

# A Two Column Example

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## Abstract

An example document showing automatic tagging of typical structures found in a L<sup>A</sup>T<sub>E</sub>X document, including titles, sections, theorems, lists, citation lists and mathematics. A two column layout is used, the tagging enables the reading order to correctly follow the flow of text through the columns.

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## 1 Introduction

This document shows a typical two-column document incorporating tables, figures and mathematics.

Apart from two commands at the start to enable tagging, and a small amount of additional markup to give alternative texts for graphics inclusion, and to specify the heading rows of tables.<sup>1</sup> The docu-

<sup>1</sup>The current tagging markup for tables is temporary and a new interface for tagging tables will be developed.

ment just uses standard L<sup>A</sup>T<sub>E</sub>X markup that would be used in any L<sup>A</sup>T<sub>E</sub>X document since the 1980s.

## 2 Document structures

### 2.1 Mathematics

Let  $p$  be a prime, then

$$n^p = n \mod p$$

An aligned set of equations:

$$\begin{aligned} f(x) &= \sin x + \cos x & f'(x) &= \cos x - \sin x & (2.1) \\ g(x) &= 2 \cos x & g'(x) &= -2 \sin x & (2.2) \end{aligned}$$

Matrices.

$$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix} \begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix} = \begin{pmatrix} 1 & 3 \\ 3 & 7 \end{pmatrix}$$

### 2.2 Lists

Lists often occur in documents.

- They may be unordered bullet lists
- Or may be numbered lists.
  1. lists may also be nested in an outer list
  2. items within such a list may be referenced.

Here we reference item 2.

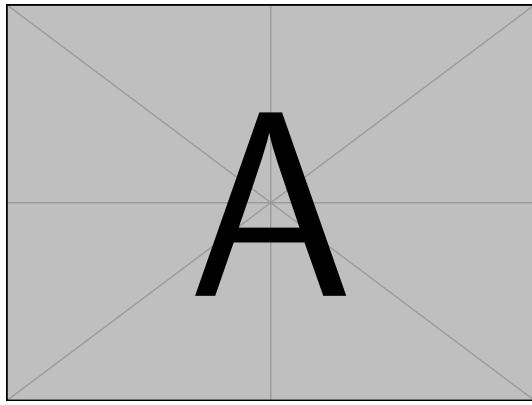


Figure 1: Larger image set as a *float*

## 2.3 Figures and Tables

Small images may be shown inline and small tables may be shown within the paragraph:

Example	
Name	Value
This	11
That	2

Marginal notes are usually placed in the outer margin.

Larger figures such as Figure 1 are usually placed in a *float* to be positioned at a suitable place to help with column and page breaking.

## 2.4 Theorems

**Theorem 1** (Fermat's Last Theorem). *If  $n > 2$ , then there are no non-zero integers  $a, b, c$  such that  $a^n + b^n = c^n$ .*

## 2.5 Verbatim

Some documents require verbatim code blocks to be displayed.

```
main( ) {
    printf("hello, world");
}
```

## 3 Citations

It is also possible to cite works from a bibTeX database, here we cite [2] and [1] from the `tugboat.bib` sample file distributed with bibTeX.

## References

- [1] Taco Hoekwater. LuaTeX. *TUGboat*, 28(3):312–313, 2007.
- [2] Don Knuth. Comments on quality in publishing. *TUGboat*, 5(1):67–67, May 1984.