Resumenes

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Contents

Capítulo 1

Prerequisites

1.1 Datos

Sean los datos que se prosiguen

- www
- wwwww

1.1.1 ff

WWWW fff WWWW wwwww

1.1.2 ff

This is a *sample* book written in **Markdown**. You can use anything that Pandoc's Markdown supports, e.g., a math equation $a^2 + b^2 = c_c^2$.

The **bookdown** package can be installed from CRAN or Github:

```
install.packages("bookdown")
# or the development version
# devtools::install_github("rstudio/bookdown")
```

Remember each Rmd file contains one and only one chapter, and a chapter is defined by the first-level heading .

To compile this example to PDF, you need XeLaTeX. You are recommended to install TinyTeX (which includes XeLaTeX): https://yihui.org/tinytex/.

1.2 Acciones

Sean los datos *emph* ***real*** **Entonces**

Capítulo 2

Introduction

You can label chapter and section titles using after them, e.g., we can reference Chapter 3. If you do not manually label them, there will be automatic labels anyway, e.g., Chapter 4.

Figures and tables with captions will be placed in and environments, respectively.

```
par(mar = c(4, 4, .1, .1))
plot(pressure, type = 'b', pch = 19)
```

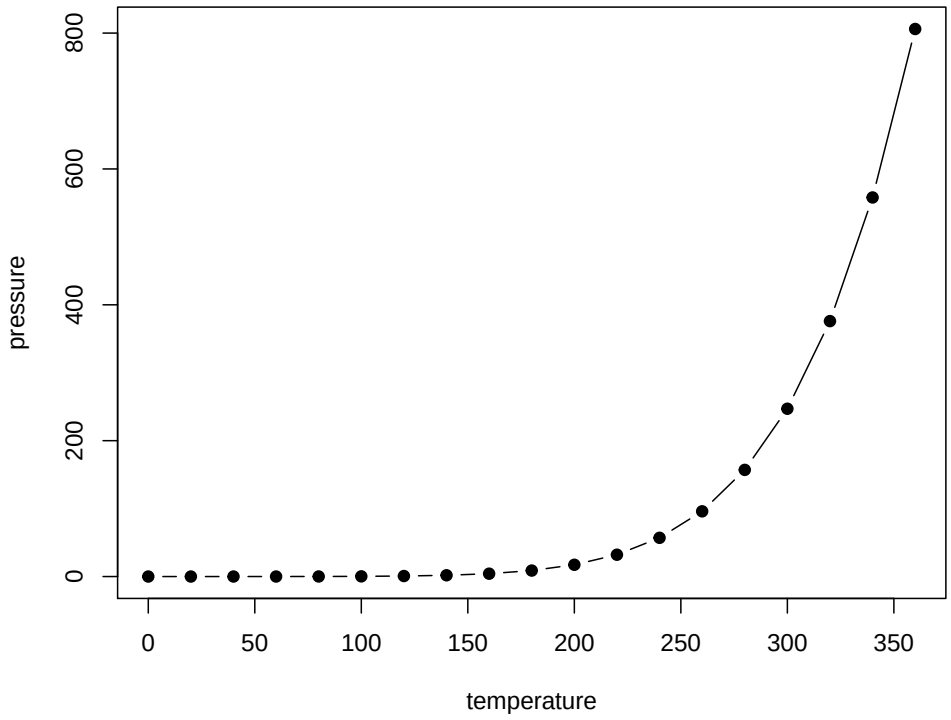

Figure 2.1: Here is a nice figure!

Reference a figure by its code chunk label with the prefix, e.g., see Figure 2.1. Similarly, you can reference tables generated from `knitr::kable()`, e.g., see Table 2.1.

```
knitr::kable(
  head(iris, 20), caption = 'Here is a nice table!',
  booktabs = TRUE
)
```

You can write citations, too. For example, we are using the **bookdown** package (Xie, 2020) in this sample book, which was built on top of R Markdown and **knitr** (Xie, 2015).

Table 2.1: Here is a nice table!

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa
4.6	3.4	1.4	0.3	setosa
5.0	3.4	1.5	0.2	setosa
4.4	2.9	1.4	0.2	setosa
4.9	3.1	1.5	0.1	setosa
5.4	3.7	1.5	0.2	setosa
4.8	3.4	1.6	0.2	setosa
4.8	3.0	1.4	0.1	setosa
4.3	3.0	1.1	0.1	setosa
5.8	4.0	1.2	0.2	setosa
5.7	4.4	1.5	0.4	setosa
5.4	3.9	1.3	0.4	setosa
5.1	3.5	1.4	0.3	setosa
5.7	3.8	1.7	0.3	setosa
5.1	3.8	1.5	0.3	setosa

Capítulo 3

Literature

Here is a review of existing methods.

Capítulo 4

Methods

We describe our methods in this chapter.

Capítulo 5

Applications

Some *significant* applications are demonstrated in this chapter.

5.1 Example one

5.2 Example two

Capítulo 6

Final Words

1. Los puntos $A = (60, 13)$ y $B = (-4, 61)$ estan sobre una parabola $\mathcal{P}$ además son simetricos con recpecto al eje focal. Desde un punto Q sobre el eje focal se traza un recta tangente a $\mathcal{P}$ que pasa por B, hallar la ecuacion de $\mathcal{P}$ y las ecuaciones de las rectas tangentes trazadas desde Q.

Ya que A y B son simetricas entonces $P_0 = \frac{A+B}{2} = (28, 37) \in \mathcal{L}_F$ donde $\mathcal{L}_F$ es el eje focal paralelo al vector $\vec{AB}^{\perp} = (B - A)^{\perp} = (-64, 48) \parallel (-4, 3) = \vec{v}_L$ es decir $\vec{v}_F$ y P_0 nos genera la ecuacion del eje focal $\mathcal{L}_F : 4x + 3y = 1$. De otro lado el punto $(20, x) \in \mathcal{L}_F$ que al reemplazarlo en la recta del eje focal nos genera $x = -27$ de donde $Q = (20, -27)$ ademas el vértice de la parabola es $V = \frac{Q+P_0}{2} = (4, 5)$ por propiedad.

Con el objetivo de hallar el valor de ρ en la ecuacion $y'^2 = 4\rho x'$ se halla las coordenadas de B en el nuevo sistema de coordenadas centrada en V con vector director $\vec{u} = \frac{(3,4)}{5}$, haciendo uso de la relación

$$(x, y) = V + x'\vec{u} + y'\vec{u}^{\perp}$$

se obtiene $x = [B - V]\,\vec{u} = 40$ y $y = [B - V]\,\vec{u}^{\perp} = 40$ por tanto reemplazando B en $y'^2 = 4\rho x'$ se tiene que $\rho = 10$

Los vectores directores de las rectas tangentes $\mathcal{L}_A$ y $\mathcal{L}_B$ ...

$$\mathcal{L}_A : 2y - 11x - 166 = 0$$

y $\mathcal{L}_B : 5x - 10y - 170 = 0$

2. ww

Bibliography

Xie, Y. (2015). *Dynamic Documents with R and knitr*. Chapman and Hall/CRC, Boca Raton, Florida, 2nd edition. ISBN 978-1498716963.

Xie, Y. (2020). *bookdown: Authoring Books and Technical Documents with R Markdown*. R package version 0.17.