

R Notebook

Code ▼

This is an R Markdown (<http://rmarkdown.rstudio.com>) Notebook. When you execute code within the notebook, the results appear beneath the code.

Try executing this chunk by clicking the *Run* button within the chunk or by placing your cursor inside it and pressing *Ctrl+Shift+Enter*.

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```
#problem 1
library(openxlsx)
xlsxFile <- system.file("extdata","data-table-B8.xlsx", package = "openxlsx")
df <- read.xlsx(xlsxFile = "data-table-B8.xlsx", sheet = 1, skipEmptyRows = FALSE)
lm <- lm(formula=y~x1+x2, data=df )
print(summary(lm))
```

Call:

```
lm(formula = y ~ x1 + x2, data = df)
```

Residuals:

Min	1Q	Median	3Q	Max
-9.7716	-4.1656	0.0802	3.8323	8.3349

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	1.109e+01	1.669e+00	6.642	1.48e-07 ***
x1	3.501e+02	3.968e+01	8.823	3.38e-10 ***
x2	1.089e-01	9.983e-03	10.912	1.74e-12 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 4.782 on 33 degrees of freedom

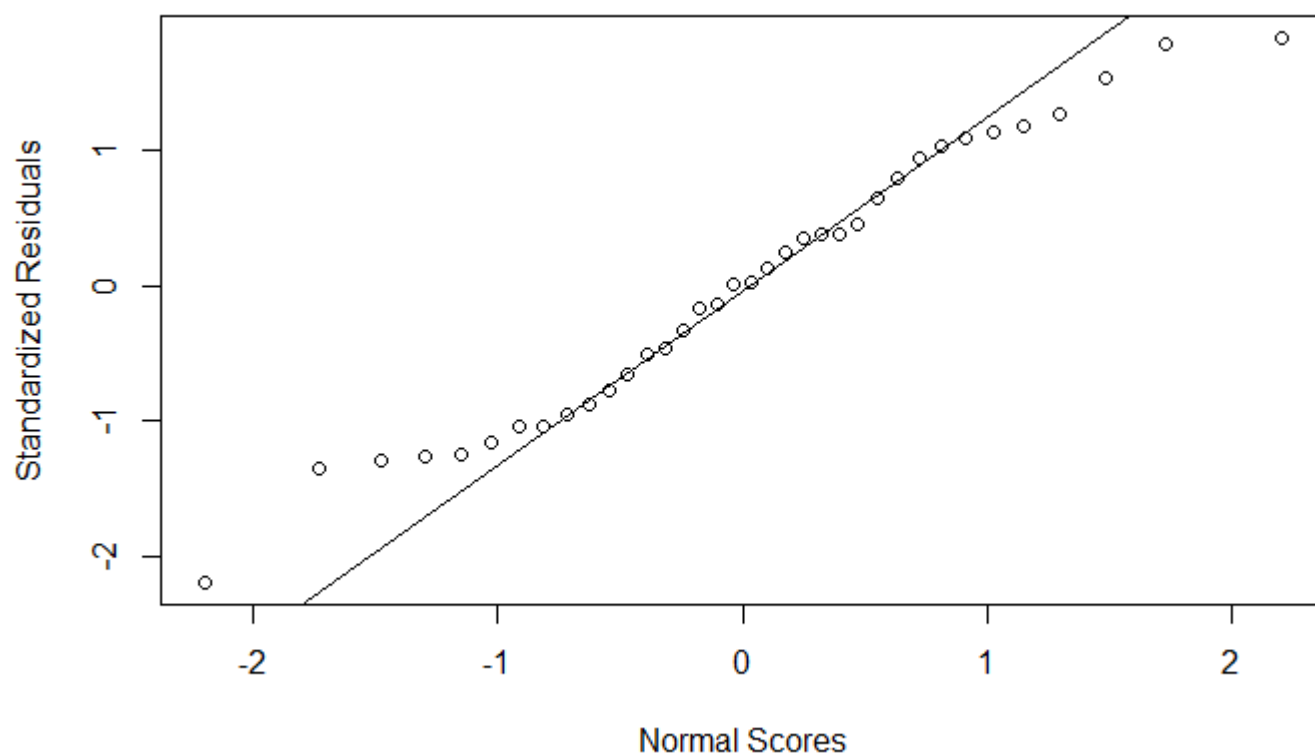
Multiple R-squared: 0.8415, Adjusted R-squared: 0.8319

F-statistic: 87.6 on 2 and 33 DF, p-value: 6.316e-14

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```
lm.stdress <- rstandard(lm)
qqnorm(lm.stdress, ylab="Standardized Residuals", xlab="Normal Scores", main="Clathrates")
qqline(lm.stdress)
```

