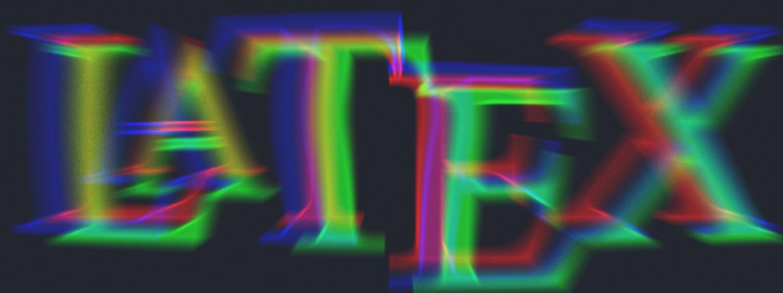


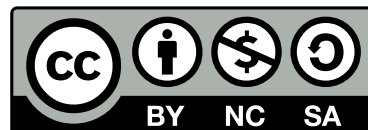
Latex in Examples



Thanks to me

Examples in this book is updated
every week.

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<pre>\begin{equation*}\label{eq1} \resizebox{.4\textwidth}{!}{ \$\dot{\rho}=\frac{x^3}{45a ,\rightarrow ^9-23b}\$} \end{equation*}</pre>	<pre>\begin{equation*}\label{eq1} \resizebox{.4\textwidth}{!}{ \$\dot{\rho}=\frac{x^3}{45a ,\rightarrow ^9-23b}\$} \end{equation*}</pre>	<pre>\begin{equation*}\label{eq1} \resizebox{.4\textwidth}{!}{ \$\dot{\rho}=\frac{x^3}{45a ^9-23b}\$} \end{equation*}</pre>
--	--	---

how

CORRECT paste code from examples

Chapter 1

Math Tips

1.1 Auto-resizing equation

$$\dot{\rho} = \frac{x^3}{45a^9 - 23b}$$

```
\begin{equation*}\label{eq1}  
\resizebox{.4\textwidth}{!}{ % change .4 to 0.5...  
$\dot{\rho}=\dfrac{x^3}{45a^9-23b}$}  
\end{equation*}
```

1.2 Form for simplest calculation

Fill with number
if it doesn't work try another PDF viewer

a:

b:

c:

$\Sigma =$

```
\documentclass{article}  
\usepackage{hyperref}  
\begin{document}  
\newcommand{\sss}[1]{this.getField("#1").value}  
\begin{Form}  
\noindent%  
Fill with number\\  
  
\TextField[name=a]{a:} \\  
  
\TextField[name=b]{b:} \\  
  
\TextField[name=c]{c:} \\  
\noindent%  
$\sum = $ \TextField[name=AvgStat, calculate={  
event.value = (  
  \sss{a} +  
  \sss{b} +  
  \sss{c}) ;  
}, readonly, value=0]{}  
\end{Form}  
\end{document}
```

1.3 Equation in the form of steps

$$\frac{n_0}{n_1} = q_1 + \frac{1}{q_2 + \frac{1}{q_3 + \frac{1}{q_4 + \dots + \frac{1}{q_{k-1} + \frac{1}{q_k}}}}$$

```
\documentclass{article}
\usepackage{amsmath}
\def\mywd{35pt}
\begin{document}
\l[
\frac{n_0}{n_1} = q_1 + \dfrac{\makebox[\mywd][l]{
  \rightarrow $1$}}
{\makebox[\mywd][l]{$q_2 + \dfrac{\makebox[\mywd][l]{
  \rightarrow $1$}}
{\makebox[\mywd][l]{$q_3 + \dfrac{\makebox[\mywd][l]{
  \rightarrow $1$}}
{\makebox[\mywd][l]{$q_4 +
\raisebox{-6pt}{$\ddots$}
\raisebox{-12pt}{$+ \dfrac{\makebox[\mywd][l]{
  \rightarrow kern30pt$}}
{q_{k-1} + \dfrac{1}{q_k}}
{q_k}}}}}}}}
\l]
\end{document}
```

1.4 One number for multiline equation

$$\begin{aligned} x_{ij} &= d_{ijk}E_k, \\ x_{ij} &= \varsigma_{ijk}H_k, \\ x_{ij} &= s_{ijkl}X_{kl}, \\ x_{ij} &= \xi_{ij}\delta p, \\ x_{ij} &= \alpha_{ij}\delta T \end{aligned} \quad (1.1)$$

```
\documentclass{article}
\usepackage{amsmath}
\begin{document}
\begin{equation}
\begin{aligned}
x_{ij} &= d_{ijk}E_k, \\
x_{ij} &= \varsigma_{ijk}H_k, \\
x_{ij} &= s_{ijkl}X_{kl}, \\
x_{ij} &= \xi_{ij}\delta p, \\
x_{ij} &= \alpha_{ij}\delta T
\end{aligned}
\end{equation}
\end{document}
```

1.5 Matrix in standalone documentclass

$$\begin{matrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{matrix}$$

```
\documentclass[preview,border={-5cm 0cm -5cm -0.1cm}]{
  \rightarrow standalone}
\usepackage{amsmath}
\begin{document}
\begin{equation*}
\begin{matrix}
a_{11} & a_{12} & a_{13} \\
a_{21} & a_{22} & a_{23} \\
a_{31} & a_{32} & a_{33}
\end{matrix}
\end{equation*}
\end{document}
```


1.6 Multiple lines, one centered label

$$A = \frac{\pi r^2}{2} = \frac{1}{2} \pi r^2 \quad (1.2)$$

```
\begin{equation} \label{eq1}
\begin{split}
A &= \frac{\pi r^2}{2} \\
&= \frac{1}{2} \pi r^2
\end{split}
\end{equation}
```

1.7 Array as a fraction

$$I - IV - V^{\frac{6-4}{4-3}} - I - cadence$$

$$I - IV - V^{\frac{6-4}{4-3}} - I - cadence$$

$$I - IV - V^{\frac{6-4}{4-3}} - I - cadence$$

```
\documentclass{article}
\usepackage{amsmath}

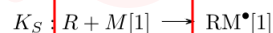
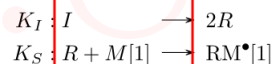
\begin{document}
$I-IV-V^{\substack{6-4\\4-3}}-I-cadence$ \\
$I-IV-V^{\genfrac{}{}{0pt}{}{6-4}{4-3}}-I-cadence$ \\
$I-IV-V^{\begin{array}{c} 6-4 \\ 4-3 \end{array}}-I- \\
\rightarrow cadence$
\end{document}
```

