LATEX 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—Eistein, 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:

```
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incid
    Theorem~\ref{thm:abc}.
```

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

```
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incid
    Theorem \ref{thm:abc}.
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incid 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 TEX primitive syntax, which is NOT supported by LATEX. 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 $\coloneqq$ is given by `\coloneqq` not `:=`. Compare them: $\coloneqq$, $:=$. You need the MATHTOOLS package.

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

The integral
$$\int_0^1 x \, \mathrm{d}x$$
is written as

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

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

The set
$$\left\{ (x,y) \in \mathbb{R}^2 \mid x \leq y \right\}$$
is written as

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

instead of

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