Clathrates

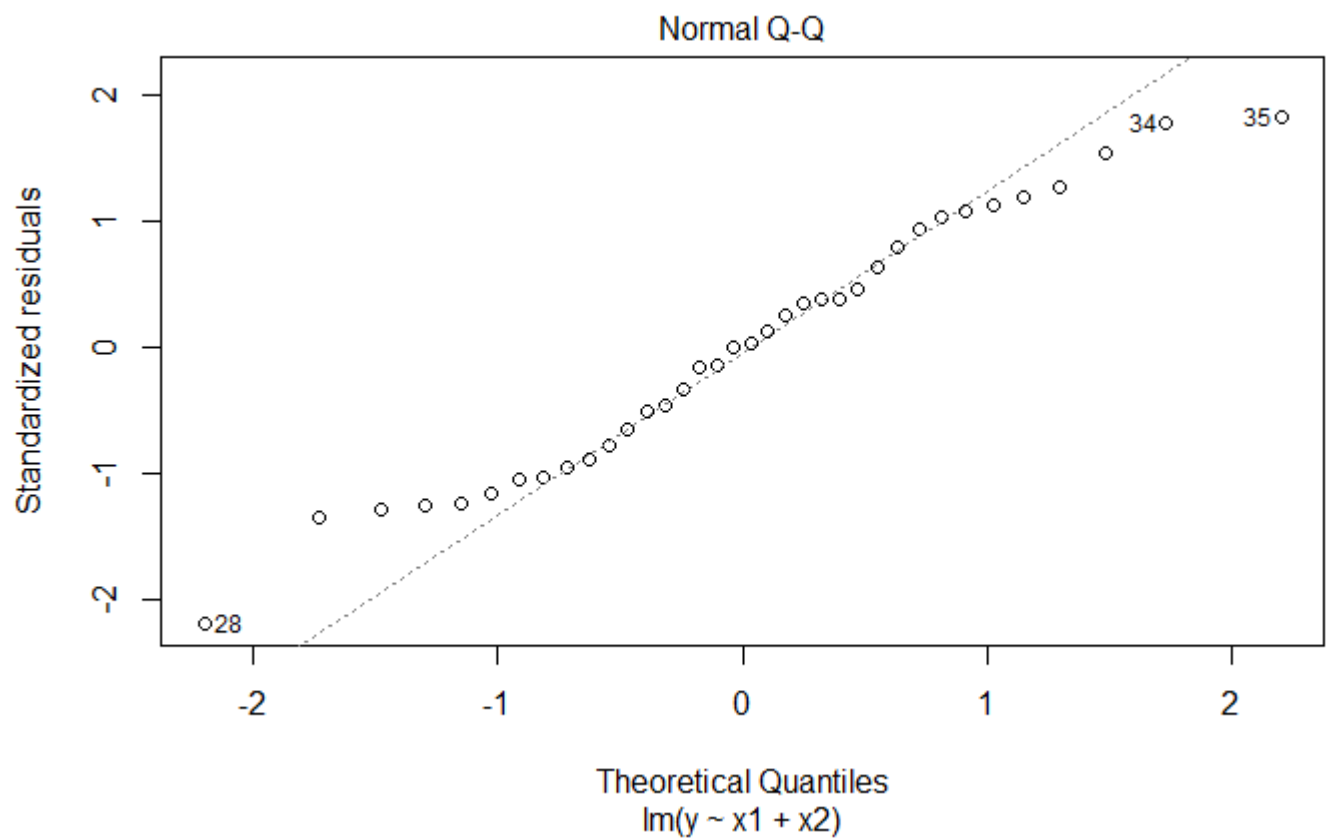
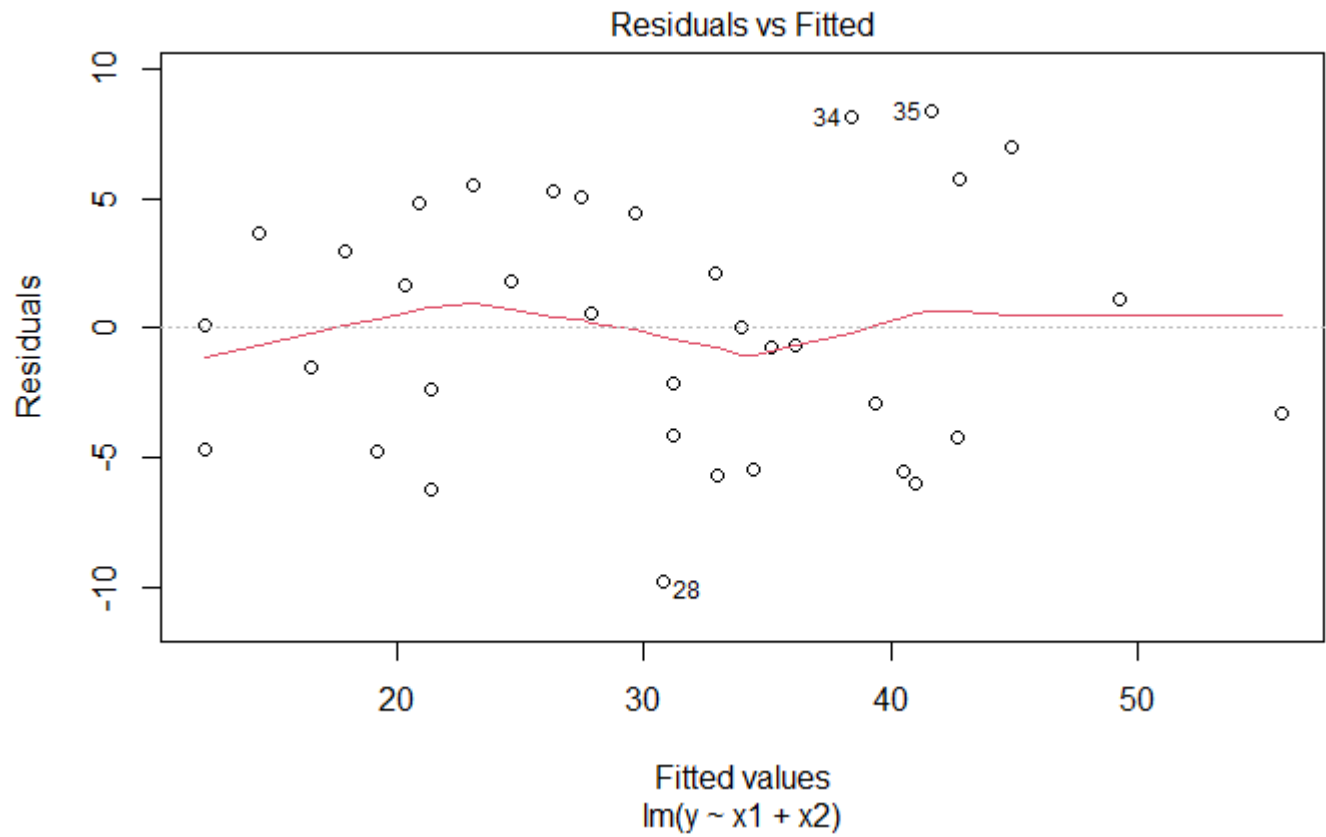
[Hide](#)

