

# **My LaTeX Notes**

By Xiang Chen (Echo)

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# 1 Basic Notes

Commands start with a name [optional arguments] {required arguments}

twocolumn : 2 column pages

titlepage : `\maketitle/` generates a title page

legno : Puts equation numbers on the left side

flegn : Left align equations versus center

twoside : Print on both sides of paper

openright : If twoside is used chapters begin on right hand page

landscape : If listed it displays in landscape

---

## 2 Page Numbering

```
1 % Use roman numeral page numbering
2 \pagenumbering{roman}
```

```
1 % Start numbering with page 2
2 \setcounter{page}{2}
```

## 3 Headers & Footers

```
1 % Clear default headers & footers
2 \fancyhf{}
```

```
1 % Draw a decorative line at the top & bottom of the page
2 \renewcommand{\headrulewidth}{2pt}
3 \renewcommand{\footrulewidth}{1pt}
```

Could also use different headers for even & odd pages:

```
1 % Leftmark : Chapter title, number, LE – left side on even pages
2 % Uppercase by default
3 \fancyhead[LE]{\leftmark}
```

```
1 % Rightmark : Chapter title, number, R0 - right side on odd pages
2 % Make lowercase
3 \fancyhead[R0]\{\nouppercase{\rightmark}}
```

```
1 % Use the same footer for pages
2 \fancyfoot[LE,R0]{\thepage}
```

---

## 4 Class, Custom margins

```
1 % Document will be printed on a4 paper, using the 12pt default font
2 % and there will be a cover page.
3 \documentclass[a4paper,12pt,titlepage]{article}
```

### — Paper types —

letterpaper (11 x 8.5 in)  
a4paper (29.7 x 21 cm) – usually use this  
legalpaper (14 x 8.5 in)  
a5paper (21 x 14.8 cm)  
executivepaper (10.5 x 7.25 in)  
b5paper (25 x 17.6 cm)

### — Class types —

article – for papers  
book  
letter  
report  
beamer — for presentation

```
1 % Define custom margins
2 \usepackage[a4paper,inner=1.7cm,outer=2.7cm,top=2cm,bottom=2cm,
3 bindingoffset=1.2cm]{geometry}
```

---

## 5 Packages

You can import packages to add functionality.

Get more info on any package by typing **texdoc PackageName** in the terminal or command line.

```

1 % Define that we want to use English hyphenation.
2 % http://mirrors.rit.edu/CTAN/macros/latex/required/babel/base/babel.pdf.
3 % Page 18 for list of languages.
4 \usepackage[english]{babel}

```

```

1 % Use Helvetica instead of the normal sans serif font
2 \usepackage[scaled=.92]{helvet}

```

— Others: —

mathpazo (Palatino (Roman))  
 mathptmx (Times (Roman))  
 avant (Avant Garde (Sans Serif))  
 courier (Courier (Typewriter))  
 chancery (Zapf Chancery (Roman))  
 bookman (Bookman (Roman) Avant Garde (Sans Serif) Courier (Typewriter))  
 newcent (New Century, Avant Garde, Courier)  
 charter (Charter (Roman))

---

Some commonly used packages:

```

1 % Improve justification document wide
2 \usepackage{microtype}

```

```

1 % Used to create filler text
2 \usepackage{blindtext}
3
4 E.g. \blindtext[5] --- create filler text

```

```

1 % Used to include pictures
2 \usepackage{graphicx}

```

```

1 % Used to wrap text around pictures
2 \usepackage{wrapfig}

```

```

1 % Used to compact lists
2 \usepackage{enumitem}

```

```
1 % Improve the justification across the entire document
2 \usepackage{microtype}
```

```
1 % Used to customize the page layout of your LaTeX documents
2 \usepackage{fancyhdr}
```

```
1 % Improve output of math formulas
2 \usepackage{amsmath}
```

```
1 % Automatically generate index
2 \usepackage{index}
3 \makeindex
```

```
1 % Customize the font color
2 \usepackage{xcolor}
```

```
1 % Change the font background color
2 \usepackage{framed}
```

