

This code example contains commands for adding more objects, like tables, images, equations, and hyperlinks.

Note: For each of the below, there may be more than one way in L^AT_EX to achieve the shown changes.

It's possible to write math as simple text: $1+2=3$. However, L^AT_EX has a math mode, which is just putting the math between two \$ dollar signs:

$1+2=3$

To get $1 + 2 = 3$.

If you add two \$ signs on each side, the math will move to the next line and will be centered, as though it is on 'display':

$$1+2=3$$

as in

$$1 + 2 = 3.$$

(Make sure to put the period (.) before the closing \$\$; otherwise, the period will be printed on the next line.)

In math/display mode, to create a subscript, use the underscore character

$a_i < a_j$

as in $a_i < a_j$.

To create a superscript, use the caret (roof) character ^

$a^2 + b^2 = c^2$

as in $a^2 + b^2 = c^2$.

More math:

```
\sqrt{4}$ \\
\sqrt[3]{8}$ \\
\frac{2}{3}$ \\
$$c = \frac{x \cdot y + z}{a - \sqrt{b}}$$ \\
\alpha$ \\ % (lowercase Greek alpha)
\Sigma$ \\ % (uppercase Greek sigma)
\infty$ \\ % (infinity)
\cos 2 \theta$ \\ % (cosine of 2 times theta [another Greek letter])
\ln x$ \\ % Natural log of x
\log_2 x$ \\ % Log base 2 of x
\max \{2, 5\}$ \\ % The maximum of 2 or 5
\min \{2, 5\}$ \\ % The minimum of 2 or 5
```

which creates:

$$\sqrt{4}$$
$$\sqrt[3]{8}$$
$$\frac{2}{3}$$

$$c = \frac{x \cdot y + z}{a - \sqrt{b}}$$

$$\alpha$$
$$\Sigma$$
$$\infty$$
$$\cos 2\theta$$
$$\ln x$$
$$\log_2 x$$
$$\max\{2, 5\}$$
$$\min\{2, 5\}$$

To start a section, do:

```
\section{Topic 1}
```

as in

1 Topic 1

To start a subsection, do:

```
\subsection{Part A}
```

as in

1.1 Part A

To start a subsubsection, do:

```
\subsubsection{Remark I}
```

as in

1.1.1 Remark I

To align equations or inequalities, first import the package

```
\usepackage{amsmath}
```

and then, in the body of the document, do:

```
\begin{align}
x &= 1 + 2 + 3 \\
&= 3 + 3 \\
&= 6
\end{align}
```

as in

$$\begin{aligned} x &= 1 + 2 + 3 & (1) \\ &= 3 + 3 & (2) \\ &= 6 & (3) \end{aligned}$$

If you don't want to assign numbers to these equations, use the 'starred' environment of `align`:

```
\begin{align*}
x &= 1 + 2 + 3 \\
&= 3 + 3 \\
&= 6
\end{align*}
```

as in

$$\begin{aligned} x &= 1 + 2 + 3 \\ &= 3 + 3 \\ &= 6 \end{aligned}$$

The `&` sign is the place where the equations on each line get aligned at.

To add and center figures/images, first import the package

```
\usepackage{graphicx}
```

and then, in the body of the document, write:

```
\begin{figure}[htbp]
\begin{center}
\includegraphics[width=3in]{Honeycrisp-Apple.JPG}
\caption{An apple.}
\end{center}
\end{figure}
```

to get:



Figure 1: An apple.

Note: The image or figure you are adding must be located in the same folder as the $\LaTeX$ source code file.

To add and center a table:

```
\begin{table}[h]
  \centering
  \begin{tabular}{|c|c|c|}
    \hline
    Item & Quantity & Price (\$) \\ \hline
    Apple & 2 & 1.50 \\ \hline
    Banana & 5 & 3.00 \\ \hline
    Orange & 3 & 2.25 \\ \hline
  \end{tabular}
  \caption{A sample table of fruit prices}
\end{table}
```

to get:

Item	Quantity	Price (\$)
Apple	2	1.50
Banana	5	3.00
Orange	3	2.25

Table 1: A sample table of fruit prices

or

```
\begin{table}[h]
  \centering
  \begin{tabular}{l c r}
    \hline
    Item & Quantity & Price (\$) \\ \hline \hline
    Apple & 2 & 1.50 \\
    Banana & 5 & 3.00 \\
    Orange & 3 & 2.25 \\ \hline
  \end{tabular}
  \caption{A sample table of fruit prices}
\end{table}
```

to get

Item	Quantity	Price (\$)
Apple	2	1.50
Banana	5	3.00
Orange	3	2.25

Table 2: A sample table of fruit prices

or any other similar table.

To add links, make sure you first import the package

```
\usepackage{hyperref}
```

and then use the following in the body of the document:

```
\url{https://www.google.com}
```

to get <https://www.google.com>, or

`\href{https://www.google.com}{Google Search}`

to get [Google Search](https://www.google.com).

You can also create a link to any place inside the PDF document. Just put a label, like

`\label{this-location}`

anywhere inside the document, an equation, a table, a section, etc., and then create a link to it by using:

`\ref{this-location}`

The label above was placed somewhere in this document, and here is the link to it: [1](#).

What part of the document does this link jump to?