```
Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept)  27.3865     2.3899  11.459  < 2e-16 ***
x            -2.5510     0.6747  -3.781 0.000317 ***
```

β_0 ← (Intercept) ✓

β_1 ← x ✓

$\beta_0 = 0$ / $\beta_0 \neq 0$

$\beta_1 = 0$ / $\beta_1 \neq 0$

$T = \frac{\hat{\beta}_i}{se(\hat{\beta}_i)}$

$t_{\frac{\alpha}{2}, n-2}$

para β_1 $\quad T = \frac{\hat{\beta}_1}{se(\hat{\beta}_1)}$

$\alpha = 0{,}05$

$n = 75$

$\frac{\alpha}{2}$

$0{,}05$ $\quad 0{,}025$ $\quad 0{,}01$

$t_{\frac{\alpha}{2}, n-2}$ $\quad t_{\frac{\alpha}{2}, n-2}$

$t_{0{,}025}$

$t_{0{,}975}$

qt(0,025, 75-2)

lower.tail = F

99
98
76
77
73

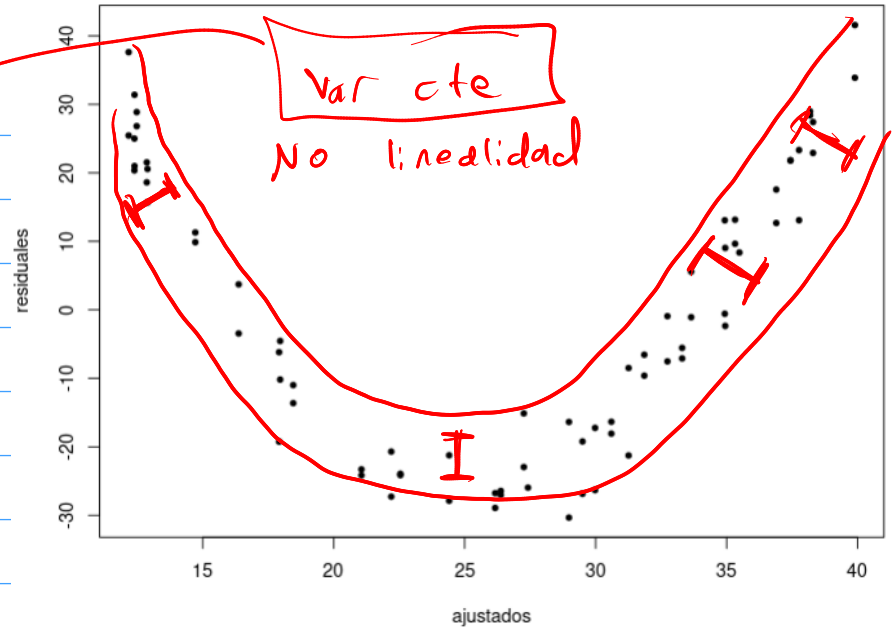
Aceptación

$t_{\frac{\alpha}{2}}$ $\quad T$

$|T| > t_{\frac{\alpha}{2}, n-2}$ Rechazo H_0

$|T| < t_{\frac{\alpha}{2}, n-2}$ No rechazo H_0

$\hat{y}_i = \hat{\beta}_0 + \hat{\beta}_1 X_i$



Var cte

No linealidad

→ -independencia ✓
- Media 0 ✓
- var cte ✓
- Normalidad ✗

No es válido

$\begin{cases} H_0: \varepsilon_i \sim \text{Normal} \\ H_a: \varepsilon_i \not\sim \text{Normal} \end{cases}$ ✗