1.8 Aligning equations inbetween text

Photochemical:



Catalyzed:



```
\documentclass{article}
\usepackage{amsmath}

\begin{document}
\begin{alignat*}{2}
\intertext{Photochemical:}
K_{UV} & \&: M[1] \& \& \ch{->} M^{*}[1] \\
\intertext{Catalyzed:}
K_I & \&: I \& \& \ch{->} 2R \\
K_S & \&: R + M [1] \& \& \ch{->} RM^{*}[1]
\end{alignat*}
\end{document}
```

Chapter 2

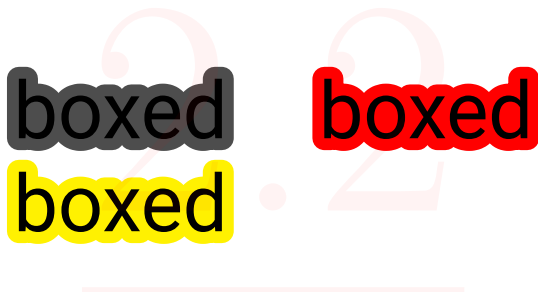
Text, Symbols

2.1 New section symbol



```
\usepackage[object=vectorian]{pgfornament}  
\usepackage{lipsum,tikz}  
\newcommand{\sectionlinetwo}[2]{%  
  \nointerlineskip \vspace{.5\baselineskip} \hspace{\fill}  
  {\color{#1}\resizebox{0.5\linewidth}{2ex}  
  {{{\begin{tikzpicture}  
    \node (C) at (0,0) {}; \node (D) at (9,0) {};  
    \path (C) to [ornament=#2] (D);  
  \end{tikzpicture}}}}}%  
  \hspace{\fill} \par \nointerlineskip  
  \vspace{.5\baselineskip}  
  %usage---> \sectionlinetwo{orange}{88}
```

2.2 Wireframe rendering



```
\documentclass{article}  
\usepackage{xcolor}  
\usepackage{roboto}  
\usepackage[outline]{contour}  
\begin{document}  
\roboto\huge\contourlength{.15em}  
\contour{gray}{boxed}  
\end{document}
```

2.3 Justified text

1. First item in a list
2. Second item in a list
3. Third item in a list
4. Fourth item in a list
5. Fifth item in a list
6. Sixth item in a list
7. Seventh item in a list
8. Eighth item in a list
9. Ninth item in a list
10. Tenth item in a list

```
\documentclass{article}
\usepackage{blindtext}
\newcommand*\justify{%
  \fontdimen2\font=0.4em% interword space
  \fontdimen3\font=0.2em% interword stretch
  \fontdimen4\font=0.1em% interword shrink
  \fontdimen7\font=0.1em% extra space
  \hyphenchar\font='- % allowing hyphenation
}

\begin{document}
\texttt{\justify\blindnumerate[10]}
\end{document}
```

2.4 Text under an underline

This is short text

(some text)

```
\documentclass[12pt]{article}
\usepackage{amsmath,soul}
\usepackage{soulpos}
\ulposdef{\ulnumaux}{%
$\underset{\saveulnum}{\rule[-.7ex]{\ulwidth}{.4pt}}$}
\newcommand{\ulnum}[2]{%
\def\saveulnum{#1}%
\ulnumaux{#2}}

\begin{document}
\ulnum{\text{(some text)}}{This is short text}
\end{document}
```

2.5 Bullets Style

32		33	↗	34	↖	35	↘	36	↙	37	⊞	38	⊟	39	⊠
40	→	41	↞	42	↠	43	↡	44	↢	45	↣	46	↤	47	↥
48	↦	49	↧	50	↨	51	↩	52	↪	53	↫	54	↬	55	↭
56	✕	57	✖	58	✗	59	✙	60	✚	61	✛	62	✜	63	✝
64	✞	65	✟	66	✠	67	✡	68	✢	69	✣	70	✤	71	✥
72	★	73	☆	74	◎	75	✧	76	✦	77	✨	78	✩	79	✪
80	✫	81	✬	82	✭	83	✮	84	✯	85	✰	86	✱	87	✲
88	✳	89	✴	90	✵	91	✶	92	✷	93	✸	94	✹	95	✺
96	✻	97	✼	98	✽	99	✾	100	✿	101	✻	102	✼	103	✽
104	✿	105	✻	106	✼	107	✽	108	✿	109	○	110	■	111	□
112	□	113	□	114	□	115	▲	116	▼	117	◆	118	◇	119	►
120	┆	121	┆	122	┆	123	•	124	•	125	•	126	•		
		161	✎	162	✎	163	✎	164	✎	165	✎	166	✎	167	✎
168	✎	169	✎	170	✎	171	✎	172	✎	173	✎	174	✎	175	✎
176	✎	177	✎	178	✎	179	✎	180	✎	181	✎	182	✎	183	✎
184	✎	185	✎	186	✎	187	✎	188	✎	189	✎	190	✎	191	✎
192	✎	193	✎	194	✎	195	✎	196	✎	197	✎	198	✎	199	✎
200	✎	201	✎	202	✎	203	✎	204	✎	205	✎	206	✎	207	✎
208	✎	209	✎	210	✎	211	✎	212	→	213	→	214	→	215	→
216	↗	217	↗	218	↗	219	↗	220	↗	221	↗	222	↗	223	↗
224	↗	225	↗	226	↗	227	↗	228	↗	229	↗	230	↗	231	↗
232	↗	233	↗	234	↗	235	↗	236	↗	237	↗	238	↗	239	↗
		241	↗	242	↗	243	↗	244	↗	245	↗	246	↗	247	↗
248	↗	249	↗	250	↗	251	↗	252	↗	253	↗	254	↗		

```

\documentclass{article}
\usepackage{pifont}

\begin{document}
\begin{itemize}
  \item[\ding{51}] Code 51
  \item[\ding{56}] Code 56
  \item[\ding{43}] Code 43
  \item[\ding{118}] Code 118
  \item[\ding{170}] Code 170
\end{itemize}
\ding{46} \ding{70} \ding{57} \ding{98} \ding{96}
\end{document}

```

Chapter 3

Code, listings, minted ...