---

## 6 Spacing

The first line after the section will not be indented.  
Also, multiple spaces do not matter.

```
1 % A built in command
2 \LaTeX
```

```
1 % Creates a line break
2 \\
```

```
1 % Prevents line breaks.
2 \nolinebreak
```

```
1 % Add a 10 pts of space between this line and the next.  
2 \[10pt]
```

```
1 % Eliminate paragraph indents.  
2 \usepackage{parskip}
```

```
1 % Only eliminate the indent for the very next paragraph  
2 % Every other paragraph that comes after it will continue doing indents.  
3 \noindent
```

```
1 % Increase the line spacing : singlespacing, onehalfspacing,  
   doublespacing  
2 \usepackage[onehalfspacing]{setspace}
```

```
1 % Another way to add space between paragraphs.  
2 \bigskip
```

---

## 7 Font

There are tons of fonts you could use: [www.tug.dk/FontCatalogue](http://www.tug.dk/FontCatalogue)

```
1 % Change the font family to sans serif  
2 \renewcommand{\familydefault}{\sfdefault}
```

### 7.1 Font Face

<code>\emph</code>	<i>Text</i>
<code>\textbf</code>	<b>Text</b>
<code>\texttt</code>	<b>Text</b>
<code>\textrm</code>	Text
<code>\textsf</code>	Text
<code>\textsc</code>	TEXT



## 7.2 Font Size

<code>\tiny</code>	Text
<code>\scriptsize</code>	Text
<code>\footnotesize</code>	Text
<code>\small</code>	Text
<code>\normalsize</code>	Text
<code>\large</code>	Text
<code>\Large</code>	Text
<code>\LARGE</code>	Text
<code>\huge</code>	Text
<code>\Huge</code>	Text

---

## 7.3 Font Color

For the font color, could check [https://www.rapidtables.com/web/color/RGB\\_Color.html](https://www.rapidtables.com/web/color/RGB_Color.html)

```
1 % Add the package to change font color
2 \usepackage{xcolor}
3 % Define customized colors
4 \definecolor{comment}{RGB}{120,120,120}
5 \definecolor{codenumber}{RGB}{100,100,100}
6 \definecolor{shade}{RGB}{240,240,240}
7
8 % Change the font color
9 \textcolor{color}{Text}
10 {\color{color} Text}
```

---

## 7.4 Font Background Color

```
1 % Add the package to change font background color
2 \usepackage{xcolor}
3
4 % Change the font background color
5 \colorbox{color}{Text}
```

---

# 8 Hyperlink

To use hyperlink, you need to add the package:

`\usepackage{hyperref}`

All cross-referenced elements become hyperlinked.

Also could check <https://www.overleaf.com/learn/latex/Hyperlinks>

## 8.1 Style & Color

```
1 % Example of setting up the style and color
2 \hypersetup{
3   colorlinks=true,
4   linkcolor=blue,
5   filecolor=magenta,
6   urlcolor=cyan,
7 }
8
9 % To set up the url font
10 % same: same with the main text
11 % rm: The font \rmfamily is used.
12 % sf: The font \sffamily is used.
13 % tt: This is the default: \ttfamily.
14 \urlstyle{sf}
```

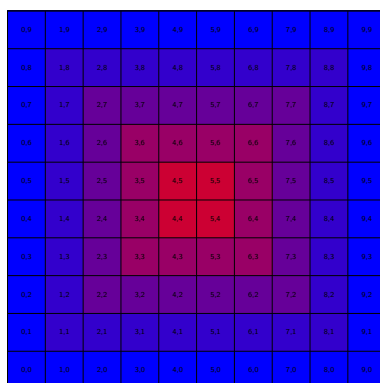
## 9 Inserting Pictures

Make sure to add the packages:

```
\usepackage{graphicx}
\usepackage{wrapfig}
```

---

### 9.1 Dummy Example



```
1 % h: Here,t: Topofpage,b: Bottom,p: SeparatePage
2 \begin{figure}[ht]
3 % make it centered
4 \centering
5 % add the picture, width could scale the image, default is \textwidth
6 \includegraphics[width=8cm]{example-grid-100x100pt}
7 \end{figure}
```