Significancia parámetro

Se busca rechazar

val-p = 0

val-p < α

Signif. modelo

Se busca rechazar

val-p = 0

val-p < α

Falta de ajuste

No rechazar

val-p grande

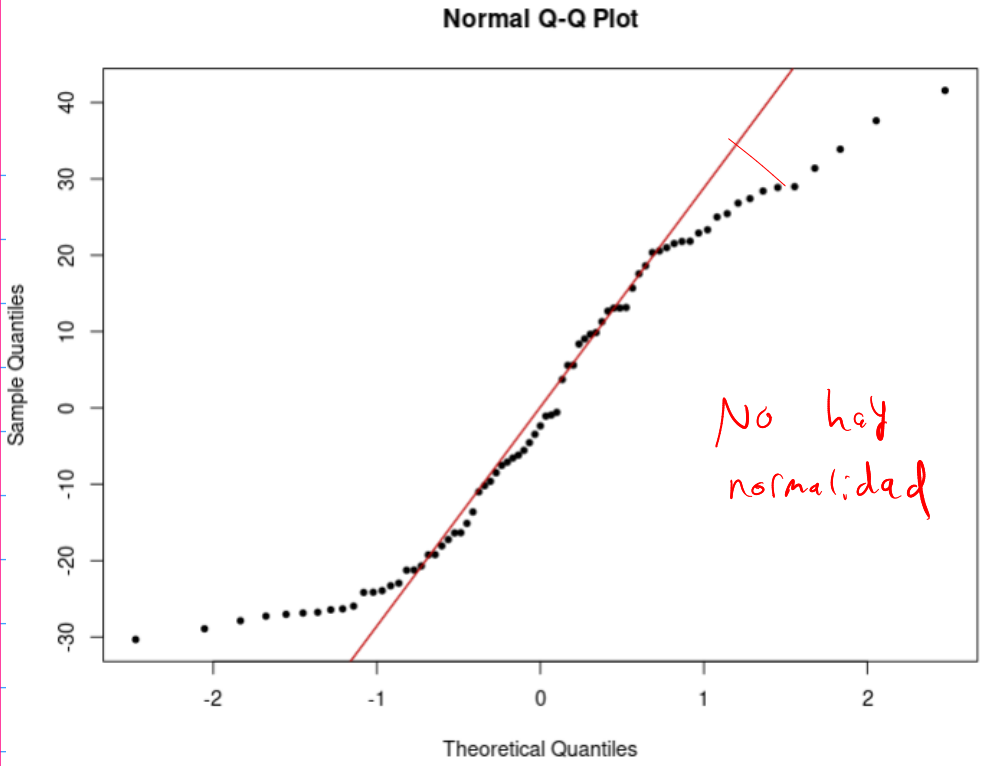
val-p > α

Normalidad

No rechazar

val-p grande

val-p > α



Val-P = 0,1

Val-P pequeño → No hay normalidad

Anova

	SS	g.l	MS	F	val-P
Reg	SSR	1	$MSR = \frac{SSR}{1}$	$\frac{MSR}{MSE}$	$0 < \alpha$ ✓ signf.
Error	SSE	n-2	$MSE = \frac{SSE}{n-2}$	$= \frac{SSR/1}{SSE/n-2}$	
lof	SSlof	m-2	$MSlof = \frac{SSlof}{m-2}$	$\frac{MSlof}{MSPE}$	$0 < \alpha$ → falta de ajuste
PE	SSPE	n-m	$MSPE = \frac{SSPE}{n-m}$		

→ $F \sim F_{m-2,n-m}$

→ $F \sim F_{1,n-2}$

$f_{0,05,1,n-2}$

$\neq$

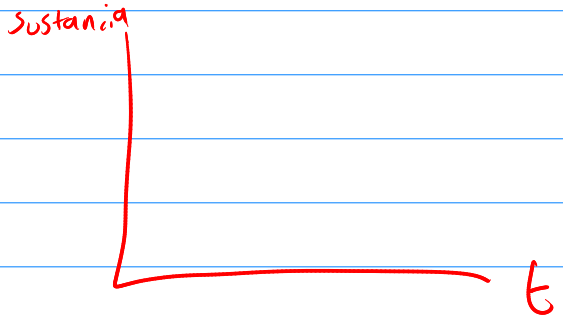
$f_{0,05,m-2,n-m} = 3,87$

```
Response: y
             Df  Sum Sq Mean Sq F value    Pr(>F)
FO(x)         1  6070.7  6070.7  14.297 0.0003168
Residuals    73 30997.7   424.6
Lack of fit  36 30058.8   835.0  32.905 < 2.2e-16
Pure error   37   938.9    25.4
```

Reg ← FO(x) ✓
Error ← Residuals
lof ← Lack of fit ✗
PE ← Pure error

Falta de ajuste

$$\begin{cases} H_0: E[Y|x_i] = \beta_0 + \beta_1 x_i \\ H_a: E[Y|x_i] \neq \beta_0 + \beta_1 x_i \end{cases}$$



$$Y_i = \exp(\beta_0 + \beta_1 t_i + \varepsilon_i)$$

$$\ln(Y_i) = \beta_0 + \beta_1 t_i + \varepsilon_i$$

$$Y_i^* = \beta_0 + \beta_1 t_i + \varepsilon_i \rightarrow \hat{Y}^* = \hat{\beta}_0 + \hat{\beta}_1 t_i$$

$$Y_i^* = \ln(Y)$$

$t \rightarrow ¿Y^*?$

$$\exp(\hat{Y}_i^*) = \hat{Y}$$

- independencia ✓
- media 0 ✓
- var cte ✓
- Normalidad ✗

{ No es válido