

# LaTeX Annotated Reference

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# Part I.

## Minimal working example

```
% Preamble %%%%%%%%%%%%%%

\documentclass{article}
\title{LaTeX Reference Notes}
\author{Thiago Scarelli}

\begin{document} %%%%%%%%%%%%%%

\maketitle

Text

\end{document} %%%%%%%%%%%%%%
```

# Part II.

## General document structure

### 1. Section

`\section{Section}`

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque.

#### 1.1. Subsection

`\subsection{Subsection}`

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis.

##### 1.1.1. Subsubsection

`\section{Subsubsection}`

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit.

**Titled paragraph** Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst.

`\paragraph{Titled paragraph}`

# Part III.

## Examples

### 2. Text

#### 2.1. Font style

|                               |    |                            |                           |
|-------------------------------|----|----------------------------|---------------------------|
| <code>{\itshape text}</code>  | or | <code>\textit{text}</code> | <i>Italic font shape</i>  |
| <code>{\slshape text}</code>  | or | <code>\textsl{text}</code> | <i>Slanted font shape</i> |
| <code>{\scshape text}</code>  | or | <code>\textsc{text}</code> | SMALL CAPITALS FONT SHAPE |
| <code>{\bfseries text}</code> | or | <code>\textbf{text}</code> | <b>Bold font series</b>   |
| <code>{\sffamily text}</code> | or | <code>\textsf{text}</code> | Sans-serif font family    |
| <code>{\ttfamily text}</code> | or | <code>\texttt{text}</code> | Monospace font family     |

Shapes, series and families are commutative properties (e.g. you can have italic bold sans-serif text).

#### 2.2. Font family

**Roman** `\textrm{text}`

Lorem ipsum dolor sit amet, consectetur adipiscing elit. **Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.** Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. *Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas.*

**Sans-serif** `\textsf{text}`

Lorem ipsum dolor sit amet, consectetur adipiscing elit. **Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.** Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. *Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas.*

**Monospace** `\texttt{text}`

Lorem ipsum dolor sit amet, consectetur adipiscing elit. **Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.** Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. *Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas.*

## 2.3. Font size

|                            |                            |
|----------------------------|----------------------------|
| <code>\tiny</code>         | Lorem ipsum dolor sit amet |
| <code>\scriptsize</code>   | Lorem ipsum dolor sit amet |
| <code>\footnotesize</code> | Lorem ipsum dolor sit amet |
| <code>\small</code>        | Lorem ipsum dolor sit amet |
| <code>\normalsize</code>   | Lorem ipsum dolor sit amet |
| <code>\large</code>        | Lorem ipsum dolor sit amet |
| <code>\Large</code>        | Lorem ipsum dolor sit amet |
| <code>\LARGE</code>        | Lorem ipsum dolor sit amet |
| <code>\huge</code>         | Lorem ipsum dolor sit amet |
| <code>\Huge</code>         | Lorem ipsum dolor sit amet |

## 2.4. Text color

`\usepackage{xcolor}` [\[ctan\]](#)

|                                      |                               |
|--------------------------------------|-------------------------------|
| <code>\textcolor{green}{text}</code> | text in green                 |
| <code>\textcolor{main}{text}</code>  | text in predefined main color |

|   |                                  |
|---|----------------------------------|
| <code>\colorbox{light-yellow}{\color{dark-red} text}</code> | dark red text on yellow colorbox |
|---|----------------------------------|

## 2.5. Lists

**Itemize** `\begin{itemize} \item text \end{itemize}`

- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi.
- Nulla malesuada porttitor diam.

**Enumerate** `\begin{enumerate} \item text \end{enumerate}`

1. Quisque ullamcorper placerat ipsum.
2. Fusce mauris.
3. Suspendisse vel felis.

**Description** `\begin{description} \item text \end{description}`

**Name of something** Sed commodo posuere pede.

**Another something** Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Donec odio elit, dictum in, hendrerit sit amet, egestas sed, leo.

**Another something** Morbi luctus, wisi viverra faucibus pretium, nibh est placerat odio, nec commodo wisi enim eget quam.

## 2.6. Paragraph alignment

**Aligned right** `{\raggedleft \text \par}`

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus.

**Aligned center** `{\centering \text \par}`

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus.

**Aligned left** `{\raggedright \text \par}`

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus.

