```
Call:
lm(formula = GGPA ~ GRE_Total + UGPA, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
-0.19943 -0.06029  0.02812  0.06216  0.17207

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) 0.637906   0.326537   1.954 0.086517 .
GRE_Total   0.012463   0.002288   5.447 0.000611 ***
UGPA        0.468670   0.093181   5.030 0.001015 **
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1127 on 8 degrees of freedom
Multiple R-squared:  0.9076,    Adjusted R-squared:  0.8845
F-statistic: 39.29 on 2 and 8 DF,  p-value: 7.289e-05
```

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y-intercept: $\hat{\beta}_0 = 0.637906$

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Call:
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y-intercept: $\hat{\beta}_0 = 0.637906$

Indipendent variables:
$\hat{\beta}_1 = 0.012463$ and $\hat{\beta}_2 = 0.468670$

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y-intercept: $\hat{\beta}_0 = 0.637906$

Indipendent variables:
$\hat{\beta}_1 = 0.012463$ and $\hat{\beta}_2 = 0.468670$

$$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 GRE_{Total} + \hat{\beta}_2 UGPA$$

$$\hat{y} = 0.637906 + 0.012463\ GRE_{Total} + 0.46867 UGPA$$

```
Call:
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y-intercept: $\hat{\beta}_0 = 0.637906$

Indipendent variables:
$\hat{\beta}_1 = 0.012463$ and $\hat{\beta}_2 = 0.468670$

t-test of every indipendent variable:

$$t = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)}$$

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Call:
lm(formula = GGPA ~ GRE_Total + UGPA, data = df)

Residuals:
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p-value of every indipendent variable

Level of significance

```
Call:
lm(formula = GGPA ~ GRE_Total + UGPA, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
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t-test of every indipendent variable:

$$t = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)}$$

p-value of every indipendent variable

Level of significance

$SER = \sqrt{\frac{\sum u_i^2}{n-k}} = 0.1127$ ,

$dof = n - k = 8 \rightarrow k = 3$ coefficients and $n = 11$

```
Call:
lm(formula = GGPA ~ GRE_Total + UGPA, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
-0.19943 -0.06029  0.02812  0.06216  0.17207

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) 0.637906   0.326537   1.954 0.086517 .
GRE_Total   0.012463   0.002288   5.447 0.000611 ***
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t-test of every indipendent variable:

$$t = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)}$$

p-value of every indipendent variable

Level of significance

$SER = \sqrt{\frac{\sum u_i^2}{n-k}} = 0.1127$ ,

$dof = n - k = 8 \rightarrow k = 3$ coefficients and $n = 11$

$R^2 = 0.907$

```
Call:
lm(formula = GGPA ~ GRE_Total + UGPA, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
-0.19943 -0.06029  0.02812  0.06216  0.17207

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
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Residual standard error: 0.1127 on 8 degrees of freedom
Multiple R-squared:  0.9076,    Adjusted R-squared:  0.8845
F-statistic: 39.29 on 2 and 8 DF,  p-value: 7.289e-05
```

y-intercept: $\hat{\beta}_0 = 0.637906$

Indipendent variables:
$\hat{\beta}_1 = 0.012463$ and $\hat{\beta}_2 = 0.468670$

t-test of every indipendent variable:

$$t = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)}$$

p-value of every indipendent variable

Level of significance

$$SER = \sqrt{\frac{\sum u_i^2}{n-k}} = 0.1127\ ,$$

$dof = n - k = 8 \rightarrow k = 3$ coefficients and $n = 11$

$R^2 = 0.907$

$$Adj.R^2 = 0.8845 = 1 - \frac{n-1}{n-k}(1-R^2) = 1 - \frac{10}{8}(1-0.907)$$

```
Call:
lm(formula = GGPA ~ GRE_Total + UGPA, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
-0.19943 -0.06029  0.02812  0.06216  0.17207

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) 0.637906   0.326537   1.954 0.086517 .
GRE_Total   0.012463   0.002288   5.447 0.000611 ***
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1127 on 8 degrees of freedom
Multiple R-squared:  0.9076,    Adjusted R-squared:  0.8845
F-statistic: 39.29 on 2 and 8 DF,  p-value: 7.289e-05
```

y-intercept: $\hat{\beta}_0 = 0.637906$

Indipendent variables:
$\hat{\beta}_1 = 0.012463$ and $\hat{\beta}_2 = 0.468670$

t-test of every indipendent variable:

$$t = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)}$$

p-value of every indipendent variable

Level of significance

$$SER = \sqrt{\frac{\sum u_i^2}{n-k}} = 0.1127\ ,$$

$dof = n - k = 8 \rightarrow k = 3$ coefficients and $n = 11$

$R^2 = 0.907$

$F_{2,8} = 39.29$ for $H_0: \hat{\beta}_1 = \hat{\beta}_2 = 0$

$$Adj.R^2 = 0.8845 = 1 - \frac{n-1}{n-k}(1-R^2) = 1 - \frac{10}{8}(1-0.907)$$

# I. Determining slope & y-intercept:

