Homework assignment title.

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An alternative for big teams - Chick Corea (884422), Baby Yoda (774455), Paco de Lucía (778899), Suzanne Ciani (365411), Alan Turing (312511) and others.

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Abstract

Summary of main findings and conclusions. Optional section.

Keywords: Optional section. quantitative finance; financial risk; financial modeling in R; Optional section.

1 Introduction.

Look how you can add web links in the following sentence. This template is based on the generic OUP template available here. **Now, look how you can add a different font**. This is useful for `file` or `function names`. The original OUP sample tex document, providing more details on preferred formatting for LaTeX documents, is included with the template in the file `ouparticle_sample.tex`.

Here are some sample references. *Reference in brackets as in a list.* Please see (Hull 2015a; Carhart 1997) for a full discussion of multi-factor models. Bibliography will appear

at the end of the document. *Second, without brackets, separated by a comma.* See Hull (2015a), Hull (2015b), Cochrane (2009) for a formal demonstration of analytical results, and (Carhart 1997; Cochrane 1996) for some empirical results.

2 Methodology.

An equation with a label for cross-referencing:

$$\int_0^{r_2} F(r,\varphi)\mathrm{d}r\,\mathrm{d}\varphi = [\sigma r_2/(2\mu_0)] \int_0^{\infty} \exp(-\lambda|z_j - z_i|)\lambda^{-1} J_1(\lambda r_2) J_0(\lambda r_i\,\lambda \mathrm{d}\lambda) \tag{1}$$

This equation can be referenced as follows: Eq. 1. Now a simpler equation:

$$w = \sum_{i=1}^{20} [1/n^i] \tag{2}$$

This equation can be referenced as Eq. 2.
We can also write equations within the main text as here: $w = \sum_{i=1}^{20} [1/n^i]$.

2.1 A subsection.

A numbered list:

1) First numbered point
2) Second numbered point
    - Subpoint

A bullet list:

