

this is a title

pl and 0x00-pl

the date is today

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## 1 section 0 哈哈 L<sup>A</sup>T<sub>E</sub>X

L<sup>A</sup>T<sub>E</sub>X

## 2 compile

### 2.1 MakeFile

```
latex hello-latex.text
dvi2pdf hello-latex.dvi
```

### 2.2 sections

```
\section
\subsection
\subsubsection
\paragraph
\subparagraph
```

#### 2.2.1 set section counter

```
\setcounter{section}{3}
```

## 3 contents 你好 L<sup>A</sup>T<sub>E</sub>X

**first contents** 你好 L<sup>A</sup>T<sub>E</sub>X

You can mix latin letters and chinese.

## 4 strings

this is some text of content of “this” subsection.  
this is another line of content.

## 5 formulas

$$B^2 = \mathbf{B} \times B$$

$A[3]$  is  $A_3$

## 6 left and right

```
\raggedright{text on left}
```

```
\begin{flushleft}
flushleft
\end{flushleft}
```

```
\raggedleft{text on right}
```

```
\begin{flushright}
flushright
\end{flushright}
```

```
\centering{centering}

\begin{center}
center
\end{center}
```

## 7 something verbatim

some thing verbatim, which without escape `\\ /23454234$&%^&^(*^\z@%@#$$%`

## 8 colors



Figure 1: [title of image](#)

## 9 images



Figure 2: 2 images

## 10 size and fount

### 10.1 size

tiny  
footnotesize  
small  
normalsize  
large  
Large  
LARGE  
huge

### 10.2 fount

testnormal normalfont  
**testtt** ttfamily  
**testbf** bfseries  
*testit* itshape

## 11 lists

- item 1
- item 2

## 12 turn and rotate

see the difference:

prev line

turn  $30^\circ$  deg

and rotate  $\frac{30}{deg}$   
nextline

## 13 tables

### 13.1 tabular

this is a tabular:

3×3 matrix			ex		
11	12	13			
21	22	23	1111	1111	1111
31	32	33	34	35	36

## 14 vector image: gnuplot

### 14.1 set format

set term postscript eps enhanced color font 'Times. 24' set output 'sin.eps'

### 14.2 plot sin

plot sin(x)

### 14.3 save file

set term x11 set output

#### 14.3.1 import

use graphicx package and includegraphics command

## 15 notation and referance

### 15.1 structure

```
\lable{marker} % define marker
...
\ref{marker} % ref marker
...
\pageref{marker} % page of marker
```

we can ref the (figure:2img): 9  
at page: 5

## 15.2 more on figure

on

```
\begin{figure}[!t]
```

the `[!t]` notation means force the image shows on the top of the page.

ps:

`[!h]` means put it here.

`[!t]` means put it on top.

`[!b]` means put it on bottom.

`[!p]` means put it into another page.

## 15.3 footnote

this is the footnote <sup>1</sup>

## 15.4 hyper link

use the package 'hyperref'

```
\url{http://the.url.is.here}
```

```
\href{http://there.is.another.url} {the link title or some discription}
```

# 16 common errors – part 4 of the lecture

## 16.1 errors and warings

`{}` miss match: Too many `}`'s

letter wrong like `\dtae{Mar.2014}`: Undefined control sequence

not in math mode: Not in Mathematics Mode.

image or box are too large: Bad Boxes!

missing packages: Missing Packages

## 16.2 lengths

normally don't override `textlength` setting or something like that.

## 16.3 counters

not normally used

## 16.4 boxes

add box on the text or `\s`omething

use `\framebox`

---

<sup>1</sup>the footnote text is here

## 16.5 rules and struts

make some area black or something like that  
using `\rule` command

## 17 mathematics and computers – part 5 of the lecture

### 17.1 methmatics packages and useage

```
\usepackage{amsmath}  
\usepackage{amssymb}  
\usepackage{amsthm}
```

inline math:

$a + a$  &  $b + b$

multi line:

$$c + c$$

&

$$d + d$$

*Proof.* proof of something.  
proof detail.

□

### 17.2 computers heigh light

```
\uspackage{listings}  
\uspackage{color}
```

```
\definecolor{myred}{rgb}{0.5, 0, 0}  
\definecolor{mygreen}{rgb}{0, 0.5, 0}  
\definecolor{myblue}{rgb}{0, 0, 0.5}
```

```
public class Factorial  
{  
    public static void main(String[] args)  
    { ... }  
    public static int factorial(int n)  
    { ... }  
}
```



## 18 chem and language – part 6

### 18.1 chem

```
\uspackage[version=3]{mhchem}  
\uspackage{chemfig}
```

```
\chemfig{  
  *6(=([:270]-\ce {N02})-([:45]-\ce {N02})-(-)=([:135]-\ce {N02})-)  
}
```

### 18.2 language

```
\usepackage{qtree}  
\Tree [.S  
  [.NP Kurisu]  
  [.VP [.V is]  
    [.NP beauty]]  
]
```

gb4e package for translation.  
tipa package for sound notation.

## 19 special pages & documents – part 7

### 19.1 index term and reference

usepackage {makeidx}  
example index  
use \makeindex before \begin{document}  
use \printindex at document end.  
reference file use Bib file format.

### 19.2 letter ppt homework and pr

#### 19.2.1 letter

change \documentclass{ ... } to {letter}. and it will give some special command as usable.

#### 19.2.2 ppt

use documentclass {beamer} for ppt  
\begin{frame} ... \end{frame}  
for each page.



### **19.2.3 homework**

```
homework use documentclass {exam} with
\begin{questions}
\question Is this a question.
\begin{solution}
Yes
\end{solution}
\end{questions}
```

### **19.2.4 pr**

pr using L<sup>A</sup>T<sub>E</sub>Xus usful.

## **20 creating graphics**

### **20.1 picture**

picture tools

### **20.2 gnuplot**

```
set term post eps
set output 'xxx.eps'
...
set term x11
set output
```

## 21 ending

### 21.1 programming

```
\newcommand{\wbal}{The Wikibook about \LaTeX}  
This is "\wbal" . "\wbal"
```

```
\newenvironment{king}  
{ \rule{1ex}{1ex}\hspace{\stretch{1}} }  
{ \hspace{\stretch{1}}\rule{1ex}{1ex} }
```

This is "The Wikibook about L<sup>A</sup>T<sub>E</sub>X" . "The Wikibook about L<sup>A</sup>T<sub>E</sub>X"