
L^AT_EX Practical Template

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Summary

Put the scientific summary here.

Contents

1	Including Figures from R	1
2	Using Subfigures	4
3	Including Tables	5
4	Citations	6
A	This is an appendix	7
	References	8

1 Including Figures from R

First create a figure in R using the pdf function.

```
pdf("figure.pdf", width = 6, height = 4, bg = "white")
plot(NA, NA, xlim = c(0, 20), ylim = c(1.7, 5), xlab = "",
     ylab = "", type = "n", axes = F)

x <- seq(1, 19, length = 1901)
y <- 0.015 * (x - 12.5)^2 + 3
lines(x, y)

for(i in 0:6) {
  x <- 3*i+1
  segments(x, 2.6, x, 2.75)
  text(x, 2.4, letters[1])
  text(x + 0.3, 2.35, i+1, cex = 0.7)
}
segments(1, 2.675, 19, 2.675)

segments(10, 2.05, 10, 2.15)
segments(16, 2.05, 16, 2.15)
segments(13, 2.05, 13, 2.25)
segments(10, 2.1, 16, 2.1)

for(x in c(11, 12, 14, 15))
  segments(x, 2.05, x, 2.15)

for(i in 0:6) {
  x <- i + 10
  text(x, 1.85, letters[2])
  text(x + 0.3, 1.8, i+1, cex = 0.7)
}

box()
dev.off()
```

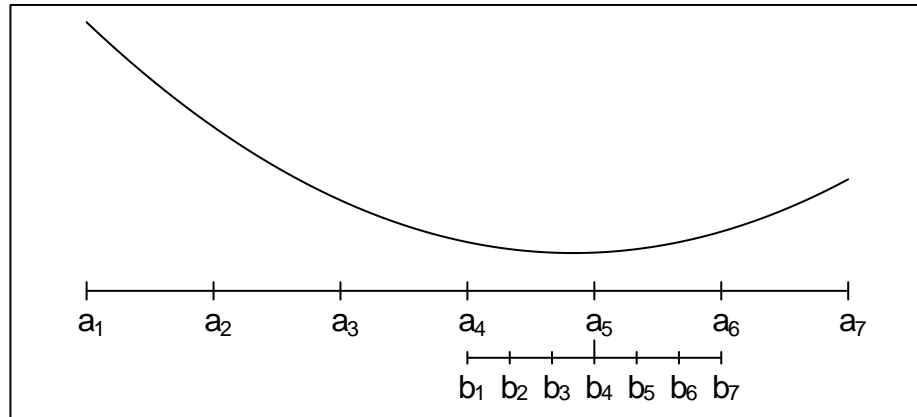


Figure 1: Put caption here.

There is a lot of white space around the figure and it is not centered. This happens because R leaves space for axis labels and for a title at the top of the figure. You can trim off the white space using the `trim` and `clip` arguments for `includegraphics`.

```
\includegraphics[trim=10px 20px 30px 40px, clip]{figure.pdf}
```

The order of those 4 lengths is left, bottom, right, top. After some guessing and checking I found

```
\includegraphics[trim=50px 65px 22px 50px, clip]{figure.pdf}
```

gives a good result.

Note: please do not actually use yellow pages in your report.

Figure 2 looks much better.

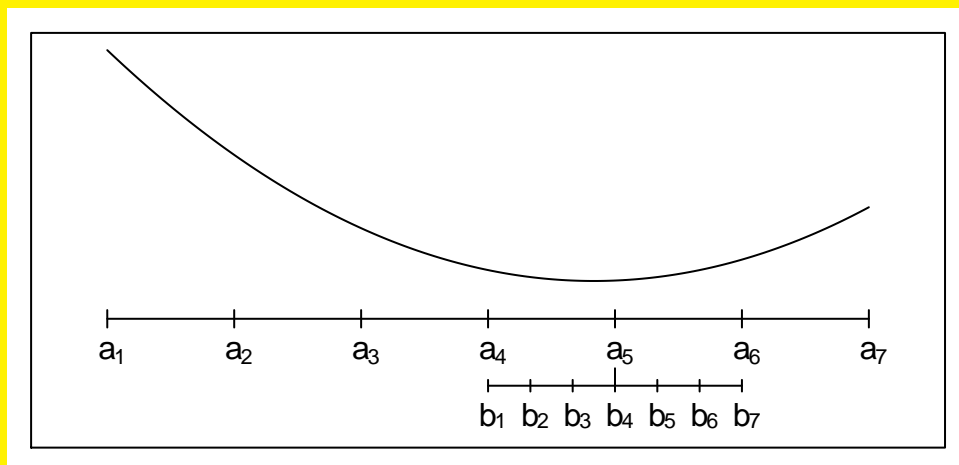
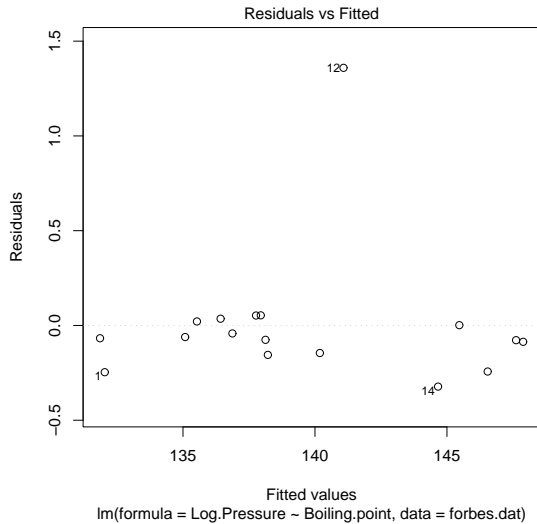


Figure 2: Same figure with less wasted space.