3.1 Code listing using *`minted`* in `beamer`

```
Python Code Example
1 import glob
2
```

```
\documentclass{beamer}
\usepackage{tcolorbox}
\tcbuselibrary{minted,skins,breakable}
\newtcblisting{pythoncode}[2][]{
  listing engine=minted, breakable, colback=bg,
  colframe=black!70, listing only,
  minted style=colorful, minted language=python,
  minted options={numbersep=3mm,texcl=true,#1},
  left=5mm,enhanced,
  overlay={\begin{tcbclipinterior}\fill[black!25] (frame.south west)
rectangle ([xshift=5mm]frame.north west);\end{tcbclipinterior}}},
#2,}
\begin{document}
\begin{frame}[fragile]
\frametitle{Premature Optimization}
\begin{pythoncode}[linenos=true,]{title=Python Code
  ↪ Example}
import glob
\end{pythoncode}
\end{frame}
\end{document}
```

3.2 "Zebra" style listing

```
/**
 * Prints Hello World.
 **/
#include <stdio.h>

int main(void) {
    printf("Hello World!");
    return 0;
}
```

```
\documentclass{article}
\usepackage[T1]{fontenc}
\usepackage{beramono}
\usepackage{listings}
\usepackage{xcolor}
\newcommand\realnumberstyle[1]{%
\makeatletter
\newcommand{\zebra}[3]{%
{\realnumberstyle{#3}}%
\begin{group}
\lst@basicstyle
\ifodd\value{lstnumber}%
\color{#1}%
\else
\color{#2}%
\fi
\rlap{\hspace*{\lst@numbersep}%
\color@block{\linewidth}{\ht\strutbox}{\dp\strutbox}%
}%
\end{group}
\makeatother
\begin{document}
\begin{lstlisting}[language=C,basicstyle=\ttfamily,
numberstyle=\zebra{green!35}{yellow!35},numbers=left]
/**
 * Prints Hello World.
 **/
#include <stdio.h>
int main(void) {
    printf("Hello World!");
    return 0;
}
\end{lstlisting}
\end{document}
```

3.3 Listing with russian language

```
print("English comment"); // English comment
print("Russian comment"); // Русский комментарий
```

```
\documentclass{article}
\usepackage[T2A]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[russian]{babel}
\usepackage{listings}
\usepackage{xcolor}

\begin{document}
\lstset{ keepspaces=true,
backgroundcolor=\color{blue},
showstringspaces=false,
language=C,
extendedchars=true,
framexrightmargin=0pt,
framexleftmargin=0pt,
framextopmargin=15pt,
framebottommargin=15pt,
frame=tb, framerule=0pt,
basicstyle=\color{yellow}\ttfamily\small}

\begin{lstlisting}% <<<<<<<<< add "/"
print("English comment"); // English comment
print("Russian comment"); // %here can be russian words
\end{lstlisting}% <<<<<<<<< add "/"
\end{document}
```

3.4 Listing with `minted`

```
1 int main(int ac, char *av[])
2 {
3     printf("Hello, World");
4     return 0;
5 }
```

```
\documentclass{article}
\usepackage[many]{tcolorbox}
\tcbuselibrary{minted}
\newtcblisting{mylisting}{
  colframe=cyan,
  colback=cyan!10,
  listing only,
  listing engine=minted,
  minted language=cpp,
  minted options={fontsize=\small,linenos,numbersep=3mm},
}

\begin{document}
\begin{mylisting}
some code
\end{mylisting}
\end{document}
```

Chapter 4

Tables, boxes and so on

4.1 Nice tcolorbox

1	22
333	
Source	

```
\PassOptionsToPackage{svgnames}{xcolor}
\documentclass[twocolumn,a4paper]{article}
\usepackage{tcolorbox}
\tcbuselibrary{skins,breakable}
\usetikzlibrary{shadings,shadows}%preamble
\begin{tcolorbox}[colback=white!100,colframe=red!75!black,width=7cm,
  ↳ righttitle=0.5cm, subtitle style={boxrule=0.4pt,colback=yellow!50!red
  ↳ !25!white},title= \bf{1}\hfill \bf{22}]
  \begin{center}\bf{333}\end{center}
  \tcblower
  \href{https://tools.ietf.org/doc/texlive-doc/latex/tcolorbox/tcolorbox.
    ↳ pdf}{URL}
\end{tcolorbox}
```

4.2 Color box with yellow border

Remarque
Some text inside

```
\documentclass[border=2mm]{standalone}
\usepackage[most]{tcolorbox}
\usepackage{lipsum}

\newtcolorbox{mycolorbox}[1]{
  enhanced, breakable,
  title=#1, colback=white,
  colbacktitle=green!20!white,
  coltitle=black,
  fonttitle=\bfseries,
  boxrule=.5pt, arc=0pt,
  outer arc=0pt,
  colframe=yellow!80!orange,
  borderline west={2pt}{0pt}{red} }

\begin{document}
\begin{mycolorbox}{Remarque}
\lipsum[1]
\end{mycolorbox}
\end{document}
```


4.3 A drop capital in a tcolorbox

SOME text. Lorem ipsum
dolor sit amet, consec-
tetuer adipiscing elit.

```
\documentclass{article}
\usepackage{lettrine}
\usepackage{tcolorbox}
\usepackage{lipsum}

\begin{document}
\begin{tcolorbox}
\lettrine{S}{ome} text. \lipsum[1]
\end{tcolorbox}
\end{document}
```

