

A Simple Example

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January 22, 2016

Abstract

This section is not numbered (see the star) as would be appropriate for something like an abstract.

1 Introduction

Note that Eq. (1) is numbered (and hyperlinked)

$$c_l(\alpha) = 2\pi\alpha \tag{1}$$

but this one is not.

$$\int_{-\infty}^{\infty} f(x) = \frac{3}{x^2}$$

This is an alternative syntax to have unnumbered equations

$$\alpha\beta = 5\gamma$$

You can also have equations inline like $4\delta^2$. We can also align equations:

$$\begin{aligned} & \text{minimize} && J(x) \\ & \text{with respect to} && x \\ & \text{subject to} && c(x) \leq 0 \end{aligned} \tag{2}$$

Or align, but number each one separately:

$$x = 5 \tag{3}$$

$$y + 2 = 7 \tag{4}$$

$$z + 4 = x + 7 \tag{5}$$

Figure 1 is showing how to insert, size, caption, and reference a figure. Note that I used a capital Cref for the start of sentence, and would use a lower case cref to refer to the figure in a sentence (Fig. 1). Also note that I have used a vector-based image (pdf in this case). This is strongly preferred to bitmap images (png, jpg) if possible. The figure will float around the text as needed to get a well-typeset document.

1.1 Hello

This is a subsection. It contains an unordered list

- something
- another thing
- i don't know

and an ordered list

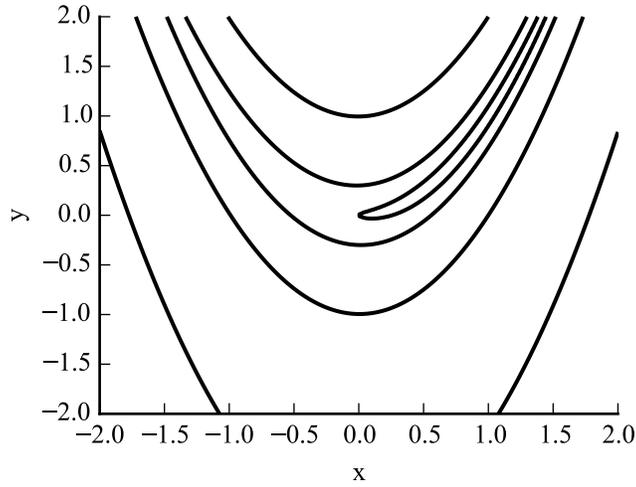


Figure 1: This are contour lines from the Rosenbrock function.

1. first time
2. second time
3. third time

These can also be nested.

1.2 Subfigure Subsection

In Fig. 2 you can see a subfigure example, I can also refer to part of the figure if I want (Fig. 2a).

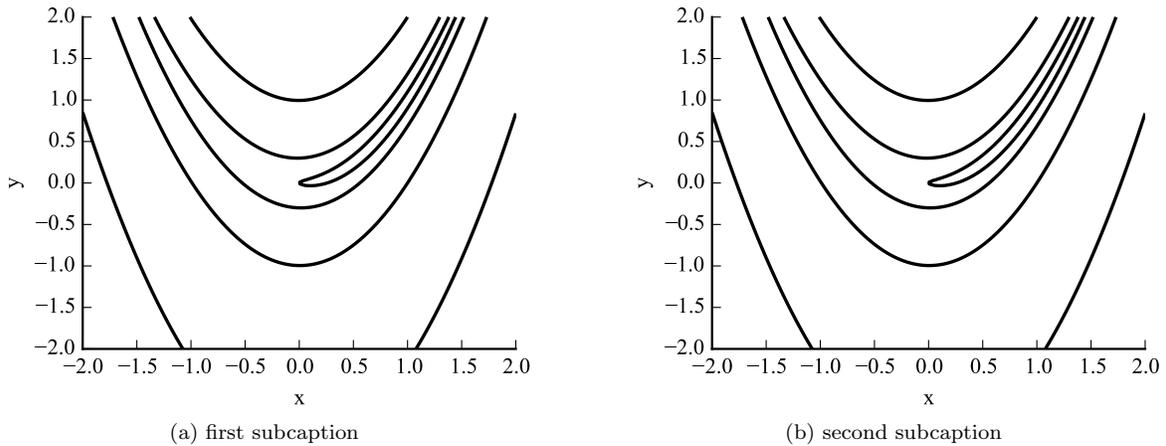


Figure 2: Overall caption, which should be a sentence.

2 Conclusion

You can **bold** or *emphasize* as needed. Be sure to use “quotation marks” correctly (leading backticks, closing pair of single quotation marks). As we see in Table 1 something something. This is a regular-dash, an en-dash, and an em—dash. I’m citing an article [1] and a book [2] in this sentence using the attached BibTeX file.

Table 1: This is a table caption. Note that table captions go above tables, whereas figure captions go below figures.

	a column	another column
case 1	1.30	2.30
case 2	4.56	6.78

References

- [1] Author Name, Second Author, and Third Author. The title of the article. *Journal Name*, 4(2):201–213, 7 1993. An optional note.
- [2] Someone Else. *The Title of the Book*, volume 4 of 10. Publisher Name, The address, 3 edition, 7 1993. An optional note.