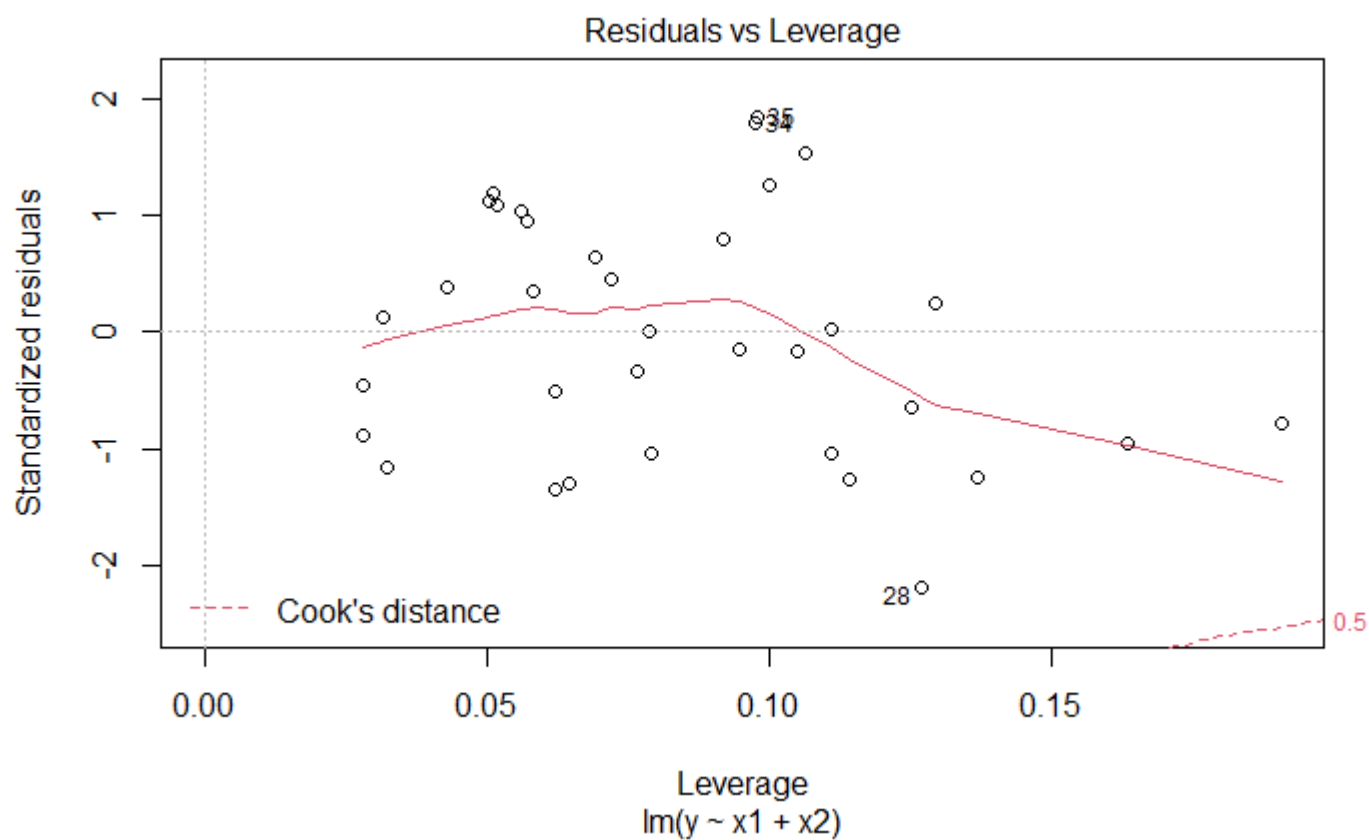
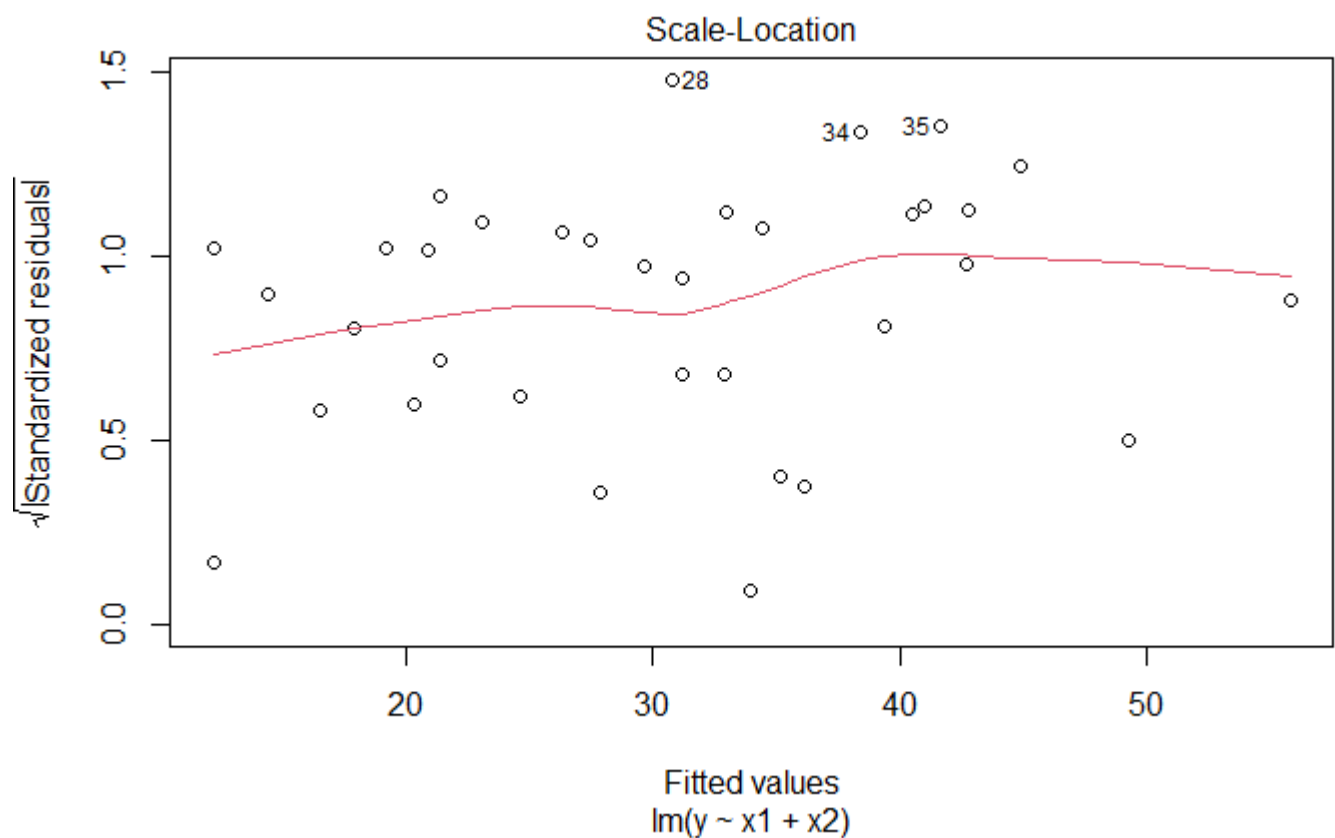
```
print("b) The graph shows that the distrobution is heavy tailed with above the line in lower per  
centile and below the line in higer percentile.")
```

```
[1] "b) The graph shows that the distrobution is heavy tailed with above the line in lower perce  
ntile and below the line in higer percentile."
```