4.4 Table with the desired length.

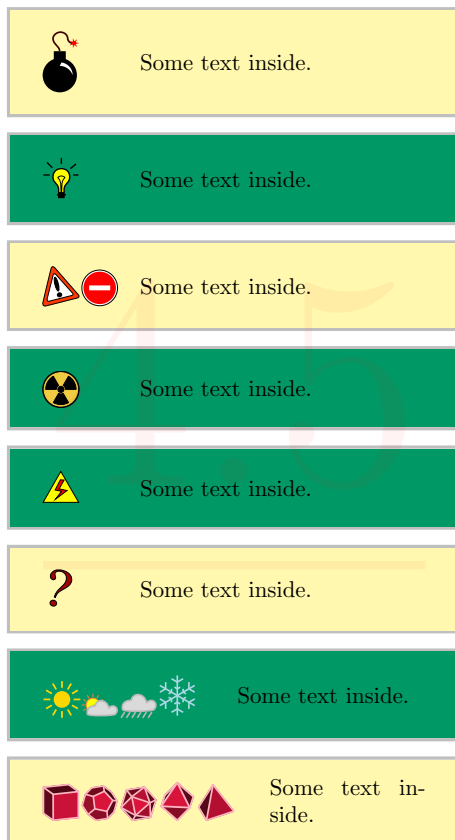
Table 1: Caption

Variant	res	Veriaty of waters f_0 , res	C, res	L, res
5	1	2	1.26	5

*a command was also created to
make a new cell view in the table*

```
\usepackage{graphicx}
\usepackage{tabularx}
\newcolumntype{Y}{>{\centering\arraybackslash}X}
\begin{document}
\begin{table}[h!]
\begin{center}
\caption{\textbf{Caption}}
\begin{tabularx}{14cm}{|Y|Y|c|Y|Y|}
\hline
Variant & res & Veriaty of waters  $f_0$ , res & C, res & L, res \\
\hline
5 & 1 & 2 & 1.26 & 5 \\
\hline
\end{tabularx}
\end{center}
\end{table}
```

4.5 bclogo – Creating colourful boxes with logos



```
\documentclass{article}
\usepackage{geometry}
\geometry{
paperwidth=8cm,
paperheight=14cm,
margin=0.5cm
}
\usepackage{xcolor}
\usepackage[most]{tcolorbox}
\usepackage{tikz}{bclogo}

\newtcolorbox{framedd}[1][{}{
colframe=lightgray,
colback=yellow!40!white,
enhanced jigsaw,
sharp corners,
lower separated=false,
lefthand width=1cm,
sidebyside gap=0.5cm,
sidebyside,#1}

\begin{document}
\begin{framedd}
\bcbombe \tcblower Some text inside.
\end{framedd}

\begin{framedd}[colback=blue!40!green]
\bcclampe \tcblower Some text inside.
\end{framedd}

\begin{framedd}
\bcattention \bcinterdit \tcblower
Some text inside.
\end{framedd}

\begin{framedd}[colback=blue!40!green]
\bcnucleaire \tcblower
Some text inside.
\end{framedd}

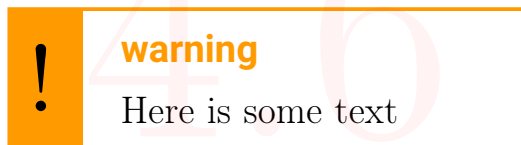
\begin{framedd}[colback=blue!40!green]
\bcdanger \tcblower
Some text inside.
\end{framedd}

\begin{framedd}
\bcquestion \tcblower
Some text inside.
\end{framedd}

\begin{framedd}[colback=blue!40!green, lefthand width=2.5cm]
\bcsoleil \bceclaircie \bcpluie \bcneige \tcblower
Some text inside.
\end{framedd}

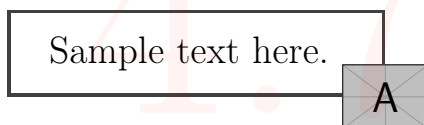
\begin{framedd}[lefthand width=3cm]
\bccube \bcdodecaedre \bcicosaedre \bcocetaedre \bctetraedre \tcblower
Some text inside.
\end{framedd}
\end{document}
```

4.6 Warning banner



```
\usepackage[utf8]{inputenc}
\usepackage[T1]{fontenc}
\usepackage[most]{tcolorbox}
\definecolor{orang}{RGB}{255,155,0}
\newtcolorbox[auto counter,number within=section]{caja}[1]{
enhanced jigsaw,colback=white,colframe=orang,coltitle=orang,
fonttitle=\bfseries\sffamily,
sharp corners,
detach title,
lefrule=10mm,
% What you need %%%%%%%%%%%
underlay unbroken and first={\node[below,text=black,anchor=east]
at ([xshift=-5.5pt]interior.base west) {\Huge \textbf{!}};},
%%%%%%%%%%
breakable,pad at break=1mm,
#1,
code={\ifdefempty{\tcbtitletext}{\tcbset{before upper={
  ↳ tcbtitle\par\medskip}}},}
\begin{document}
\begin{caja}[title=warning]
The vertical alignment settings
\end{caja}
\end{document}
```

4.7 Photo positioning



```
\documentclass{article}
\usepackage[most]{tcolorbox}
\usepackage{graphicx}
\begin{document}
\begin{tcolorbox}[enhanced,sharp corners,
width={5cm},
colback=white,
overlay={\node at (frame.south east) {\includegraphics[scale=0.1]{
  ↳ example-image-a}};}]
Sample text here.
\end{tcolorbox}
\end{document}
```

4.8 Absolutely centered cells (vertically and horisontally)

all	in	cells
are	centered	vertically
and	horisontally	Σ

```

\documentclass{article}
\usepackage{float}
\usepackage{array, makecell}
\setcellgapes{5pt}

\begin{document}
\begin{table}[H]
\center
\makegapedcells
\begin{tabular}{|c|c|c|c|}
\hline
1&1&1&1 \\ \hline
1&1&1&1 \\ \hline
1&1&1&1 \\ \hline
\end{tabular}
\end{table}

\end{document}