- First point
- Second point

3 Results.

3.1 Generate a figure.

```
plot(1:10, main = "Some data", xlab = "Distance (cm)",
     ylab = "Time (hours)")
```

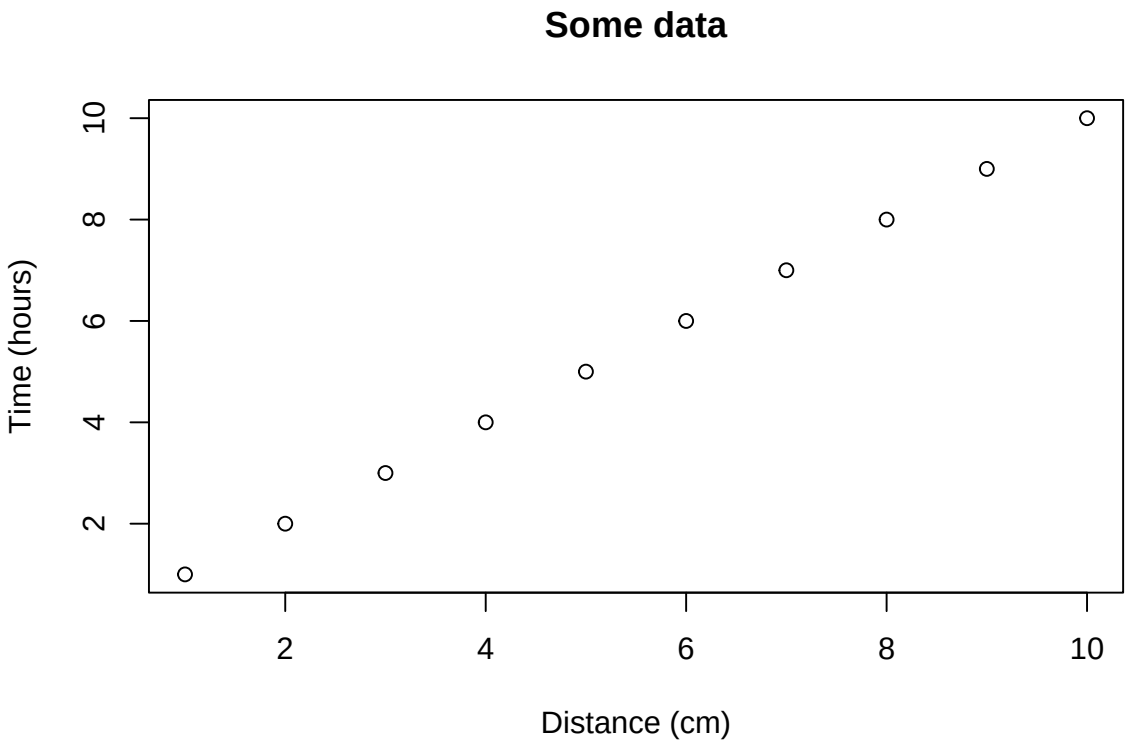

Figure 1: This is the first figure.

You can reference this figure as follows: Fig. 1.

```
plot(1:5, pch = 19, main = "Some data", xlab = "Distance (cm)",
     ylab = "Time (hours)")
```

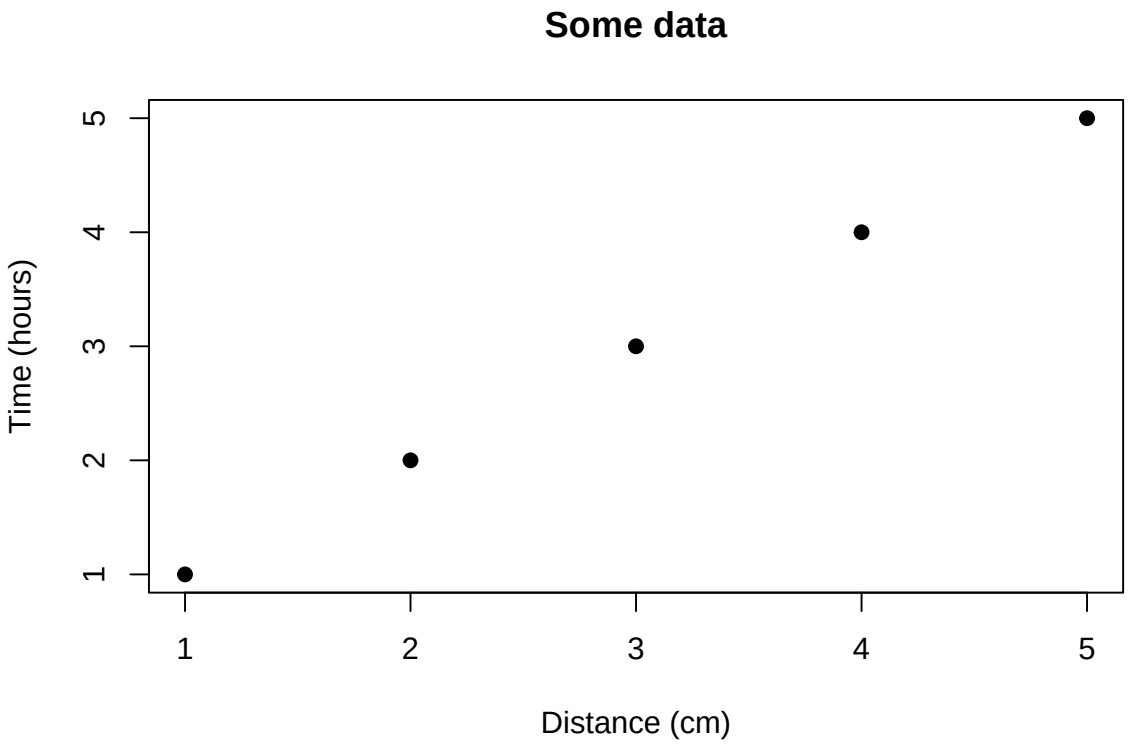

Figure 2: This is the second figure.

Reference to second figure: Fig. 2

3.2 Generate a table using `xtable`.

```
df = data.frame(ID = 1:3, code = letters[1:3])

# Creates tables that follow OUP guidelines using xtable
library(xtable)
print(xtable(df, caption = "This is the table caption",
             label = "tab:tab1"), comment = FALSE)
```

	ID	code
1	1	a
2	2	b
3	3	c

Table 1: This is the table caption

You can reference this table as follows: Table 1.

