

# This is a Title

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## Abstract

This is a short introduction to L<sup>A</sup>T<sub>E</sub>X. Always be careful of indentations; remember to always compile twice consecutively, and follow some of these easy to use instructions (haha, some of them are not so easy...)

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Okay, now we can start the document

## 1 This is a section, say Introduction

### 1.1 This is a subsection

If you were writing up a problem set you might have multiple parts to a problem.

Typing math in line is easy, you surround your math in dollar signs:  $a + b$ .

Displaystyle takes our fractions from  $\frac{a}{b}$  to look like  $\frac{a}{b}$ . It's useful sometimes but can also screw up the line space of a document.

If you want a central equation you can surround in in double dollar signs:

$$a + b.$$

However, if you are doing a derivation and want to align equal signs you can use `begin{align*}`. The asterisk means that the equation WON'T be numbered. The ampersand will tell TeX which characters you want aligned

$$\begin{aligned} a + b &= c \\ \Rightarrow a &= c - b. \end{aligned}$$

Don't forget to punctuate your mathematics. You can number an equation using `align` without the asterisk. You can also give it a label to refer to it later in the source:

$$\vec{a} + \vec{b} = \vec{c} \tag{1}$$

Now I can refer to Equation (1) using its label (see my source if reading this in pdf!). This is useful because if you add numbered equations above this one it updates it for you.

You always need to compile the code twice for the references to work!

## 2 Pictures

In many tex distributions they'll have a button you can click to input figures and things. This can be nice, but also more confusing than it needs to be.

Here's an example of a picture (you won't be able to compile this with the picture unless there's a picture at the right file path! If the picture is in the same directory as the .tex document you can just give the file name)

I can make it bigger (see Fig. (2))!



Figure 1: A picture of beautiful Old Kenyon Hall

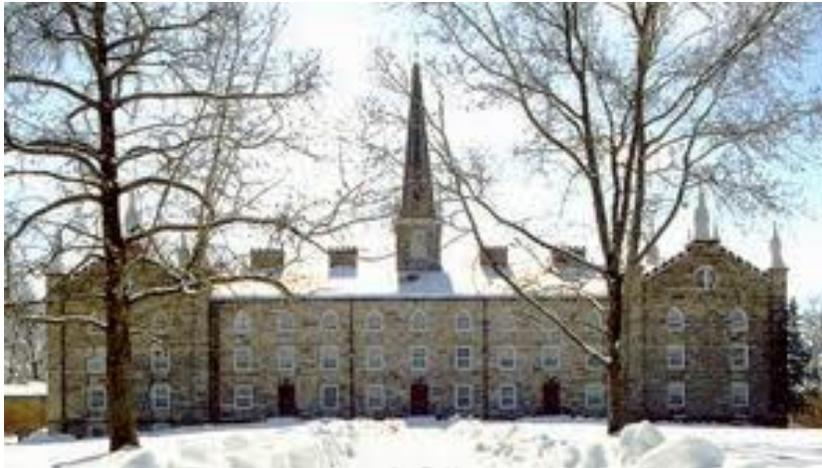


Figure 2: A larger (and hence even more beautiful) picture Old Kenyon Hall

And now if you look at the source and .pdf you'll see what I mean about it being finicky about where it puts pictures and text. That's why with TeX documents it's always best to reference the figure number instead of "the figure above" or something. Also quotations are weird. "" doesn't work it's got to be "" where the left quote is hitting the "reflected" apostrophe that's just above the tab key twice.

Putting pictures side by side is confusing, but can be done using sub-figure



(a) OK Hall



(b) OK Hall

Figure 3: Two pictures of OK Hall

The last thing is that you can wrap text around a figure like seen in this picture here. It's touch and go, though, like a lot of things ;lka jsdf;lka jdsfl;kj ads;lkfja;ldjfa;dj;ajf;kljadf;lka jdf;lka jdf;lka jsdf; lka jdf;lka jsdf;kj adf;lhad ;lfkjads;lkfj as;dlfjas;ldf jas;ldfja;ls djfla;sdjfl ;aksd jfl;aksjdf ;lka-sjdf;lka jd fl;ka jsdf;lkja sdf;kj lkj;sjf a;lksdjfa ;lksdjf;las djf;lasdjf;lsaj we need a new package, wrapfig, for this.  
;lkdjsf;klajsdfl;kjads;lkfjas;dja;slf;kafdj;af; wrapping wrapping, yes, this is all very nice... blahlahabl;kjasdfie lkjasdf;lklasdfo jiojoja ;lefj poaj oi-waej ;lkasdlk;j opj ;oa;alskfj Ok, that exhibited that feature nicely...

### 3 Tables

Last thing to look at is tables, see the source for comments

1	2	3
4	5	6

Table 1: a small table

So you can see in Table (1) that this is actually not too bad!

### 4 Suggestions

Google is amazing for LaTeX help. Especially [1], which is where I got almost all of this from. Oh, also, citing from a bibliography is a bit different, read the source for this line closely.

### References

[1] <http://en.wikibooks.org/wiki/LaTeX>



Figure 4: A gull