[Hide](#)

```
plot(lm)
```




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```
print("c) The graph is an idea graph with the distribution of points centered around the line how  
ever point 34,35 and 28 seem to be outliers")
```

[1] "c) The graph is an idea graph with the distribution of points centered around the line however point 34,35 and 28 seem to be outliers"

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df

	x1 <dbl>	x2 <dbl>	y <dbl>
1	0.00	10	7.5
2	0.00	50	15.0
3	0.00	85	22.0
4	0.00	110	28.6
5	0.00	140	31.6
6	0.00	170	34.0
7	0.00	200	35.0
8	0.00	230	35.5
9	0.00	260	36.5
10	0.00	290	38.5
1-10 of 36 rows		Previous	1 2 3 4 Next

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```
library(openxlsx)
xlsxFile <- system.file("extdata","data-table-B10.xlsx", package = "openxlsx")
df <- read.xlsx(xlsxFile = "data-table-B10.xlsx", sheet = 1, skipEmptyRows = FALSE)
lm <- lm(formula=y~x1+x2, data=df )
print(summary(lm))
```

Call:

```
lm(formula = y ~ x1 + x2, data = df)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-0.22179	-0.18102	-0.08439	0.09111	0.99908

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.679439	0.143532	4.734	3.20e-05 ***
x1	1.407331	0.196925	7.147	1.81e-08 ***
x2	-0.015629	0.001428	-10.948	3.67e-13 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

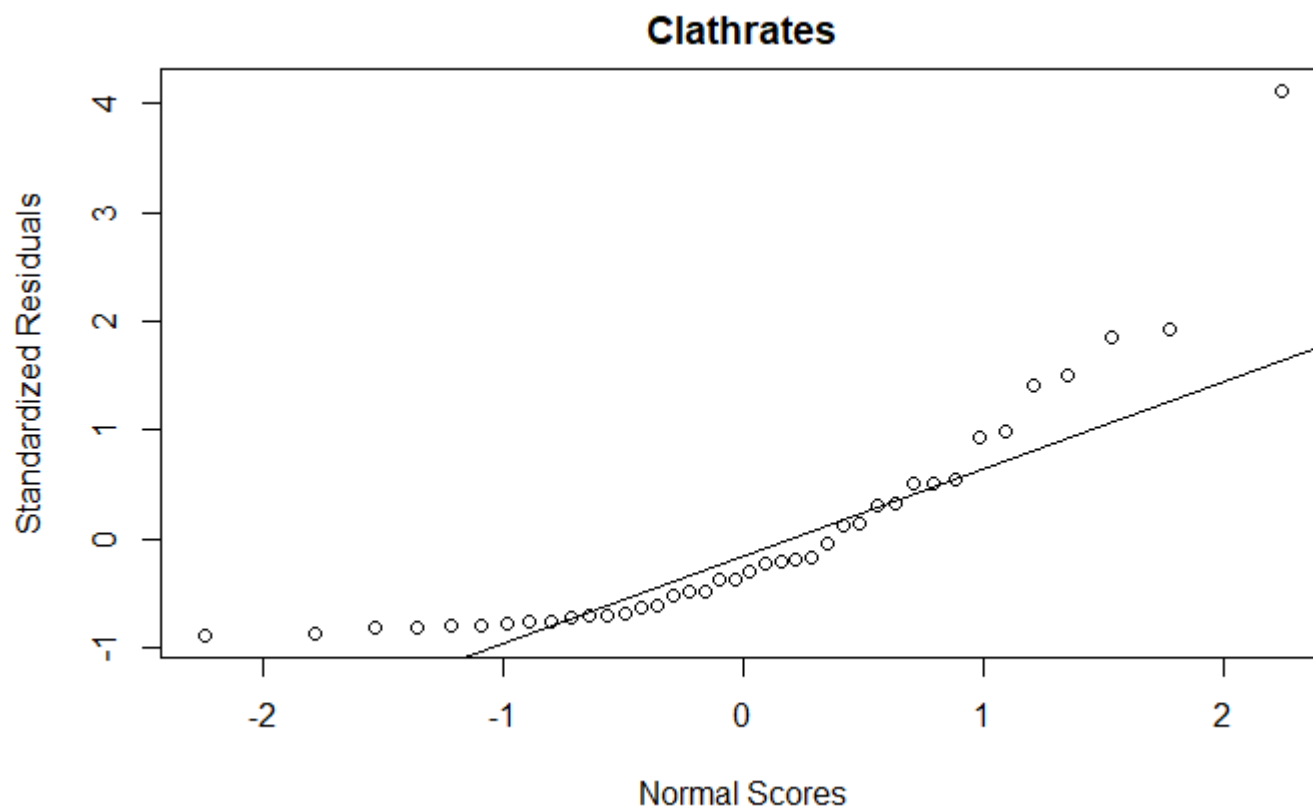
Residual standard error: 0.2593 on 37 degrees of freedom

Multiple R-squared: 0.822, Adjusted R-squared: 0.8124

F-statistic: 85.46 on 2 and 37 DF, p-value: 1.351e-14

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```
lm.stdress <- rstandard(lm)
qqnorm(lm.stdress, ylab="Standardized Residuals", xlab="Normal Scores", main="Clathrates")
qqline(lm.stdress)
```



