Calculo I

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Índice general

CAPÍTULO 1

Números reales

1.1. Los axiomas de cuerpo

1.2. Los axiomas de orden

1.3. Valores absolutos y desigualdad triangular

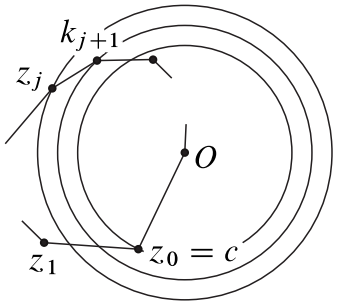
1.4. Algebra de los valores absolutos.

1.5. Proximidad

Generar pdf y svg en inskape(ajustar Shift+Ctrl+R) o relativos luego se debe guardar en el mismo directorio general luego se usa el entorno `ff fff`

$$\prod_{1}^{2}$$

Figura 1.1: some text here to represent the caption



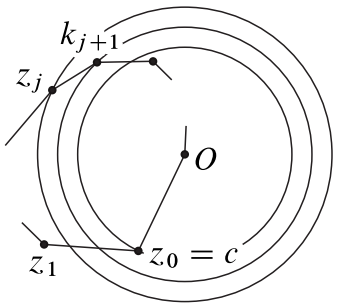


Figura 1.2: some text here to represent the caption

1.5.1. Vector

$$\vec{w}$$

1.5.2. Recta

See Theorem 1.1

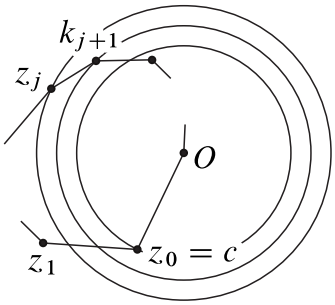


Figura 1.3: ww

Here is my theorem. Here is my theorem.

Teorema 1.1..... *Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem.*

sea Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem. $\sum_1^2$

Definición 1.1 (ww)**.....** *Sea la siguiente formula Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem. Here is my theorem.*

See Figure 1.5 1.3

Figura 1.4: ww

Here is my theorem. Here is my theorem. Here is my theorem.

```
plot(cars)  # a scatterplot
```

Lema 1.1 (Pythagorean theorem)**.....** *For a right triangle, if c denotes the length of the hypotenuse and a and b denote the lengths of the other two sides, we have*

$$a^2 + b^2 = c^2$$

See Table 1.1

```
knitr::kable(mtcars[1:5, 1:5], caption = "A caption", booktabs=TRUE)
```

$$f(k) = \binom{n}{k} p^k (1-p)^{n-k} \tag{5.1}$$

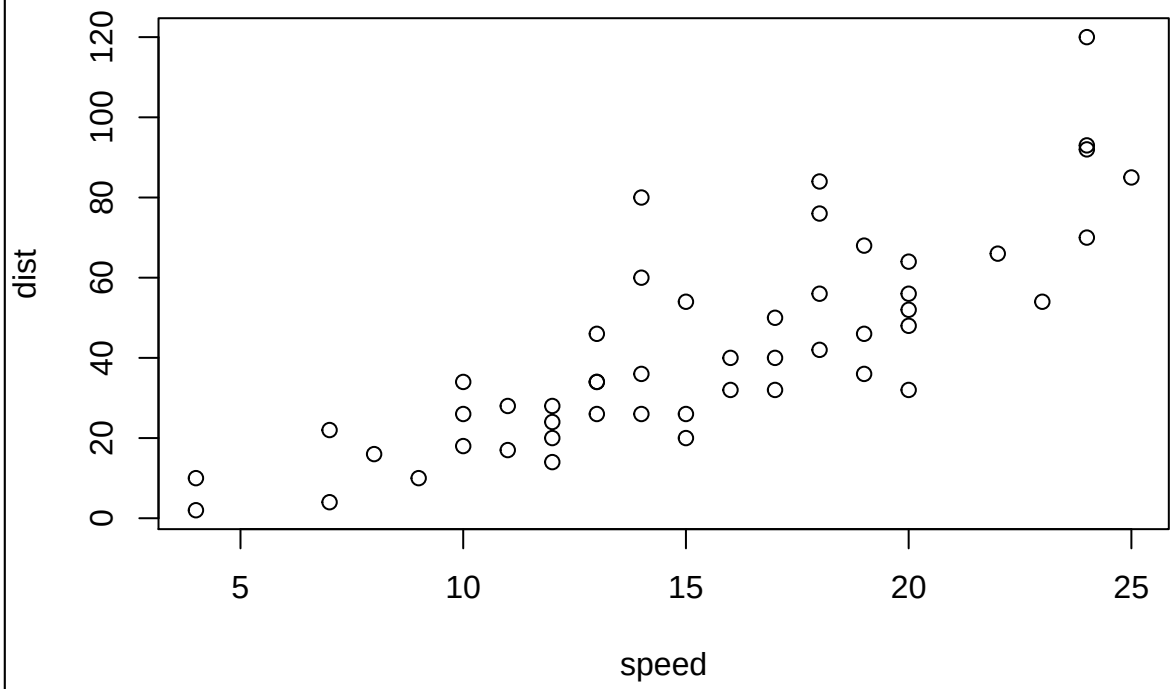


Figura 1.5: A plot caption

	mpg	cyl	disp	hp	drat
Mazda RX4	21.0	6	160	110	3.90
Mazda RX4 Wag	21.0	6	160	110	3.90
Datsun 710	22.8	4	108	93	3.85
Hornet 4 Drive	21.4	6	258	110	3.08
Hornet Sportabout	18.7	8	360	175	3.15