```

4.9 Martix made of table

$$d_{n+1} \begin{vmatrix} a_{1,1} & \dots, a_{1,n} & 0 \\ a_{1,1} & \dots, a_{1,n} & 0 \\ \dots\dots\dots \\ a_{1,1} & \dots, a_{1,n} & 0 \\ a_{1,1} & \dots, a_{1,n} & 0 \\ a_{1,1} & \dots, a_{1,n} & 0 \\ \dots\dots\dots \\ a_{1,1} & \dots, a_{1,n} & 0 \end{vmatrix} = 0$$

```

\documentclass[a4paper,14pt]{extreport}
\begin{document}
\begin{table}[]
\begin{tabular}{|l|l c r|l}
& \$a_{1,1}$ & \$\dots, a_{1,n}$ & 0 & & \\
& \$a_{1,1}$ & \$\dots, a_{1,n}$ & 0 & & \\
& \multicolumn{3}{|l|}{\dotfill} & & \\
& \$a_{1,1}$ & \$\dots, a_{1,n}$ & 0 & & \\
& \$d_{n+1}$ & & & = & \$\pm 2ad_n$ = 0 & \\
& \$a_{1,1}$ & \$\dots, a_{1,n}$ & 0 & & \\
& \$a_{1,1}$ & \$\dots, a_{1,n}$ & 0 & & \\
& \multicolumn{3}{|l|}{\dotfill} & & \\
& \$a_{1,1}$ & \$\dots, a_{1,n}$ & 0 & & \\
\end{tabular}
\end{table}

\end{document}

```

4.10 Centering cells with NiceTabular

1	1	EVERY
1	1	CELL
1	1	CENTERED

```

\documentclass{article}
\usepackage[table]{xcolor}
\usepackage{nicematrix}
\NiceMatrixOptions{cell-space-top-limit=5pt,cell-space-bottom-
    ↪ limit=5pt}

\begin{document}
\begin{table}[htbp]
\centering
\begin{NiceTabular}{|c|c|c|}
\hline
\cellcolor{red}1&\cellcolor{green}1&1 \\ \hline
\cellcolor{orange}1&\cellcolor{red!35}1&1 \\ \hline
\cellcolor{green!35}1&\cellcolor{blue!45}1&1 \\ \hline
\end{NiceTabular}
\end{table}
\end{document}

```

4.11 Centered cells in longtable

Enum	Example	Description
1	test	Quisque facilisis auctor sapien. Pellentesque gravida hendrerit lectus. Mauris rutrum sodales sapien. Fusce hendrerit sem vel lorem. Integer pellentesque massa vel augue. Integer elit tortor, feugiat quis, sagittis et, ornare non, lacus. Vestibulum posuere pellentesque eros. Quisque venenatis ipsum dictum nulla. Aliquam quis quam non metus eleifend interdum. Nam eget sapien ac mauris malesuada adipiscing. Etiam eleifend neque sed quam. Nulla facilisi. Proin a ligula. Sed id dui eu nibh egestas tincidunt. Suspendisse arcu.
2a	test	Quisque facilisis auctor sapien. Pellentesque gravida hendrerit lectus. Mauris rutrum sodales sapien. Fusce hendrerit sem vel lorem. Integer pellentesque massa vel augue. Integer elit tortor, feugiat quis, sagittis et, ornare non, lacus. Vestibulum posuere pellentesque eros. Quisque venenatis ipsum dictum nulla. Aliquam quis quam non metus eleifend interdum. Nam eget sapien ac mauris malesuada adipiscing. Etiam eleifend neque sed quam. Nulla facilisi. Proin a ligula. Sed id dui eu nibh egestas tincidunt. Suspendisse arcu.
2b	test	Quisque facilisis auctor sapien. Pellentesque gravida hendrerit lectus. Mauris rutrum sodales sapien. Fusce hendrerit sem vel lorem. Integer pellentesque massa vel augue. Integer elit tortor, feugiat quis, sagittis et, ornare non, lacus. Vestibulum posuere pellentesque eros. Quisque venenatis ipsum dictum nulla. Aliquam quis quam non metus eleifend interdum. Nam eget sapien ac mauris malesuada adipiscing. Etiam eleifend neque sed quam. Nulla facilisi. Proin a ligula. Sed id dui eu nibh egestas tincidunt. Suspendisse arcu.

```

\documentclass{article}
\usepackage[left=1.5cm,right=1.5cm,
top=1.5cm,bottom=2cm,bindingoffset=0cm]{geometry}
\usepackage{float}
\usepackage{array, makecell}
\usepackage{utf8}{inputenc}
\usepackage{lipsum}
\usepackage{booktabs}
\usepackage{multirow}
\usepackage{pdfscape}
\usepackage{longtable, array}

\begin{document}
\begin{landscape}
\begin{longtable}{@{} *{2}{m{.15\paperwidth}} *{1}{m{.40\paperwidth}} @{}}
\endfirsthead
\endhead
\toprule
\textbf{Enum} & \textbf{Example} & \textbf{Description} \\
\midrule
1 & test & \lipsum[50] \\
\midrule
2a & test & \lipsum[50] \\
2b & test & \lipsum[50] \\
\bottomrule
\end{longtable}
\end{landscape}
\end{document}

```

4.12 If table is not wide enough

	Item1	Item2	Item3
Group1	0.8	0.1	0.1
Group2	0.1	0.8	0.1
Group3	0.1	0.1	0.8
Group4	0.34	0.33	0.33

```

\documentclass{article}
\usepackage[left=1.5cm,right=1.5cm,
top=1.5cm,bottom=2cm,bindingsoffset=0cm]{geometry}
\usepackage{graphicx}
\usepackage{booktabs}
\usepackage{tabularx}

\begin{document}

\begin{table}[!ht]
\caption{Vertical and lateral stresses of mortar.}
\vspace{0.5cm}
\begin{tabularx}{\textwidth}{X X X X}
& Item1 & Item2 & Item3 \\ \midrule
Group1 & 0.8 & 0.1 & 0.1 \\
Group2 & 0.1 & 0.8 & 0.1 \\
Group3 & 0.1 & 0.1 & 0.8 \\
Group4 & 0.34 & 0.33 & 0.33 \\ \bottomrule
\end{tabularx}
\label{c}
\end{table}

\end{document}