---

## 9.2 Wrapping Image Example

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

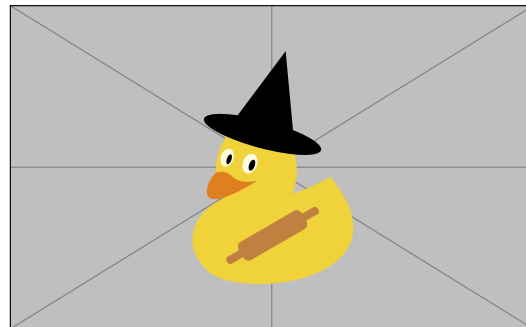


Figure 1: Pretty Picture

```
1 % Group the text and image
2 \begingroup
3 % Set space above and below float to 0
4 \setlength{\intextsep}{0pt}
5
6 % Set distance between columns
7 \setlength{\columnsep}{15pt}
8
9 % Text wraps around images
10 % Position image to the right with r
11 % Also can use l : Left, i : Inside Edge and o : Outside Edge
12 % 0.45\textwidth : Size image width relative to the text width
13 \begin{wrapfigure}{r}{0.45\textwidth}
14 \centering
15   % Place image
16   \includegraphics[width=\linewidth]{pic.png}
17   % I can assign a label I can refer to later
18   \caption{Pretty Picture}\label{fig:prettypic}
19 \end{wrapfigure}
20
21 \blindtext
22
23 \endgroup
```

---

## 10 Lists

### 10.1 Bulleted Lists

Smoothie Recipe

- 1 Cup Spinach

- 1 Cup Frozen Blueberries
- 2 Bananas
- 1.5 Cups Almond Milk
- Powders
  - 1 Tbs PB2
  - 1 Tsp Ambla Powder
- 6 Dates

```

1 % The title
2 \hspace*{6mm}{\large Smoothie Recipe}
3 % The list
4 \begin{itemize}
5   \item 1 Cup Spinach
6   \item 1 Cup Frozen Blueberries
7   \item 2 Bananas
8   \item 1.5 Cups Almond Milk
9   \item Powders
10     % Create a list in a list
11     \begin{itemize}
12       \item 1 Tbs PB2
13       \item 1 Tsp Ambla Powder
14     \end{itemize}
15   \item 6 Dates
16 \end{itemize}

```

---

## 10.2 Numbered Lists

```

1 % Allows for any numbering scheme.
2 % Normally, nesting numbering goes from 1 to a to i. to A..
3 \item[customNumbering]

```

```

1 % Compact the list by replacing enumerate with compactenum
2 % and itemize with com- pactitem.
3 \usepackage{paralist}

```

---

### Perfect Meal Recipe

I Add the following and cook for 2 minutes

- 1 tsp Olive Oil
- 1 Cup Onion, diced
- 3 cloves Garlic, minced

- 1 tsp Salt
- 1 Cup chopped Portobello Mushrooms

**II** Add the following and stir for 2 minutes

- 2 TBs Curry Powder
- 1 tsp Fresh Minced Ginger
- 2 TBs Tomato Paste

**III** Add the following and simmer for 15 minutes

- 1 cup uncooked Lentils
- 4 cups Vegetable Broth

**IV** Add the following and simmer for 20 minutes

- 2 cups chopped Carrots
- 4 Cups cubed Yams

**V** Add the following and cook for 10 minutes

- 2 cups boiled diced Collard Greens
- 1 cup frozen diced Spinach

```

1 % The title
2 \hspace*{6mm}{\large Perfect Meal Recipe}
3 % Can change the numbering \arabic*, \alpha*, \Alph*, \roman*
4 % Can change the font just for the numbering
5 \begin{enumerate}[label=\Roman*, font=\bfseries]
6   \item Add the following and cook for 2 minutes
7     \begin{itemize}
8       \item 1 tsp Olive Oil
9       \item 1 Cup Onion, diced
10      \item 3 cloves Garlic, minced
11      \item 1 tsp Salt
12      \item 1 Cup chopped Portobello Mushrooms
13     \end{itemize}
14   \item Add the following and stir for 2 minutes
15     \begin{itemize}
16       \item 2 TBs Curry Powder
17       \item 1 tsp Fresh Minced Ginger
18       \item 2 TBs Tomato Paste
19     \end{itemize}
20   \item Add the following and simmer for 15 minutes
21     \begin{itemize}
22       \item 1 cup uncooked Lentils
23       \item 4 cups Vegetable Broth
24     \end{itemize}
25   \item Add the following and simmer for 20 minutes
26     \begin{itemize}
27       \item 2 cups chopped Carrots
28       \item 4 Cups cubed Yams
29     \end{itemize}
30   \item Add the following and cook for 10 minutes
31     \begin{itemize}
32       \item 2 cups boiled diced Collard Greens
33       \item 1 cup frozen diced Spinach
34     \end{itemize}
35 \end{enumerate}

