactic, cheddar)
> summary(lmod1)

Call:
lm(formula = taste ~ 0 + Acetic + H2S + Lactic, data = cheddar)

Residuals:
    Min       1Q   Median       3Q      Max
-15.4521  -6.5262  -0.6388   4.6811  28.4744

Coefficients:
       Estimate Std. Error t value Pr(>|t|)
Acetic   -5.454      2.111  -2.583  0.01553 *
H2S       4.576      1.187   3.854  0.00065 ***
Lactic   19.127      8.801   2.173  0.03871 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 10.34 on 27 degrees of freedom
Multiple R-squared:  0.8877,    Adjusted R-squared:  0.8752
F-statistic: 71.15 on 3 and 27 DF,  p-value: 6.099e-13
```

```
> cor(fitted(lmod1), cheddar$taste)
[1] 0.7901946
> 0.7901946^2
[1] 0.6244075
> confint(lmod)
                2.5 %     97.5 %
(Intercept) -69.443503 11.689964
Acetic       -8.839420  9.494902
H2S           1.345656  6.478026
Lactic        1.933267 37.407820
>
```

```
> data(uswages, package="faraway")
> library("faraway", lib.loc="/Library/Frameworks/R.framework/Versions/3.3/Resources/
library")
> lmod=lm(wage~educ+exper, uswages)
> summary(lmod)

Call:
lm(formula = wage ~ educ + exper, data = uswages)

Residuals:
    Min      1Q  Median      3Q     Max
-1018.2  -237.9   -50.9   149.9  7228.6

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) -242.7994    50.6816  -4.791 1.78e-06 ***
educ          51.1753     3.3419  15.313  < 2e-16 ***
exper          9.7748     0.7506  13.023  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 427.9 on 1997 degrees of freedom
Multiple R-squared:  0.1351,    Adjusted R-squared:  0.1343
F-statistic:   156 on 2 and 1997 DF,  p-value: < 2.2e-16
```

```
> residuals=resid(lmod)
> which.max(residuals)
15387
 1576
> mean(residuals)
[1] -6.317169e-16
> median(residuals)
[1] -50.86827
>
```

```
> dfrm1=uswages$educ
> dfrm2=uswages$exper-1
> k=predict(lmod,new=data.frame(educ=dfrm1, exper=dfrm2))
> l=k-uswages$wage
> mean(l)
[1] -9.774767
> median(l)
[1] 41.0935
>
```

```
[1] -50.00027
> cor(fitted(lmod), residuals)
[1] 1.520935e-16
> plot(fitted(lmod), residuals)
>
>
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```