## 2.7. Framed boxes

**Short sentences** `\fbox{ text }` Suspendisse vitae elit.

**Adjust padding** `\setlength{\fboxsep}{5ex} \fbox{ text }`

Suspendisse vitae elit.

**Minipage** `\fbox{\begin{minipage}[pos][height][cpos]{width} text \end{minipage}}`

**pos** selects the reference baseline (**top**, **bottom**, or **center**) and **cpos** positions the contents within the box (**center**, **top**, **bottom** or **spread**, but has no effect if the box is not larger than its contents).

## 2.8. Verbatim

**Short sentences** `\verb|text|`

**Multiline environment** `\begin{verbatim} text \end{verbatim}`

this is a multiline verbatim environment

special characters are turned off.

## 2.9. Columns

`\usepackage{multicol}` [\[ctan\]](#)

**Balanced columns** `\begin{multicols}{n} text \end{multicols}`

|   |  |   |   |
|---|--|---|---|
| Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, | magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi | auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit | mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. |
|---|--|---|---|

**Define a column break point** `\columnbreak`

|   |  |  |  |
|---|--|--|--|
| Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, | tesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Nam | dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac | orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. |
|---|--|--|--|

**Unbalanced columns** `\begin{multicols*}{n} text \end{multicols*}`

|   |   |  |
|---|---|--|
| Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. | Mauris ut leo. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. | Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. |
|---|---|--|



### 3. Typesetting Math

`\usepackage{mathtools}` [\[ctan\]](#)

`\usepackage{amsfonts}` [\[ctan\]](#)

`\usepackage{bbm}` [\[ctan\]](#)

`\usepackage{bm}` [\[ctan\]](#)

**Inline math** `\( math \)`  $y_i = \beta_0 + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + u_i$

**Displayed math** `\[ math \]`

$$y_i = \beta_0 + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + u_i$$

**Displayed math with numbered equations** `\begin{equation} math \end{equation}`

$$y_i = \beta_0 + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + u_i \tag{1}$$

**Consecutive equations** `\begin{gather} math 1 \\ math 2 \end{gather}`

$$y_i = \beta_0 + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + u_i \tag{2}$$

$$y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + u_i \tag{3}$$

**Aligned equations** `\begin{align} start & math 1 \\ start & math 2 \end{align}`

$$y_i = \beta_0 + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + u_i \tag{4}$$

$$y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + u_i \tag{5}$$

**Blackboard symbols** `\( \mathbb{A} > \mathbb{B} > \mathbb{C} \)`  $A > B > C$

**Bold symbols** `\( \bm{\alpha} > \bm{\beta} \)`  $\alpha > \beta$

## 4. Floats

```
\usepackage{graphix} [ctan]
```

```
\usepackage{float} [ctan]
```

```
\usepackage[font = small, labelfont = bf, labelsep = colon,
justification = centerlast]{caption} [ctan]
```

The placement specifier [H] overrides the program default and places the float *here*.

### 4.1. Figures

```
\begin{figure}[H]
\centering
\caption{Bassin de la Seine}
\label{fig:seine}
\includegraphics[width=.9\textwidth]{seine.png}
\end{figure}
```

**Figure 1: Bassin de la Seine**



### 4.2. Tables

```
\begin{table}[H]
\caption{Bookmark table}
\label{tab:table_a}
\centering
\begin{tabular}{lr}
\toprule
a & b \\
\midrule
1 & 2 \\
3 & 4 \\
5 & 6 \\
\bottomrule
\end{tabular}
\end{table}
```

**Table 1: Simple bookmark table**

| a | b |
|---|---|
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |

#### 4.2.1. Table with notes, special number alignment

```

\usepackage[flushleft, para]{threeparttable} [ctan]
\usepackage{threeparttablex} [ctan]
\usepackage{dcolumn} [ctan]

\usepackage{dcolumn}
\newcolumnntype{d}[1]{D{.}{.}{#1}}

% Bottom notes
\begin{ThreePartTable}
\begin{TableNotes}[flushleft]
\item Source: Author's calculation.
\end{TableNotes}

% Table caption, head and foot
\begin{longtable}{l d{3} d{3} d{3} }
\caption{Table with note, special number alignment} \label{summary_N} \\
\toprule\midrule
& \textbf{W} & \textbf{X} & \textbf{Y} \\
\midrule
\endhead
\endfoot
\midrule\bottomrule
\insertTableNotes
\endlastfoot

% Table body
Variable A & 7.3 & (1.0) & 61 \\
Variable B & 29.76 & (12.917) & 59.917 \\
Variable C & -0.179 & (0.1) & 1.2 \\

% Closing
\end{longtable}
\end{ThreePartTable}