```

---

## 10.3 Definition List

**Philtrum** The vertical groove on the median line of the upper lip

**Darkle** Becoming cloudy or dark

**Pogonotrophy** Growing and grooming a beard or other facial hair

**Interrobang** A punctuation mark designed for use especially at the end of an exclamatory rhetorical question; usually written as ?!

```

1 \begin{description}
2   \item[Philtrum] The vertical groove on the median line of the upper lip
3   \item[Darkle] Becoming cloudy or dark
4   \item[Pogonotrophy] Growing and grooming a beard or other facial hair
5   \item[Interrobang] A punctuation mark designed for use especially at
6     the end of an exclamatory rhetorical question; usually written as ?!
7 \end{description}

```

## 11 Tables

### 11.1 E.g. tabbing

Customer Name	Street	City
Derek Banas	123 Main St	Pittsburgh

```

1 \begin{tabbing}
2
3 % On setup row define where tabs occur and the space to set aside
4 Customer \= Name \hspace*{1.5cm} \= Street \hspace*{1.5cm} \= City \\
5
6 % \> Jumps to the next tab
7 \> Echo \> 123 Main St \> Toronto \\
8 \end{tabbing}

```

### 11.2 E.g. Tables, Type Emphasis & Fonts

Below is an example of a more complex table:

To fix the floating problem (the table will appear before the title), use `\usepackage{float}`, and add the `[H]` parameter after `\begin{table}`.

Name	Command	Sample Text
emphasize	<code>\emph</code>	<i>abcdefgh</i>
italic	<code>\textit</code>	<i>abcdefgh</i>
slanted	<code>\textbf</code>	<b>abcdefgh</b>
bold	<code>\emph</code>	<i>abcdefgh</i>
small capped	<code>\textsc</code>	ABCDEFGH
medium	<code>\textmd</code>	abcdefgh
upright	<code>\textup</code>	abcdefgh
roman family	<code>\textrm</code>	abcdefgh
sans serif	<code>\textsf</code>	abcdefgh
typewriter	<code>\texttt</code>	abcdefgh
combo	<code>\textup{\textbf{}}</code>	<b><i>abcdefgh</i></b>

Table 1: Ways to emphasize text

```

1 % Wrap a table around tabular to make captions
2 % Use the [H] parameter to avoid floating
3 \begin{table}[H]
4 \center
5 % Define a table with 3 left aligned columns
6 % Use c : Center) or r : Right
7 % The center | creates a vertical line
8 \begin{tabular}{l|l|l}
9 % Draw horizontal line
10 % \usepackage{booktabs} provides different line thicknesses
11 % \toprule, \midrule, \bottomrule
12 \hline
13
14 % '&' Defines the breaks in the table
15 \textbf{Name} & \textbf{Command} & \textbf{Sample Text} \\
16 \hline
17
18 % \verb| | allows you to type commands
19 emphasize & \verb|\emph| & \emph{abcdefgh} \\
20 italic & \verb|\textit| & \textit{abcdefgh} \\
21 slanted & \verb|\textbf| & \textbf{abcdefgh} \\
22 bold & \verb|\emph| & \emph{abcdefgh} \\
23 small capped & \verb|\textsc| & \textsc{abcdefgh} \\
24 medium & \verb|\textmd| & \textmd{abcdefgh} \\
25 upright & \verb|\textup| & \textup{abcdefgh} \\
26 roman family & \verb|\textrm| & \textrm{abcdefgh} \\
27 sans serif & \verb|\textsf| & \textsf{abcdefgh} \\
28 typewriter & \verb|\texttt| & \texttt{abcdefgh} \\
29 combo & \verb|\textup{\textbf{}}| & \textit{\textbf{abcdefgh}} \\
30 \end{tabular}
31 \caption{Ways to emphasize text}
32 \end{table}