```

4.13 Text next to a table

text text text

1	22	333

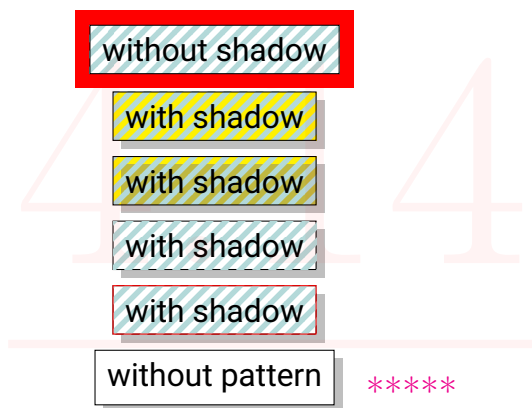
```

\documentclass[a4paper,14pt]{extreport}
\usepackage[left=1.5cm,right=1.5cm,top=1.5cm,bottom=2cm,
↪ bindingsoffset=0cm]{geometry}
\usepackage{lipsum}

\begin{document}
\begin{minipage}[m]{0.58\textwidth}
text text text
\end{minipage}
\hspace{0.2cm}
\begin{minipage}[m]{0.40\textwidth}
\begin{tabular}{|c|c|c|}
\hline
1 & 22 & 333 \\ \hline
& & \\ \hline
& & \\ \hline
& & \\ \hline
\end{tabular}
\end{minipage}
\end{document}

```

4.14 Text next to a table



```

\documentclass[tikz,border=5mm]{standalone}
\usetikzlibrary{chains,patterns,shadows,fit,backgrounds}

\makeatletter
\tikzset{% customization of pattern
  % based on <m.wibrow@gm...> - 2013-03-24 07:20:
  hatch distance/.store in=\hatchdistance,
  hatch distance=5pt,
  hatch thickness/.store in=\hatchthickness,
  hatch thickness=5pt
}
\pgfdeclarepatternformonly[\hatchdistance,\hatchthickness]{north east hatch
  ↪ }% name
{
  \pgfpoint{-1pt}{-1pt}}% below left
{
  \pgfpoint{\hatchdistance}{\hatchdistance}}% above right
{
  \pgfpoint{\hatchdistance-1pt}{\hatchdistance-1pt}}%
{
  \pgfsetcolor{\tikz@pattern@color}
  \pgfsetlinewidth{\hatchthickness}
  \pgfpathmoveto{\pgfpoint{0pt}{0pt}}
  \pgfpathlineto{\pgfpoint{\hatchdistance}{\hatchdistance}}
  \pgfusepath{stroke}
}
\makeatother

\begin{document}
\begin{tikzpicture}
  start chain=going below,
  node distance=2mm,
  Node/.style = {minimum width=#1,
    shape=rectangle,
    draw, fill=white,
    on chain},
  Pattern/.style = {pattern=north east hatch,
    pattern color=teal!30,
    hatch distance=7pt,
    hatch thickness=2pt},
  font=\small\sffamily
%-----
  \node[Node=24mm, Pattern,
    preaction={fill=white}] (a) {without shadow};
  \begin{scope}[on background layer]
    \node[fit=(a),fill=red] {};
  \end{scope}

  \node[Node=24mm, drop shadow,
    preaction={fill=yellow}, Pattern] (b) {with shadow};

  \node[Node=24mm, preaction={fill=yellow},
    drop shadow, Pattern] (b) {with shadow};

  \node[Node=24mm, postaction={Pattern},
    drop shadow] (b) {with shadow};

  \node[Node=24mm, postaction={draw=red, Pattern},
    drop shadow] (b) {with shadow};

  \node[Node=24mm, drop shadow] (c) {without pattern};
%---
\end{tikzpicture}
\end{document}

```

4.15 Hand Drawn tcolorbox



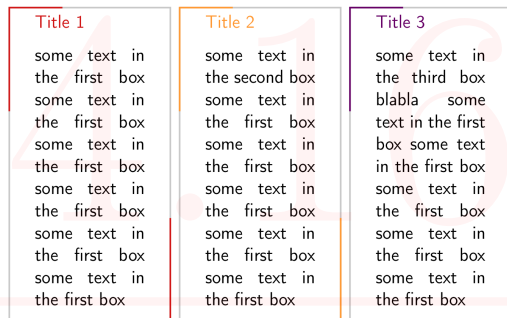
```

\documentclass{article}
\usepackage{most}{tcolorbox}
\usepackage{emerald}
\usetikzlibrary{decorations.pathmorphing}
\usetikzlibrary{shadows}
\tikzset{decoration={random steps,segment length=2mm,
    ↪ amplitude=0.6pt}}
\newtcbtheorem{mytheo}{Theorem}{
  coltitle=green!80!black,
  colback=lightgray!20,
  colbacktitle=lightgray!20,
  fonttitle=\bfseries\ECFAugie,
  enhanced,
  attach boxed title to top left={yshift=-0.18cm,xshift=-0.5mm},
  boxed title style={
    tikz={rotate=4,transform shape},
    frame code={
      \draw[decorate,fill=lightgray!20] (frame.south west) rectangle
        ↪ (frame.north east);
    } },
    frame code={
      \draw[decorate,fill=lightgray!20,drop shadow] (frame.north east
        ↪ ) rectangle (frame.south west);
    } },{th}

\begin{document}
\begin{mytheo}{}{theoexample}
content...
\end{mytheo}
\end{document}

```


4.16 Halfframed boxes



```

\documentclass{beamer}
\usepackage[english]{babel}
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage{tikz}
\usepackage{tcolorbox}
\usetikzlibrary{calc}
\tcbuselibrary{skins,breakable,raster}
\makeatletter
\definecolor{myred}{RGB}{209,23,23}
\definecolor{myorange}{RGB}{255,153,51}
\definecolor{mypurple}{RGB}{102,0,102}
\definecolor{mygrey}{RGB}{200,200,200}

\newtcolorbox{mybox}[2]{%
empty,
coltitle = #1,
title = #2,
overlay = {
\draw[mygrey,line width=1pt]
(frame.north west)--(frame.north east)--(frame.south east)--(frame.
↪ south west)--(frame.north west);
\draw[#1,line width=1pt]
($ (frame.north west)!0.33!(frame.south west)$)
--(frame.north west)
--($ (frame.north west)!0.33!(frame.north east)$);
\draw[#1,line width=1pt]
($ (frame.south east)!0.33!(frame.south west)$)
--(frame.south east)
--($ (frame.south east)!0.33!(frame.north east)$);}}

\tcbset{marktext/.style={%
overlay={\node[rotate=90,text=black,anchor=north east] at (
↪ frame.north west){#1}};},
code={\setbox\z@=\color@hbox#1\color@endbox\tcbdimto\
↪ myheight{\wd\z@+3mm}},
minimum for equal height group=\tcb@ehgid:\myheight,}}
\makeatother

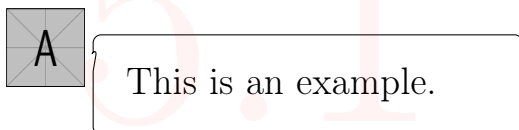
\begin{document}
\begin{frame}
\begin{tcbrafter}[%
raster columns=3,
raster equal height=rows
]
\begin{mybox}{myred}{Title 1}
some text in the first box
\end{mybox}
\begin{mybox}{myorange}{Title 2}
some text in the second box
\end{mybox}
\begin{mybox}{mypurple}{Title 3}
some text in the third box blabla
\end{mybox}
\end{tcbrafter}
\end{frame}
\end{document}