Table 2: This is the table caption

ID	code
1	a
2	b
3	c

3.3 Generate a table using `kable`.

```
df = data.frame(ID = 1:3, code = letters[1:3])

# kable can alse be used for creating tables
knitr::kable(df, caption = "This is the table caption", format = "latex",
             booktabs = TRUE, label = "tab2")
```

You can reference this table as follows: Table 2.

4 Nombres de los alumnos de PMF (fall 2021).

4.1 Grupo 3:00pm.

Diana Jacquelinne Soto Alcaraz
Juan Pablo Almada Burr
Bernardo Amador Padilla
Christian Contreras Hernández
Melanie Flores García
Luis Fernando Rodríguez Parra
Diego Valdés Contreras
María Fernanda Rendón Muro
Eugenio Murillo Nader
Adriana Beatriz Santos Monterroza
Oscar David Cortés Gutiérrez
Pompilio Rainiero Amador Sandoval
José Gonzalo Morones Intriago-Saludos!
Andrea Newell Jasso
María Julia Romero Rico
Claudia Michelle de los Ríos Arellano
Salvador Adrián Sánchez Macías
Enrique Gallegos Pateiro

César Alejandro Marroquín Garibay
Natalia Azcárraga Kuri
Cecilia Reyes Villarreal
Ricardo Díaz Ceballos Corral
Medardo Chávez Aguilar
Sofía Aitana Salcedo Martínez
Karina Albarrán Herrera
César Jacob Linares Murguia
Edgar Fernández Reynaga
Marianne Obele Coll
Emilio Noriega González
Allan Alvarado Lozano - Saludos desde Guadalajara
Lara Hanna Weitgasser - Hola a todos y todas!

4.2 Grupo 6:00pm.

Juan Andrés Castro Moreno
Manuel Alejandro Manríquez Quezada
Juan Carlos Bocanegra Rivera
Alejandro Adolfo Pastor Lara
Adalberto Vladimir Palomares Ramos
Diana Angélica Sandoval Ramírez
Luis Daniel Puente Flores
José Ramón Santos Buhl
Raúl Antonio Valdez Lozano
Jesús Oscar López Mendoza
Eduardo Cuesy Saldaña
Héctor Alejandro Faz Zepeda
Adriana Sofía Salcido Berumen
Luis Arturo Payán Quiñones
Daniela Pizano Chávez
David Armando Placencia Aguilar
Marco Francisco Beltrán Soto
Román Muñoz Loza
Oscar Ventura Montaño
Manuel Eduardo Romero Jara
Juan Francisco Marcial Posas
Jorge Andrés Ángeles Luévano
Andrés Amílkar Yáñez Frías

Nicolai Reiners

Félix Muñoz Rodríguez

David Villard Linares

Álvaro Rubio Pina

Eyleen Lizeth López Cueva-Saludos desde Perú

4.3 Task.

Use R code to numerically demonstrate whether the following equation is true:

$$ln(e) + (sin^2x + cos^2x) > \sum_{n=0}^{\infty} 1/2^n \tag{3}$$

Write your R code and results here, below the equation 3 and before the conclusion. Please include your name.

5 Conclusion.

You can cross-reference sections and subsections as follows: Section 2 and Section 2.1.

Note: the last section in the document will be used as the section title for the bibliography.

References.

Carhart, Mark M. 1997. "On Persistence in Mutual Fund Performance." *The Journal of Finance* 52 (1): 57–82.

Cochrane, John H. 1996. "A Cross-Sectional Test of an Investment-Based Asset Pricing Model." *Journal of Political Economy* 104 (3): 572–621.

———. 2009. *Asset Pricing: Revised Edition*. Princeton university press.

Hull, John C. 2015a. *Options, Futures, and Other Derivatives*. 9th ed. Prentice Hall.

———. 2015b. *Options, Futures, and Other Derivatives*. 9th ed. Prentice Hall.