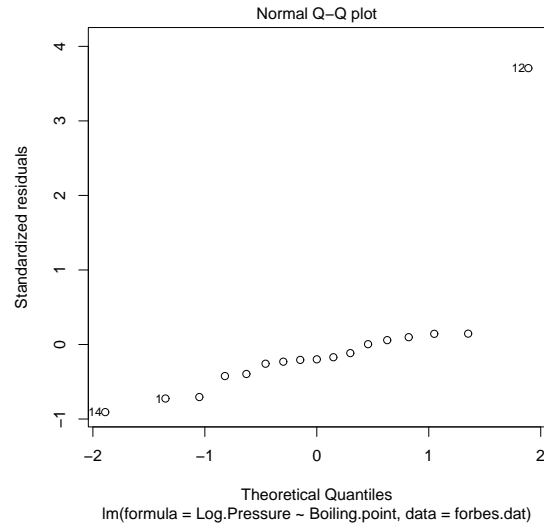
2 Using Subfigures

If you want more than one plot in the same figure then use subfigure. You need to include the subfigure package by putting `\usepackage{subfigure}` in the header of your .tex file. Here are the four plots generated by `plot.lm`. You should experiment with using `\ref` to use cross references for your subfigures. For instance, I like figure 3(b).

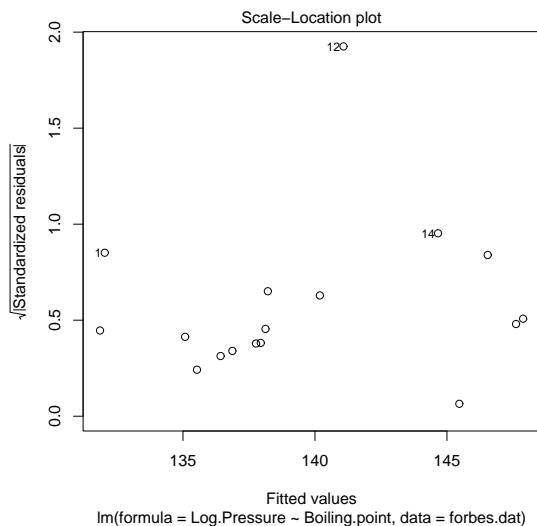
Note: you should use the `xlab`, `ylab`, and `main` arguments when making your plots rather than accept R's default labels.



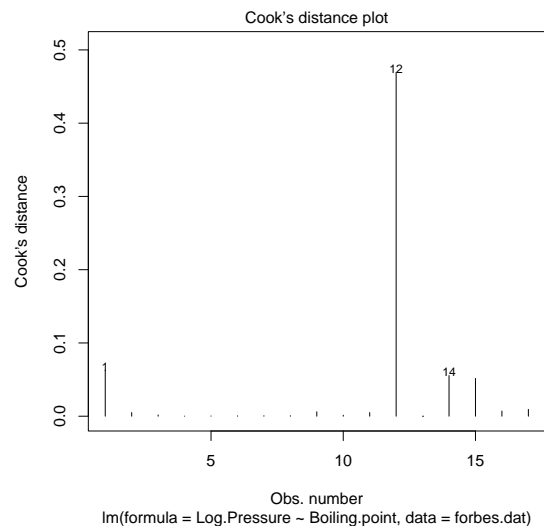
(a) Residuals vs. Fitted Values



(b) Normal QQ Plot of the Residuals



(c) Scale-Location Plot



(d) Cook's Distance

Figure 3: The plot method for R linear model objects.

3 Including Tables

Table 1: Forbes' data on the air pressure in the Alps and the boiling point of water.

Observation Number	Boiling Point ($^{\circ}\text{F}$)	$100\times$ Log(Pressure)
1	194.5	131.79
2	194.3	131.79
3	197.9	135.02
4	198.4	135.55
5	199.4	136.46
6	199.9	136.83
7	200.9	137.82
8	201.1	138
9	201.4	138.06
10	201.3	138.05
11	203.6	140.04
12	204.6	142.44
13	209.5	145.47
14	208.6	144.34
15	210.7	146.3
16	211.9	147.54
17	212.2	147.8

4 Citations

I am going to cite Atkinson [1], Cook [2] and Woodbury [3] just so that they show up in the references.

A This is an appendix

Appendices are just like sections except that they come after the `\appendix` tag in your `.tex` file.

References

- [1] A. C. Atkinson. *Plots, Transformation, and Regression*. Oxford University Press, Oxford, 1985.
- [2] R. D. Cook. Detection of influential observations in linear regression. *Technometrics*, 19:15–18, 1977.
- [3] M. Woodbury. Inverting modified matrices. Technical Report 42, Statistical Techniques Research Group, Princeton University, 1950.