```

Chapter 5

Figures

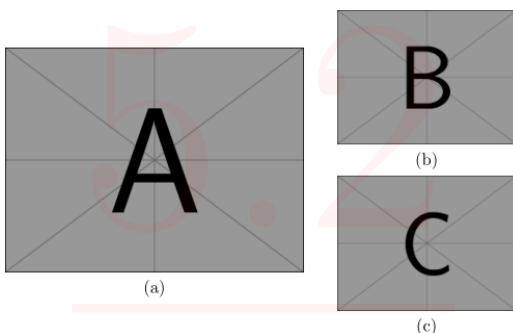
5.1 Comment to figure



```
\documentclass{article}
\usepackage{tikz}
\usetikzlibrary{shapes.callouts}

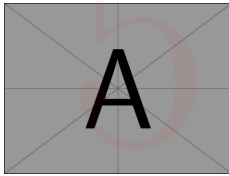
\begin{document}
\begin{tikzpicture}
  \node [anchor=south west] at (0,0) (cartoon) {\includegraphics[width
    ↳=.15\textwidth,height=.15\textwidth]{example-image-a}};
  \node [anchor=north west,rectangle callout,draw=black,
    ↳callout absolute pointer=(cartoon.east),
    ↳rounded corners=3pt,text width=0.7\textwidth, inner sep=2ex] at (.19\
    ↳textwidth,.125\textwidth) {This is an example.};
\end{tikzpicture}
\end{document}
```

5.2 Positioning 1 | 2



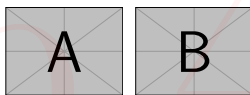
```
\documentclass{article}
\usepackage{graphicx}
\usepackage{subfig}
\begin{document}
\begin{figure}[htp]
\centering
\begin{tabular}{@{}c@{}}
\subfloat{\includegraphics[width=0.5\linewidth]{example-image-a.png}}\\ (a)
\end{tabular}
\quad % some space
\begin{tabular}{@{}c@{}}
\subfloat{\includegraphics[width=0.3\linewidth]{example-image-b.png}}\\ (b)
\subfloat{\includegraphics[width=0.3\linewidth]{example-image-c.png}}\\ (c)
\end{tabular}
\caption{Caption.}
\end{figure}
\end{document}
```

5.3 Placing image anywhere You want



```
\usepackage{graphicx}
\usepackage{tikz}
\begin{document}
\begin{tikzpicture}[overlay, remember picture]
\node[anchor=north west,xshift=4cm,yshift=-11cm]
at (current page.north west)
{\includegraphics[width=5.5cm]{example-image-a.png}};
\end{tikzpicture}
\end{document}
```

5.4 Italic subfigure references



(a) *a* (b) *b*

Fig. 1 *a* ← *a* in *italic* style

```
\documentclass{article}
\usepackage{graphicx}
\usepackage{subcaption}
\renewcommand\thesubfigure{\itshape\alph{subfigure}} %<--- added

\begin{document}
\begin{figure}
\centering
\begin{subfigure}{.25\textwidth}
\centering
\includegraphics[width=.6\linewidth]{example-image-a}
\caption{\textit{a}}
\label{1a}
\end{subfigure}%
\begin{subfigure}{.25\textwidth}
\centering
\includegraphics[width=.715\linewidth]{example-image-b}
\caption{\textit{b}}
\label{1b}
\end{subfigure}
\caption{}
\label{fig1}
\end{figure}
Fig. \ref{1a} $\leftarrow$ a in italic style
\end{document}
```

5.5 Wrapfigure

5.6 Figures in landscape mode



Figure 1: FIG 1

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 2: FIG 2



Figure 3: FIG 3

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.

```
\documentclass[11pt]{scrartcl}
\usepackage[english]{babel}
\usepackage[utf8]{inputenc}
\usepackage{blindtext}
\usepackage[demo]{graphicx}
\usepackage{wrapfig}
\setlength{\parindent}{0pt}

\begin{document}
\begin{wrapfigure}[11]{l}{0.4\textwidth}
\centering
\includegraphics[scale=0.1]{Bild}
\caption{FIG 1}
\end{wrapfigure}
\blindtext

\begin{wrapfigure}[11]{r}{0.4\textwidth}
\centering
\includegraphics[scale=0.1]{Bild}
\caption{FIG 2}
\end{wrapfigure}
\blindtext

\begin{wrapfigure}[11]{l}{0.4\textwidth}
\centering
\includegraphics[scale=0.1]{Bild}
\caption{FIG 3}
\end{wrapfigure}
\blindtext
\blindtext
\end{document}
```

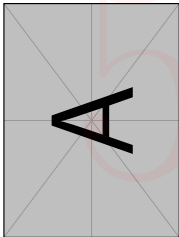


Table 5.2



Table 5.3

```
\documentclass[12pt]{report}
\usepackage{graphicx}
\usepackage{lipsum}
\begin{document}
qqqqqqq
\begin{figure}[htb]
\hfill
\rotatebox{90}{%
\begin{minipage}{0.45\linewidth}
\includegraphics[width=\linewidth]{example-image-a}
\caption{Caption1}
\label{fig:First}
\end{minipage}
}\hfill
\rotatebox{90}{%
\begin{minipage}{0.45\linewidth}
\includegraphics[width=\linewidth]{example-image-b}
\caption{Caption2}
\label{fig:First}
\end{minipage}
}\hfill\strut
\end{figure}

\end{document}
```