Cuadro 1.1: A caption

Este es un *ejemplo* book written in **Markdown. La ecuacion (5.1). You can use anything that Pandoc's Markdown supports, e.g., a math equation $a^2 + b^2 = c^2$.

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/.

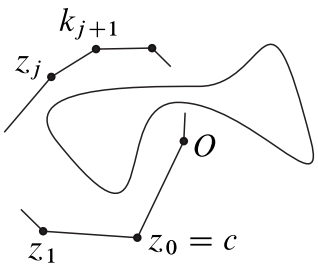


Figura 1.6: ww

CAPÍTULO 2

Números naturales

Teorema 2.1 (russ)**.....** *Dada el espacio* R *y* $r \in R$ *se tiene que* $\mathcal{R}(r) = \lim_{t\to\infty} g(y)_r$

Demostración. En efecto haciendo el intercambio de variables se tiene que $\sum_{i=1}^{\infty} r_i$

$$\vec{r} = \left| \frac{\int_1^{\vec{2}} r}{|r_1^2|} \right| \left\| \int_1^2 e \right\|$$

por lo tanto se cumple. □

You can label chapter and section titles using after them, e.g., we can reference Chapter 2. 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)
```

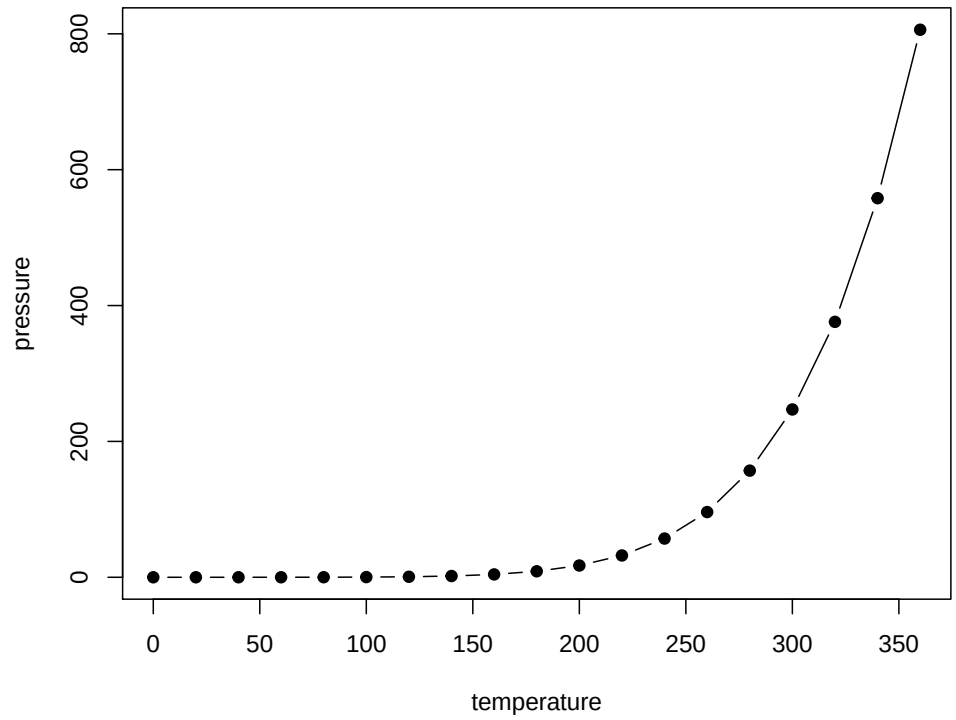


Figura 2.1: Here is a nice figure!

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

Cuadro 2.1: Here is a nice table!

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

CAPÍTULO 3

Limite de una función

3.1. Definición de lim ite para funciones $\mathbb{R} \to \mathbb{R}$ (es decir, funciones que aplican reales en reales)

3.2. Teorema sobre lim ite de funciones

3.3. Teorema lím ite de la raíz de una función

3.4. Teorema del lím ite para funciones com puestas

3.5. Teorema del sandwich

3.6. Limites laterales

3.7. Limites que contienen in finito

3.8. Límites de la forma $\lim f(x)^{g(x)} = C$

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

We have finished a nice book.

Bibliografía

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.