```

**Table 2: Table with note, special number alignment**

|            | <b>W</b> | <b>X</b> | <b>Y</b> |
|------------|----------|----------|----------|
| Variable A | 7.3      | (1.0)    | 61       |
| Variable B | 29.76    | (12.917) | 59.917   |
| Variable C | -0.179   | (0.1)    | 1.2      |

Source: Author's calculation.

## 5. References

### 5.1. Links

`\usepackage{hyperref}` [\[ctan\]](#)

`\hypersetup{colorlinks = true, citecolor = blue, urlcolor = blue, linkcolor = blue}`

**Common uses** `\href{link}{text}` [Wikibook on LaTeX](#)

### 5.2. Cross references

`\usepackage[nameinlink, noabbrev]{cleveref}` [\[ctan\]](#)

**Common uses** `\cref{label}` See [table 1](#). See [figure 1](#). See [section 5](#).

### 5.3. Footnotes

`\usepackage[flushmargin, hang, bottom, stable, multiple]{footmisc}` [\[ctan\]](#)

`\setlength{\footnotemargin}{.8em}`

`\setlength{\footnotesep}{1\baselineskip}`

**Common uses** `\footnote{Footnote}` Some text<sup>1</sup> and more text.<sup>2</sup>

---

<sup>1</sup> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque.

<sup>2</sup> Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis.

## 6. Other topics

### 6.1. Page layout

`\usepackage[a4paper, centering, hmargin = 3cm, vmargin = 3cm]{geometry}` [\[ctan\]](#)

### 6.2. Units

|                       |    |   |
|-----------------------|----|---|
| <b>Fixed measures</b> | pt | Anglo-American points (inch = 72.27 pt) |
|                       | cm | centimeters (inch = 2.54 cm)            |
|                       | mm | millimeters (inch = 25.4 mm)            |
|                       | in | inches                                  |

|                          |    |                               |
|--------------------------|----|-------------------------------|
| <b>Relative measures</b> | em | ems of the current point size |
|                          | ex | x-height of the current font  |

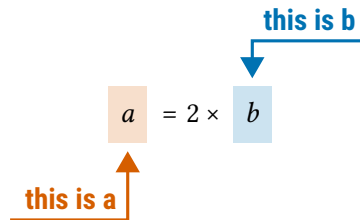
### 6.3. White space

|                         |  |          |
|-------------------------|--|----------|
| <code>\thinspace</code> |  | 1/6 em   |
| <code>\enspace</code>   |  | 1/2 em   |
| <code>\quad</code>      |  | 1 em     |
| <code>\qquad</code>     |  | 2 em     |
| <code>\hspace{#}</code> |  | # = 4 em |

## 7. Tikz

### 7.1. Annotated equations

Heavily inspired by [\[annotated latex equations\]](#).



The diagram shows the equation  $a = 2 \times b$ . The variable  $a$  is enclosed in an orange square, and the variable  $b$  is enclosed in a blue square. An orange arrow points from the text "this is a" to the orange square. A blue arrow points from the text "this is b" to the blue square.

$$\boxed{a} = 2 \times \boxed{b}$$

## 8. Bibliography management

```
\usepackage[authordate, backend = biber, abbreviate = false, date = year,  
isbn = false, hyperref = false]{biblatex-chicago}
```

```
\setcounter{biburllcpenalty}{9000} % Break long sequences
```

```
\addbibresource{references.bib} % Bibliography file \[ctan\]
```

|                    |                                     |                       |
|--------------------|-------------------------------------|-----------------------|
| <b>Common uses</b> | <code>\cite{gratzer_1996}</code>    | Gratzer 1996          |
|                    | <code>\textcite{flynn_2005}</code>  | Flynn (2005)          |
|                    | <code>\parencite{kopka_2004}</code> | (Kopka and Daly 2004) |

To print all bibliographic entries, add `\nocite{*}` before `\printbibliography`

### References

Flynn, Peter. 2005. *Formatting Information: A Beginner's Introduction to Typesetting with LaTeX*.