```

### 11.3 E.g. Leave some columns blank & merge others

An example of leaving some columns blank and merge others:

Name		Age
First	Last	
Derek	Banas	44
Sally	Smith	42



```

1 % Use the [H] parameter to avoid floating
2 \begin{table}[H]
3 \center
4 % '@{} ' defines the space before the column
5 % having nothing between the {} means I want no space
6 % Create 3 columns
7 \begin{tabular}{@{}*3l@{}}
8
9 % Take up to columns with Name and 1 with age
10 \multicolumn{2}{c}{Name} &
11 \multicolumn{1}{c}{Age}\\
12
13 % Add headers with the last left blank
14 First & Last & \\
15 \hline
16 Derek & Banas & 44\\
17 Sally & Smith & 42\\
18 \end{tabular}
19 \end{table}

```

---

## 12 Accent Characters

These is a package that allows you to enter accented characters:

`\usepackage[utf8]{inputenc}` on Linux/MacOS and  
`\usepackage[latin1]{inputenc}` on Windows.

Some examples:

á ê ‘o ü à ò ñ ã ä å ö ç ñ ì

## 13 Type Emphasis

### 13.1 Simple Example

```

1 % Abbreviate listing in table of contents to just Type and make sans
  serif font
2 % I use label here so I can refer to this section later
3 \section[Type]{\textsf{Type Emphasis \& Sizing}} \label{sec:typeemp}

```

Result:

### Type Emphasis & Sizing

---

### 13.2 Quote

“I like long walks, especially when they are taken by people who annoy me.” - Fred Allen

```

1 % Create quotes
2 \begin{quote}
3 "I like long walks, especially when they are taken by people who annoy me
4 .''
5 - Fred Allen
6 \end{quote}

```

---

## 14 Math Formulas

Add the package `\usepackage{amsmath}`

List of LaTeX Symbols [http://www.rpi.edu/dept/arc/training/latex/LaTeX\\_symbols.pdf](http://www.rpi.edu/dept/arc/training/latex/LaTeX_symbols.pdf)

### 14.1 E.g. Quadratic Equation

$$ax^2 + bx + c = 0$$

```

1 % Quadratic Equation
2 % flalign* with formula surrounded with &s makes it left justified
3 \begin{flalign*}
4 & ax^2 + bx + c = 0 &\&
5 \end{flalign*}

```

---

#### 14.1.1 Place a Formula in Text

This  $ax^2 + bx + c = 0$  is the quadratic equation

```

1 This \(\ ax^2 + bx + c = 0 \) is the quadratic equation

```

---

#### 14.1.2 \$ Tex Shortcut

Formula:  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

```

1 Formula: $x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$

```

---

## 14.2 Matrices

$$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$$

```
1 $\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$
```

## 14.3 Integrals

$$\Delta x = \int_{t_0}^{t_1} v(t) dt$$

```
1 $\Delta x = \int_{t_0}^{t_1} v(t) dt$
```

## 14.4 Limits

$$\lim_{x \rightarrow 0} \frac{1}{x} = \infty$$

```
1 $\lim_{x \rightarrow 0} \frac{1}{x} = \infty$
```

## 14.5 Summations

$$e^x = \sum_{n=0}^{\infty} \frac{x^n}{n!}$$

```
1 $e^x = \sum_{n=0}^{\infty} \frac{x^n}{n!}$
```

