Contents

Working faster

Typesetting documents faster comes down to becoming more familiar with VSCode and the use of snippets.

1.1 Becoming familiar with VSCode

It's worth taking a look at the official trips and tricks: link. We will cover some of the simpler ones which are used constantly.

1.1.1 Multi-line editing

You can set your cursor in the same position across multiple lines using `ctrl+alt+`↑/↓ (on Mac ⌘+⌥+↑/↓).

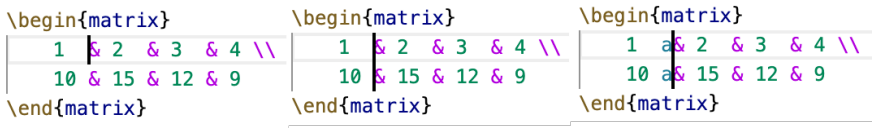

Figure 1.1: Multiline editing

1.1.2 Moving lines

You can move the current line with ⌥+↑/↓.

The existence of this command is the motivation for why paragraphs are split at the end of each sentence, allowing you to easily reorganise your ideas.

1.1.3 Copying lines

You can copy the current line with ⇧+⌥+↑/↓.

This is particularly useful with maths and tables.

1.1.4 Identing code

Indent in: ctrl+] (Mac ⌘+]).

Indent out: ctrl+ [(Mac ⌘+ [ ).

1.1.5 Command pallete

ctrl+⇧+P (Mac: ⌘+⇧+P) opens all the commands given by your extensions. In particular, Math Preview Panel, View LaTeX PDF File, and Promote/Demote sections are used quite often.

1.2 Using snippets

The LaTeX Workshop extension provides many snippets, which can be seen here. They can also be user defined, and as you typeset more documents you will find your particular needs. More information on writing your own snippets can be found here.

A few examples will be presented, and we will go over the keybindings to very quickly produce them. Bear in mind the pure text sections will just be ignored.

Note: In case you are unfamiliar with the symbols:

Symbol	Meaning
⌥	`alt`
⇧	`shift`
⌘	`command`
→⇥	`tab`

1.2.1 Example - Logarithms

This is a small section from the wikipedia article Logarithms which we recreate. Highlighted below are only the snippets, so you would still have to manually write things like `\log_2 3` for $\log_2 3$.

1. sse+→⇥ creates `\section{}`. →⇥ again after typing "Logarithmns" to move cursor out of the brackets.
2. For the intext maths, the time saving is \(+→⇥.
3. bseq+→⇥ quickly creates the unnumbered `equation*` environment
4. @/+→⇥ to create the fraction. type m+→⇥+n
5. For the next maths environment, we use bsal+→⇥ — creating an `align*` environment

1 Logarithmns

Perhaps the numbers most easy to provide irrational are certain logarithmns. Here is a proof by contradiction that $\log_2 3$ is irrational ($\log_2 3 \approx 1.58 > 0$).

Assume $\log_2 3$ is rational. For some positive integers m and n, we have

$$\log_2 3 = \frac{m}{n}.$$

It follows that

$$\begin{aligned} 2^{m/n} &= 3 \\ \left(2^{m/n}\right)^n &= 3^n \\ 2^m &= 3^n. \end{aligned}$$

6. 2 + ** + →| + m/n + →| creates $2^{m/n}$

7. Finally, to get the right positioning for ^{n}, we think a little bit ahead: { + 2 + ** + →| + m/n will produce `{2^{m/n}}`.

8. Move to the end of the line with ctrl + → (Mac: ⌘ + →), then you can finish writing `{2^{m/n}}^n`.

1.2.2 Example - Integral

$$\begin{aligned} I &= \int_0^\infty \frac{2}{3} x^2 \, dx \\ &= \frac{2}{3} \int_0^\infty x^2 \, dx \\ &= \frac{2}{9} x^3 \Big|_0^\infty \end{aligned}$$

1. bsal + →| creates the `align*` environment

2. Type `I &=`, then @I + →| + 0 + →| + @8 + →| to produce the integral and its limits

3. @/ + →| + 2 + →| + 3 creates the fraction, then the rest is manually typed.

4. ⌥ + ⇧ + ↓ duplicates the line, navigate to the beginning with ctrl + ← (Mac: ⌘ + ←), and delete `I`.

5. To quickly move between words, use ⌥ + → ←. Select `\frac{2}{3}` by holding `shift` as you navigate through it, then cut and paste before the integral. Your code will look like this:

```
\begin{align*}
    I &= \int_{0}^{\infty} \frac{2}{3} x^2 \,dx \\
    &= \frac{2}{3} \int_{0}^{\infty} x^2 \,dx \\
\end{align*}
```

6. Now duplicate this line (⌥+⇧+↓)

7. Delete `\int`, and then press @|+⇥, producing `\Big|_{0}^{\infty}`.

8. Again, use ⌥+⇧+←/→ to quickly select $\Big|_0^\infty$ and move it to its appropriate place.

9. Change the other numbers appropriately.

1.2.3 Example -

1.2.4 Example -