Gratzer, George A. 1996. *Math into LaTeX: An Introduction to LaTeX and AMS-LaTeX*. Boston: Birkhäuser.

Kopka, Helmut, and Patrick W. Daly. 2004. *Guide to LaTeX*. 4th ed. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Boston: Addison-Wesley.

Mittelbach, Frank, Michel Goossens, Johannes Braams, Chris Rowley, and David Carlisle. 2004. *The LaTeX Companion*. 2nd ed. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Boston: Addison-Wesley.

Oetiker, Tobias, Hubert Partl, Irene Hyna, and Elisabeth Schlegl. 2021. *The Not So Short Introduction to LaTeX 2e*. <https://ctan.org/pkg/lshort>.

## A. Advanced example: Editing an environment

```
% Format abstract environment
\renewenvironment{abstract}
{\small
\begin{center}
\bfseries\abstractname\vspace{-.5em}\vspace{opt}
\end{center}
\list{}{
\setlength{\leftmargin}{2cm}%
\setlength{\rightmargin}{\leftmargin}%
}%
\item\relax}
{\endlist}
```

**Common use** `\begin{abstract} \lipsum[1] \end{abstract}`

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.



## B. Preamble for this document

```
%%%%%%%%%  
% Preamble %  
%%%%%%%%%
```

```
% Page layout
```

```
\documentclass[paper = a4, fontsize = 11pt, headings = big, numbers = endperiod, captions = head]  
\usepackage[vmargin = 1in, hmargin = 1in]{geometry}
```

```
% Base fonts
```

```
\usepackage{libertinus} % rm  
\usepackage{libertinust1math} % rm math support  
\usepackage[condensed]{roboto} % sf  
\renewcommand{\seriesdefault}{m} % fix missing italics of roboto condensed  
\usepackage[scale=.9]{FiraMono} % tt
```

```
% Encoding
```

```
\usepackage[T1]{fontenc}  
\usepackage[utf8]{inputenc}
```

```
% Language
```

```
\usepackage[english]{babel}
```

```
% Paragraphs
```

```
\setlength{\parindent}{0pt} % Indentation  
\setlength{\parskip}{\medskipamount} % Space between paragraphs  
\usepackage{setspace}  
\setstretch{1}% Spacing between lines
```

```
% Columns
```

```
\usepackage{multicol}
```

```
% Control of widows and orphans
```

```
\widowpenalty = 10000  
\clubpenalty = 10000
```

```
% Colors
```

```
%%%%%%%%%
```

```
\usepackage[dvipsnames]{xcolor}  
\definecolor{main}{RGB}{0,114,178}
```

```
% As per Wong's color blindness scheme (www.nature.com/articles/nmeth.1618)
```

```
\definecolor{orange}{RGB}{230,159,0}  
\definecolor{light-blue}{RGB}{86,180,233}  
\definecolor{green}{RGB}{0,158,115}  
\definecolor{yellow}{RGB}{240,228,66}  
\definecolor{blue}{RGB}{0,114,178}  
\definecolor{red}{RGB}{213,94,0}  
\definecolor{purple}{RGB}{204,121,167}
```

```
% Additions
```

```
\definecolor{dark-blue}{RGB}{0,51,102}  
\definecolor{dark-red}{RGB}{139,0,0}  
\definecolor{dark-green}{RGB}{0,100,80}  
\definecolor{dark-purple}{RGB}{90,0,90}
```

```

\definecolor{brown}{RGB}{166,86,40}

\definecolor{gray}{gray}{0.50}
\definecolor{dark-gray}{gray}{0.40}
\definecolor{light-gray}{gray}{0.95}

\definecolor{plot-red}{HTML}{C71E1D}
\definecolor{plot-light-blue}{HTML}{18A1CD}
\definecolor{plot-blue}{HTML}{1D81A2}
\definecolor{plot-dark-blue}{HTML}{15607A}
\definecolor{plot-light-green}{HTML}{00DCA6}
\definecolor{plot-green}{HTML}{09BB9F}
\definecolor{plot-dark-green}{HTML}{009076}
\definecolor{plot-gray}{HTML}{C4C4C4}
\definecolor{plot-dark-red}{HTML}{C71E1D}
\definecolor{plot-orange}{HTML}{FA8C00}

% Floats
%%%%%%%%%%

\usepackage{graphicx, float, wrapfig}

% Space above and below floats
\setlength{\intextsep}{1\baselineskip}
\setlength{\textfloatsep}{1\baselineskip}

% Captions
\setkomafont{caption}{\small\sffamily\bfseries}
\setkomafont{captionlabel}{\small\sffamily\bfseries}

\usepackage{caption}
\captionsetup{justification = centerlast, width = 0.85\textwidth}
\newcommand\notebelow[1]{\setkomafont{caption}{\footnotesize}\captionbelow*{#1}}

% Tables
%%%%%%%%%%

\usepackage{array, multirow, subcaption, makecell, colortbl}
\usepackage{booktabs} % Use toprule, midrule and bottomrule
\usepackage{longtable} % Span multiple pages
\usepackage{pdflscape} % Use landscape pages
\usepackage{flushleft, para}{threeparttable}
\usepackage{threeparttablex} % Add notes under a longtable

% Centered column with given decimal places: d{#}
\usepackage{dcolumn}
\newcolumntype{d}[1]{D{.}{.}{#1}}

% Columns with fixed width: L{} C{} R{}
\newcolumntype{L}[1]{>{\raggedright\let\newline\\\arraybackslash\hspace{0pt}}m{#1}}
\newcolumntype{C}[1]{>{\centering\let\newline\\\arraybackslash\hspace{0pt}}m{#1}}
\newcolumntype{R}[1]{>{\raggedleft\let\newline\\\arraybackslash\hspace{0pt}}m{#1}}

% Math
%%%%%%%%%%

\usepackage{mathtools, amsfonts, amsmath, amsthm, amssymb}
\usepackage{bbm} % blackboard math characters with \mathbbm{}