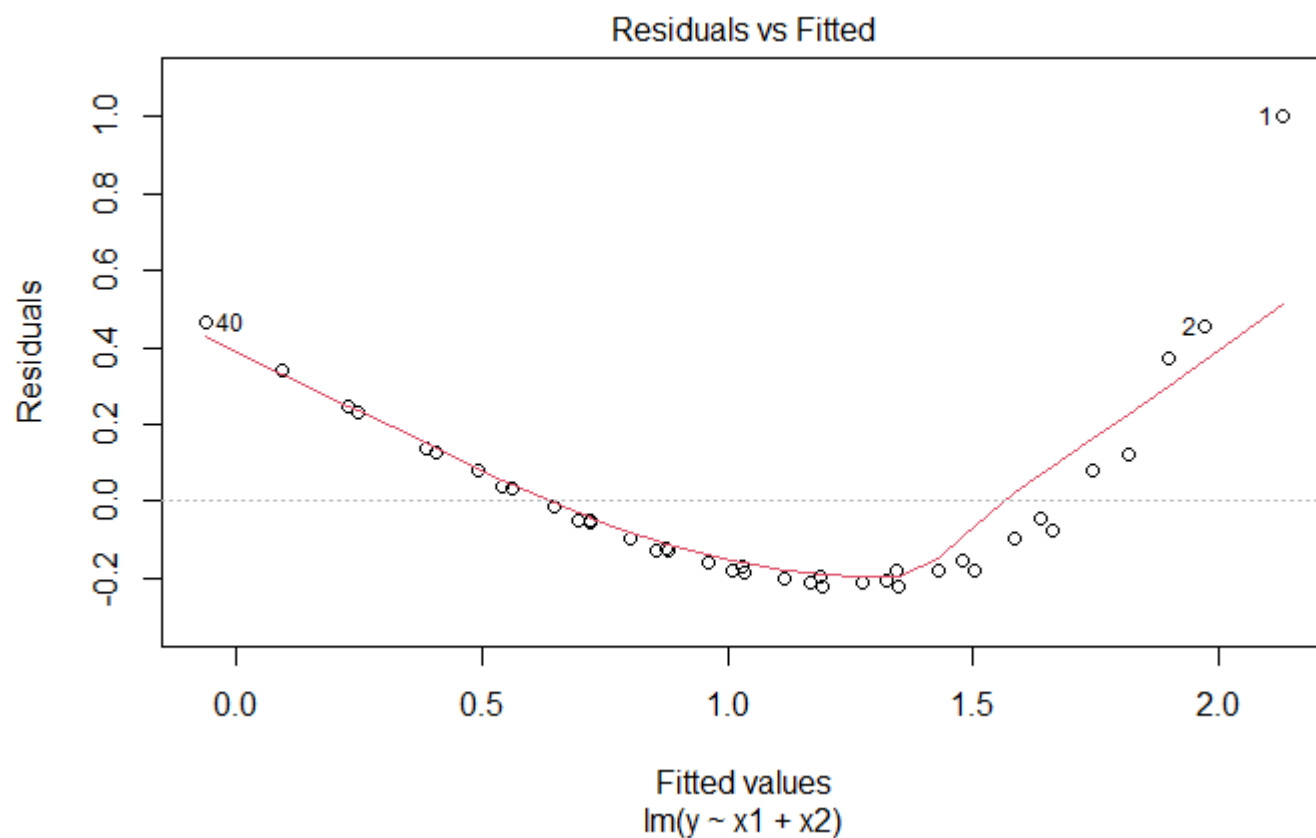
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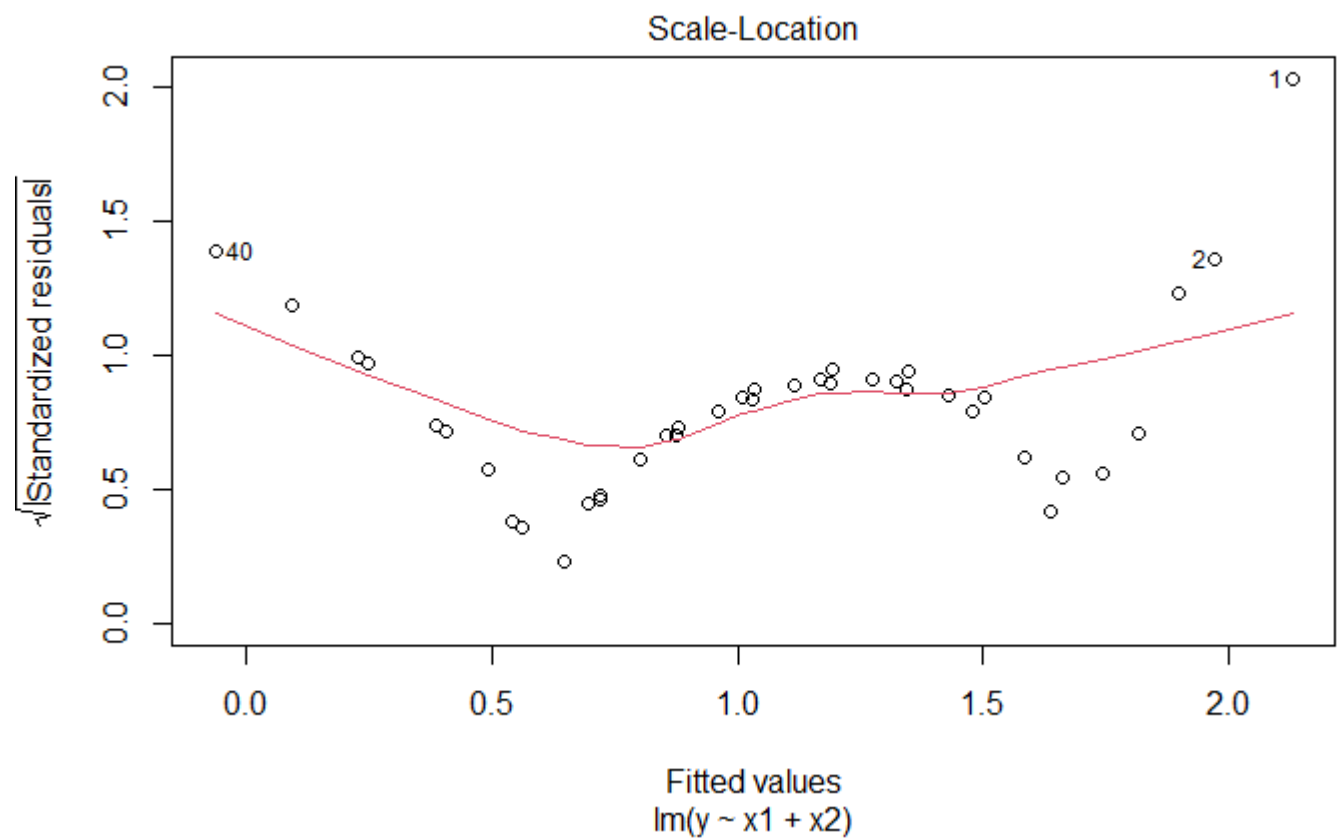
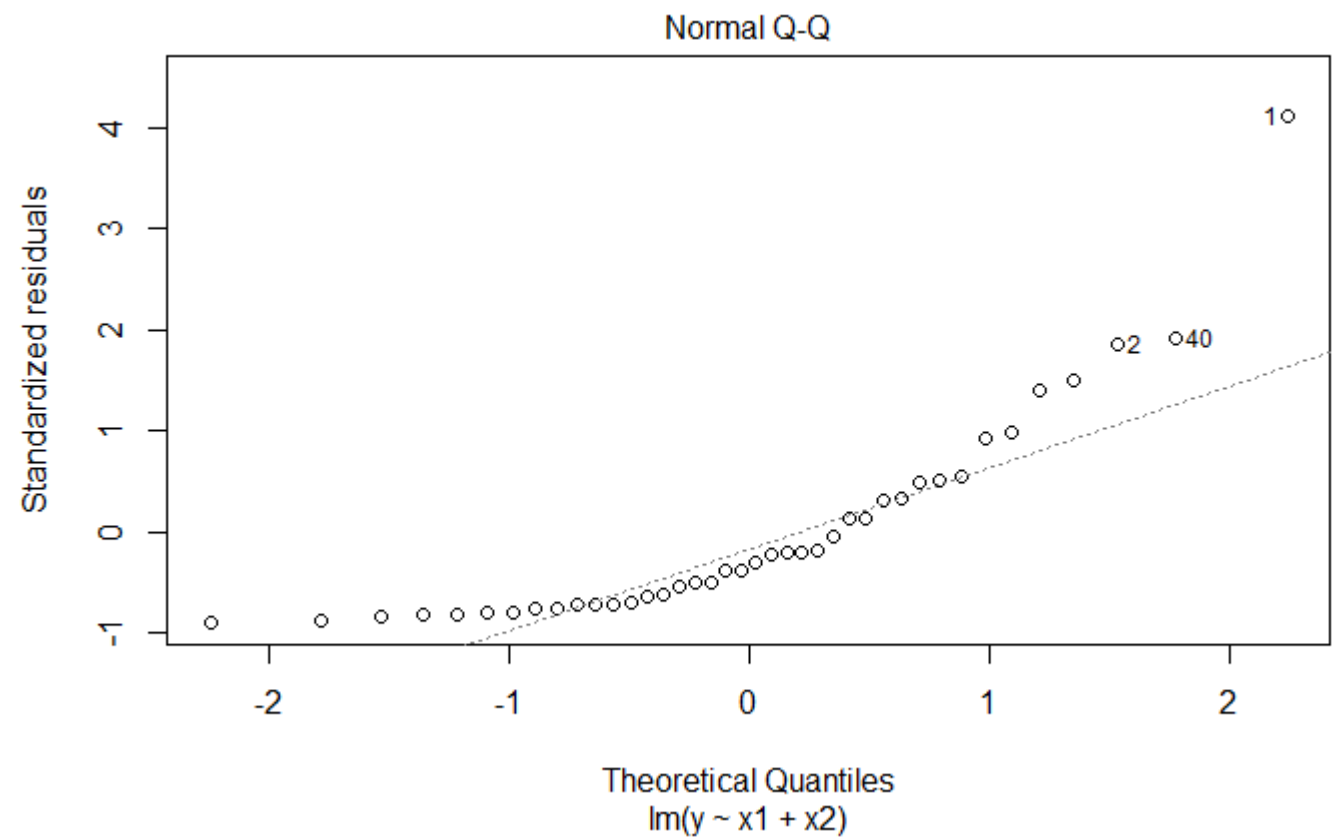
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print("b) The graph shows that the distrobution is heavy tailed with above the line in lower per  