```
Call:
lm(formula = MPG.city ~ Min.Price)

Residuals:
    Min      1Q  Median      3Q     Max
-6.6505 -1.7971 -0.4599  1.7501  7.2069

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) 26.58176    1.02976  25.814  < 2e-16 ***
Min.Price   -0.34008    0.05643  -6.027 2.64e-07 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 3.018 on 46 degrees of freedom
Multiple R-squared: 0.4412, Adjusted R-squared: 0.4291
F-statistic: 36.32 on 1 and 46 DF,  p-value: 2.64e-07
```

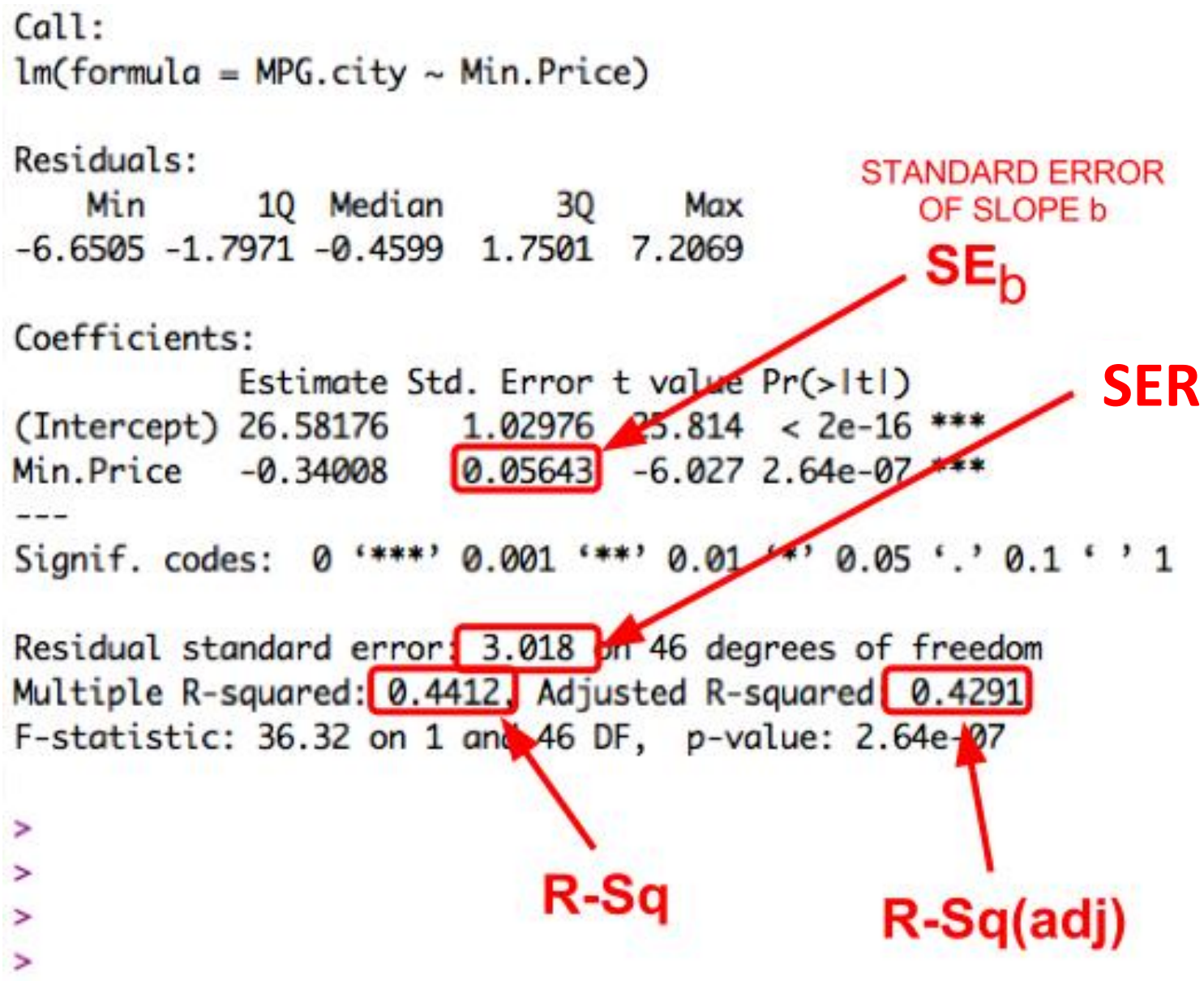
y-intercept

slope

**The equation of the fitted regression line is:**

$$\hat{y} = 26.58 - 0.34x$$

# II. Determining Standard Error, R-Sq, and R-Sq(adj):



# III. Determining and Interpreting t & P-value