```

```

\usepackage{bm} % bold math with \bm{}

% Spacing before and after equations
\AtBeginDocument{%
  \addtolength\abovedisplayskip{0\baselineskip}%
  \addtolength\abovedisplayskip{0\baselineskip}%
  \addtolength\belowdisplayskip{.25\baselineskip}%
  \addtolength\belowdisplayskip{.25\baselineskip}%
}

% Tikz
%%%%%%%%

\usepackage{tikz}
\usetikzlibrary{arrows, arrows.meta, backgrounds, calc, positioning, mindmap, shadows, shapes, t

% Highlighting text
\newcommand{\highlight}[2]{\fcolorbox{white}{#1!20}{$\mathrlap{\vphantom{\int}} #2$}}
\newcommand{\highlightdark}[2]{\fcolorbox{white}{#1!50}{$\mathrlap{\vphantom{\int}} #2$}}

% Spacing around highlighted item
\setlength{\fboxrule}{0.5ex}
\setlength{\fboxsep}{0.5ex}

% Default color order
\newcommand{\colora}{red}
\newcommand{\colorb}{blue}
\newcommand{\colorc}{green}

% Common parameters
\tikzset{
  every picture/.style = {
    line width = 0.25ex, > = triangle 60, <-,
    nodes = {align = center, inner ysep = 0.75ex,
    remember picture},
    font = {\sffamily\normalsize}}

% Links
%%%%%%%%

\usepackage{hyperref}
\hypersetup{colorlinks = true, allcolors = main}
\usepackage[nameinlink, noabbrev]{cleveref} % Clever cross-reference (loaded after hyperref)

% References
%%%%%%%%

\usepackage[authordate, backend = biber, abbreviate = false, date = year, isbn = false, hyperref
\addbibresource{references.bib}
\urlstyle{same} % Avoid verbatim fields in bibliography
\setcounter{biburllcpenalty}{9000} % Break number sequences

% Footnotes (overwriting Chicago's default)
\usepackage[flushmargin, hang, bottom, stable, multiple]{footmisc}
\setlength{\footnotemargin}{.8em}
\setlength{\footnotesep}{1\baselineskip}

```

% Misc

%%%%%%%%

\usepackage{soul} % highlight and underline

\sethlcolor{light-yellow}

%\overfullrule = 2cm % Highlight overfull issues

\usepackage{lipsum} % placeholder text

% \pagenumbering{gobble} % Suppress page number