## 14.6 Some Commonly Used Symbols

Command	Sample Text
<code>\alpha</code>	$\alpha$
<code>\beta</code>	$\beta$
<code>\gamma</code>	$\gamma$
<code>\delta</code>	$\delta$
<code>\epsilon</code>	$\epsilon$
<code>\zeta</code>	$\zeta$
<code>\theta</code>	$\theta$
<code>\vartheta</code>	$\vartheta$
<code>\lambda</code>	$\lambda$
<code>\Lambda</code>	$\Lambda$
<code>\mu</code>	$\mu$
<code>\nu</code>	$\nu$
<code>\xi</code>	$\xi$
<code>\Xi</code>	$\Xi$
<code>\pi</code>	$\pi$
<code>\Pi</code>	$\Pi$
<code>\rho</code>	$\rho$
<code>\sigma</code>	$\sigma$
<code>\Sigma</code>	$\Sigma$
<code>\tau</code>	$\tau$
<code>\upsilon</code>	$\upsilon$
<code>\Upsilon</code>	$\Upsilon$
<code>\phi</code>	$\phi$
<code>\varphi</code>	$\varphi$
<code>\Phi</code>	$\Phi$
<code>\psi</code>	$\psi$
<code>\Psi</code>	$\Psi$
<code>\Omega</code>	$\Omega$
<code>\omega</code>	$\omega$

Table 2: Greek letters examples

Command	Sample Text
<code>\mathcal{A}</code>	$\mathcal{A}$
<code>\mathcal{B}</code>	$\mathcal{B}$

Table 3: Script letters examples

Command	Sample Text
<code>\mathbf{t}_0</code>	$\mathbf{t}_0$

Table 4: Subscript examples

Command	Sample Text
<code>x^2</code>	$x^2$

Table 5: Superscript examples

Command	Sample Text
<code>\vec{a}\cdot\hat{x}=a_x</code>	$\vec{a} \cdot \hat{x} = a_x$

Table 6: Vectors examples

Command	Sample Text
<code>\arccos</code>	$\arccos$
<code>\arcsin</code>	$\arcsin$
<code>\arctan</code>	$\arctan$
<code>\arg</code>	$\arg$
<code>\cos</code>	$\cos$
<code>\cosh</code>	$\cosh$
<code>\cot</code>	$\cot$
<code>\coth</code>	$\coth$
<code>\exp</code>	$\exp$
<code>\lim</code>	$\lim$
<code>\lg</code>	$\lg$
<code>\ln</code>	$\ln$
<code>\max</code>	$\max$
<code>\min</code>	$\min$
<code>\sin</code>	$\sin$
<code>\sinh</code>	$\sinh$
<code>\tan</code>	$\tan$
<code>\tanh</code>	$\tanh$

Table 7: Operators examples

Command	Sample Text
<code>\leftarrow</code>	$\leftarrow$
<code>\Leftarrow</code>	$\Leftarrow$
<code>\rightarrow</code>	$\rightarrow$
<code>\Rightarrow</code>	$\Rightarrow$
<code>\leftrightarrow</code>	$\leftrightarrow$
<code>\rightleftharpoons</code>	$\rightleftharpoons$
<code>\uparrow</code>	$\uparrow$
<code>\downarrow</code>	$\downarrow$
<code>\Uparrow</code>	$\Uparrow$
<code>\Downarrow</code>	$\Downarrow$
<code>\Leftrightarrow</code>	$\Leftrightarrow$
<code>\Updownarrow</code>	$\Updownarrow$
<code>\mapsto</code>	$\mapsto$
<code>\longmapsto</code>	$\longmapsto$
<code>\nearrow</code>	$\nearrow$
<code>\searrow</code>	$\searrow$
<code>\swarrow</code>	$\swarrow$
<code>\nwarrow</code>	$\nwarrow$
<code>\leftharpoonup</code>	$\leftharpoonup$
<code>\rightharpoonup</code>	$\rightharpoonup$
<code>\leftharpoondown</code>	$\leftharpoondown$
<code>\rightharpoondown</code>	$\rightharpoondown$

Table 8: Arrows examples

Command	Sample Text
<code>\geq</code>	$\geq$
<code>\gg</code>	$\gg$
<code>\leq</code>	$\leq$
<code>\ll</code>	$\ll$
<code>\neq</code>	$\neq$

Table 9: Relational Operators examples

Command	Sample Text
<code>\approx</code>	$\approx$
<code>\asymp</code>	$\asymp$
<code>\bowtie</code>	$\bowtie$
<code>\cong</code>	$\cong$
<code>\dashv</code>	$\dashv$
<code>\doteq</code>	$\doteq$
<code>\equiv</code>	$\equiv$
<code>\frown</code>	$\frown$
<code>\mid</code>	$\mid$
<code>\models</code>	$\models$
<code>\parallel</code>	$\parallel$
<code>\perp</code>	$\perp$
<code>\prec</code>	$\prec$
<code>\preceq</code>	$\preceq$
<code>\propto</code>	$\propto$
<code>\sim</code>	$\sim$
<code>\simeq</code>	$\simeq$
<code>\smile</code>	$\smile$
<code>\succ</code>	$\succ$
<code>\succeq</code>	$\succeq$
<code>\vdash</code>	$\vdash$

