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: 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)")
```

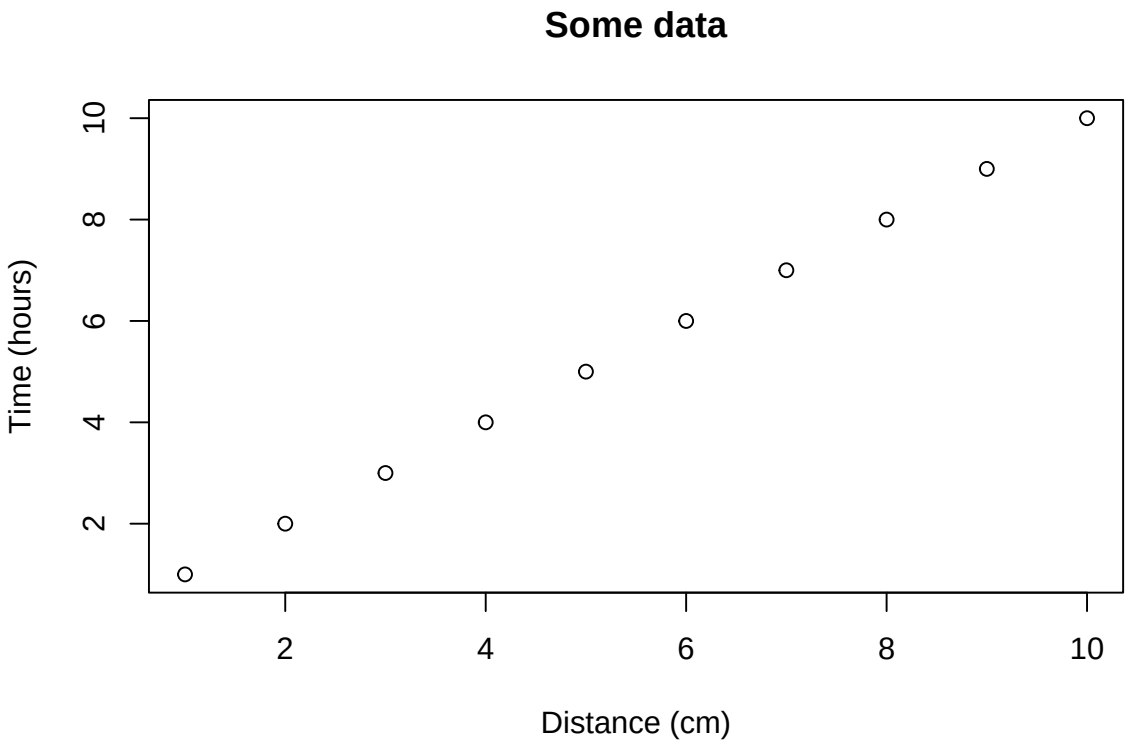

Figure 1: This is the first figure.

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

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

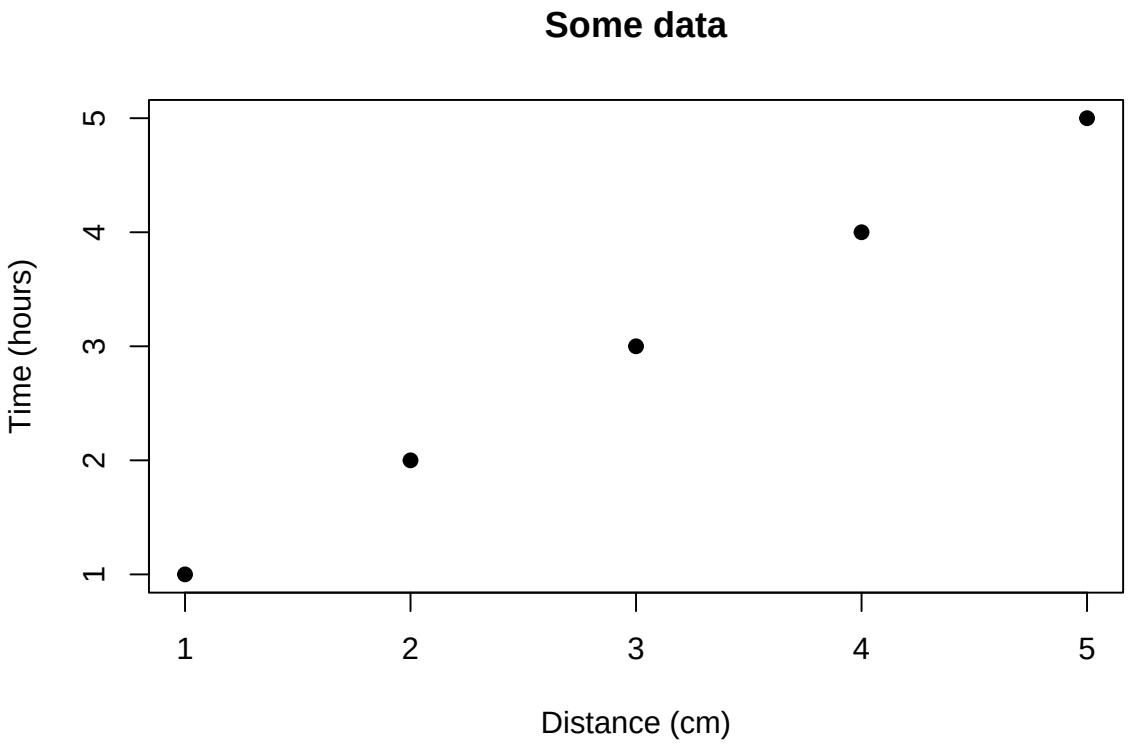

Figure 2: This is the second figure.

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 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.