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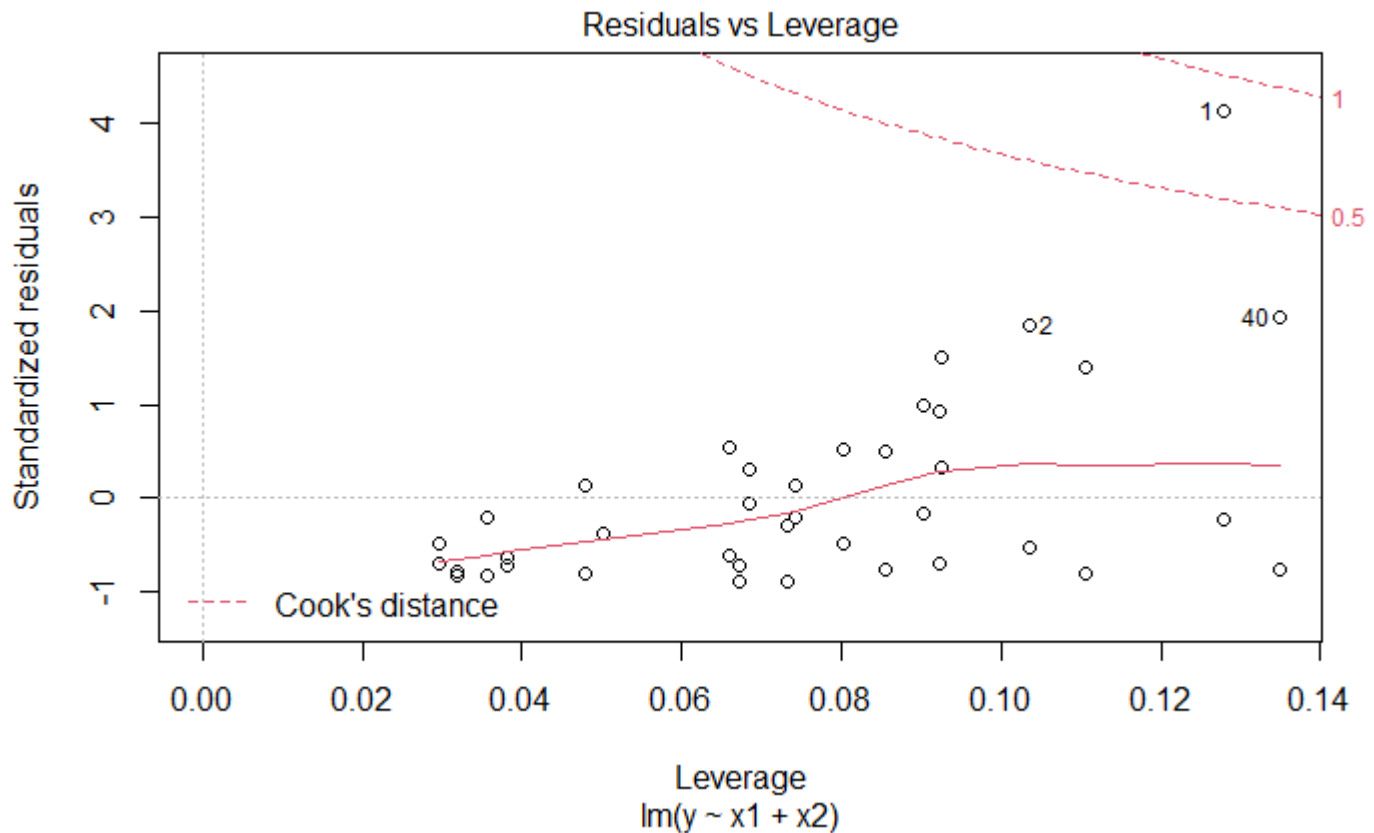
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[Hide](#)

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Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Ctrl+Alt+I*.

When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Ctrl+Shift+K* to preview the HTML file).

The preview shows you a rendered HTML copy of the contents of the editor. Consequently, unlike *Knit*, *Preview* does not run any R code chunks. Instead, the output of the chunk when it was last run in the editor is displayed.