

# Make a L<sup>A</sup>T<sub>E</sub>X document for Assignment 0

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## 1 Instructions

You must reproduce this document *exactly* in L<sup>A</sup>T<sub>E</sub>X. Use the `article` class with the `10pt` and `a4paper` options. However, you must substitute your own name and surname for mine in the title, and use your own student number in the place of the “12345678”. You will notice that I literally will test all the different text typesetting options that we covered in the course (and some more), and then also—of course – your mathe-ma-ti-cal typesetting proficiency.<sup>1</sup>

**Submission** You have to hand in on sunLearn both the pdf copy and your L<sup>A</sup>T<sub>E</sub>X source, before you leave the venue.

## 2 Some mathematics to typeset

The text and mathematics below is not supposed to make sense! We just want to look at the typesetting possibilities of L<sup>A</sup>T<sub>E</sub>X.

### 2.1 Symbols and layout

We can either use symbols like  $\phi$  and  $\pi$  in text mode, or we can write it in display mode like this:

$$\phi \text{ and } \pi.$$

### 2.2 Superscripts and subscripts

Type in this formula:

$$x^2 + y^{2+x} \xrightarrow{\infty} x^{2x^{y+1}}$$

Sums are also useful:  $\sum_{i=0}^n \sum_{j=0}^m x^{ij} + x^i$ , and so are limits and integrals:

$$\int_a^b \frac{x^3 - x^4}{f'(x)g(x)} dx \geq \lim_{x \rightarrow \infty} f(x).$$

Be aware of the spacing in the equations above.

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<sup>1</sup>This is a footnote.

### 2.3 And some last technical playsetting

$$\sqrt[5]{\frac{f^2(x)}{\sqrt{g(x)!}}}$$

and

$$\exists k : k < 42\%$$

and

$$A \cup B \neq A \cap B.$$