Table 10: Binary Operation/Relation Symbols examples

## 15 Custom Commands

We could define our own commands by the form :

`\newcommand{Command Name}{Content}`

But make sure to put it in the beginning.

```

1 % Will show 'New Think Tank' if type \NTT\
2   \newcommand{\NTT}{New Think Tank}
3
4 % Will show 'New Think Tank' in bold if type \NTTB\
5   \newcommand{\NTTB}{\textbf{New Think Tank}}
6
7 % Will apply the font to the text if type '\typew{typewriter} '
8   \newcommand{\typew}[1]{\texttt{#1}}
```

## 16 Text Boxes & Justification

### 16.1 Centering the text

Sample Text Sample Text Sample Text Sample Text

```

1 {\centering
2 Sample Text Sample Text Sample Text Sample Text\\
3 }

```

## 16.2 Justified Column

I used to	Always	I always	When I
think I was	remember	wanted to	was a kid
indecisive,	that you're	be	my parents
but now	unique.	somebody,	moved a
I'm not	Just like	but I	lot, but I
too sure.	everyone.	should	always
		have been	found
		more	them.
		specific.	

```

1 % Create a fully justified column 4cm wide
2 % \parbox{4cm}{I used to think I was indecisive, but now I'm not too sure
3 % [t]{2cm} aligns to top, [b] aligns to bottom, [s] stretches vertically,
4 % \quad adds horizontal spacing between the boxes
5 \quad\parbox{2cm}{I used to think I was indecisive, but now I'm not too
6 % You can define hyphenation with\
7 \quad\parbox{2cm}{Always re\mem\ber that you're unique. Just like
8 % raggedright eliminates justification and hyphenation (Justifies Left)
9 % You can do this document wide if typed in the preamble
10 \quad\parbox{2cm}{\raggedright I always wanted to be somebody, but I
11 % raggedleft eliminates justification and hyphenation (Justifies Right)
12 \quad\parbox{2cm}{\raggedleft When I was a kid my parents moved a lot,
    but I always found them. }

```

## 17 Referencing

### 17.1 Footer Referencing

The answer you're looking for is inside of you, but it's wrong.<sup>2</sup>

```

1 % You can add footnotes and override the numbering
2 The answer you're looking for is inside of you, but it's wrong.\footnote
    [2]{author unknown}

```

---

<sup>2</sup>author unknown



## 17.2 Table Referencing

There is a great table on Greek letter symbols is in section 2 on page 19

```
1 There is a great table on Type Emphasis is in this section~\ref{sec:
  typeemp} on page~\pageref{sec:typeemp}
```

---

## 17.3 Image Referencing

There is a pretty picture in section 1 on page 10

```
1 There is a pretty picture in section~\ref{fig:prettypic} on page~\pageref
  {fig:prettypic}
```

---

## 17.4 Bibliograph

How I learned my ABCs [1].

## References

[1] Walter Abish *The Alphabetical Africa*, 1974

```
1 % Listing references in a bibliography
2 How I learned my ABCs \cite{ABCAFR}.
3
4 % Generate the bibliograph elsewhere in this document
5 \begin{thebibliography} {books}
6 \bibitem{ABCAFR} Walter Abish \emph{The Alphabetical Africa}, 1974
7 \end{thebibliography}
```

---

## 17.5 Index Referencing

Add the package:

`\usepackage{index}`

`\makeindex`

Remember to choose 'Makeindex' under Typeset.

Example:

When I was born I was so ugly the doctor slapped my mother - Rodney Dangerfield

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
1 When I was born I was so ugly the doctor slapped my mother - {\index{
   Rodney}Rodney Dangerfield}
2 \\
3 \blindtext[1]
4 \clearpage
5 \addcontentsline{toc}{chapter}{Index}
6 \printindex
```