

# L<sup>A</sup>T<sub>E</sub>X TIPS FOR WORKING MATHEMATICIANS

## 1. DASHES

The symbols -, -- and --- are known as the *hyphen*, the *en-dash* and the *em-dash* respectively. Typical examples of -: well-known, Chambert-Loir.

Typical examples of --: Monge–Ampère, Page 1–100.

Typical example of ---: Many renowned scientists—Einstein, Fermi, Feynman, Szilard contributed to the atomic bomb.

## 2. NON-BREAKING SPACE

The non-breaking space refers to the symbol ~. It produces a space, but the line will not break at this space. When you refer to a theorem, the correct way of writing is `Theorem-\ref{thm:abc}`. Alternatively, if you use the package CLEVEREF, you could simply write `\cref{thm:abc}`, the non-breaking space is automatically included.

Compare the two examples below:

```
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  Theorem-\ref{thm:abc}.
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt Theorem 2.1.

```
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  Theorem \ref{thm:abc}.
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt Theorem 2.1.

thm:abc

**Theorem 2.1.** ...

## 3. DISPLAYED FORMULAE

It is a common mistake to put displayed formulae in a pair of `$$`. There are many differences between `$$` and `\[...\]`.

The symbol `$$` is T<sub>E</sub>X primitive syntax, which is NOT supported by L<sup>A</sup>T<sub>E</sub>X. On the other hand, if you load the package AMSMATH, `\[...\]` is the synonym of the environment `equation*`. You will very frequently find wrong spacing if you use the symbol `$$`.

For more details, see [the discussion here](#).

## 4. SOME ANNOYING SYMBOLS

The symbol `:=` is given by `\coloneqq` not `:=`. Compare them: `:=`, `:=`. You need the MATHTOOLS package.

The Hungarian `ő` is given by `\H{o}` not `\"o`. Compare them: `ő`, `ö`.

The integral

$$\int_0^1 x dx$$

is written as

```
\int_0^1 x\,\mathrm{d}x.
```

The symbol `f: X → Y` should be written as `f \colon X \rightarrow Y` not `f : X \rightarrow Y`. Compare them: `f: X → Y`, `f: X → Y`.

The set

$$\{(x, y) \in \mathbb{R}^2 \mid x \leq y\}$$

is written as

```
\left\{(x,y)\in \mathbb{R}^2 \mid x\leq y\right\}
```

instead of

```
\left\{(x,y)\in \mathbb{R}^2 \mid x\leq y\right\}.
```

You could also replace `\mid` by `:` (not `\colon`).

The three dots ... should be typeset as `\dots` (or its other variants) instead of simply putting three dots together like ....

#### 5. A SENTENCE NEVER BEGINS WITH A FORMULA

A sentence never begins with a formula.