Chapter 6

Numbering, enumeration, itemizing

6.1 Numbering in few columns

- 
1. c 3. d
2. g 4. f
-

```
\documentclass{article}
\usepackage{multicol}

\begin{document}
\begin{multicols}{2}%change to have more columns
\begin{enumerate}
\item c
\item g
\item d
\item f
\end{enumerate}
\end{multicols}
\end{document}
```

6.2 Enumeration environment with position number in the format (i, j)

- (1) First level-one item
 - (1,1) First level-two item
 - (1,2) Second level-two item
- (2) Second level-one item
 - (2,1) Still another level-two item

```

\documentclass{article}
\renewcommand{\theenumi}{(\arabic{enumi})}
\renewcommand{\theenumii}{(\arabic{enumi},\arabic{enumii})}
\renewcommand{\labelenumi}{\theenumi}
\renewcommand{\labelenumii}{\theenumii}
\makeatletter \renewcommand{\p@enumii}{} \makeatother

\begin{document}
\begin{enumerate}
\item First level-one item
  \begin{enumerate}
\item First level-two item
\item Second level-two item
\end{enumerate}
\item Second level-one item
  \begin{enumerate}
\item Still another level-two item
\end{enumerate}
\end{enumerate}
\end{document}

```

6.3 Colored enumeration

- 1) item
- 2)
- 3) item
- 4)
- 5) special item
- 6)
- 7) item

```

\documentclass{article}
\usepackage{tikz}
\definecolor{amethyst}{rgb}{0.6, 0.4, 0.8}
\definecolor{applegreen}{rgb}{0.55, 0.71, 0.0}
\definecolor{arylideyellow}{rgb}{0.91, 0.84, 0.42}
\definecolor{asparagus}{rgb}{0.53, 0.66, 0.42}
\definecolor{atomictangerine}{rgb}{1.0, 0.6, 0.4}
\definecolor{bananayellow}{rgb}{1.0, 0.88, 0.21}
\definecolor{brightgreen}{rgb}{0.4, 1.0, 0.0}
\definecolor{cambridgeblue}{rgb}{0.64, 0.76, 0.68}
\definecolor{capri}{rgb}{0.0, 0.75, 1.0}
\definecolor{carnationpink}{rgb}{1.0, 0.65, 0.79}
\newcommand{\ClaudioList}{red,applegreen,amethyst,carnationpink,blue!50!
  ↪ cyan,arylideyellow,asparagus,atomictangerine,bananayellow,brightgreen
  ↪ ,cambridgeblue,capri}
\newcommand{\SebastianoItem}[1]{\foreach \X[count=\Y] in \ClaudioList
\ifnum\Y=#1\relax
\edef\SebastianoColor{\X}
\fi}
\tikz[baseline=(SebastianoItem.base),remember
picture]{%
\node[fill=\SebastianoColor,inner sep=4pt,font=\sffamily,fill opacity=0.5] (
  ↪ SebastianoItem){#1};}
\newcommand{\SebastianoHighlight}{\tikz[overlay,remember picture]{%
\fill[\SebastianoColor,fill opacity=0.5] ([yshift=4pt,xshift=-\pgflinewidth]
  ↪ SebastianoItem.east) -- ++(4pt,-4pt)
-- ++(-4pt,-4pt) -- cycle;}}
\begin{document}
\renewcommand{\labelenumi}{\SebastianoItem{\arabic{enumi}}}
\begin{enumerate}
\item item
\item special item \SebastianoHighlight
\item item
\end{enumerate}
\end{document}

```

6.4 Leveled arabic enumeration

- (1) First level-one item
 - (1,1) First level-two item
 - (1,2) Second level-two item
- (2) Second level-one item
 - (2,1) Still another level-two item

```

\documentclass{article}
\renewcommand{\theenumi}{(\arabic{enumi})}
\renewcommand{\theenumii}{(\arabic{enumi},\arabic{enumii})}
\renewcommand{\labelenumi}{\theenumi}
\renewcommand{\labelenumii}{\theenumii}
\makeatletter
\renewcommand{\p@enumii}{}
\makeatother
\begin{document}
\begin{enumerate}
\item First level-one item
  \begin{enumerate}
\item First level-two item
\item Second level-two item
\end{enumerate}
\item Second level-one item
  \begin{enumerate}
\item Still another level-two item
\end{enumerate}
\end{enumerate}
\end{document}

```

6.5 Change footnote symbol

Sample frame title



Just by changing the value of the number you can insert the symbol of your choice.

1. asterisk *
2. dagger †
3. double dagger ‡
4. section symbol §
5. paragraph ¶
6. parallel lines ||
7. two asterisks **

```

\documentclass{beamer}
\renewcommand{\thefootnote}{(\fnsymbol{footnote})}

\begin{document}
\begin{frame}
\frametitle{Sample frame title}
\begin{figure}
\includegraphics[width=0.5\linewidth]{example-image}\footnote[1]{image
  ↳ description}
\end{figure}
\end{frame}
\end{document}

```

6.6 Bullets Style

32		33	↗	34	↘	35	↖	36	↙	37	⊞	38	⊟	39	⊠
40	↠	41	↡	42	↢	43	↣	44	↤	45	↥	46	↦	47	↧
48	↨	49	↩	50	↪	51	↫	52	↬	53	↭	54	↮	55	↯
56	✕	57	✕	58	✕	59	✕	60	✕	61	✕	62	✕	63	✕
64	✕	65	✕	66	✕	67	✕	68	✕	69	✕	70	✕	71	✕
72	★	73	☆	74	⊙	75	☆	76	★	77	★	78	★	79	★
80	☆	81	★	82	☆	83	★	84	★	85	★	86	★	87	★
88	★	89	★	90	★	91	★	92	★	93	★	94	★	95	★
96	✱	97	✱	98	✱	99	✱	100	✱	101	✱	102	✱	103	✱
104	✱	105	✱	106	✱	107	✱	108	●	109	○	110	■	111	□
112	□	113	□	114	□	115	▲	116	▼	117	◆	118	◇	119	▶
120		121		122		123	*	124	*	125	*	126	*	127	*
		161	⌘	162	⌘	163	⌘	164	♥	165	♠	166	♣	167	♣

✓ Code 51

✕ Code 56

☞ Code 43

❖ Code 118

♥ Code 170

	✎		◆		✚		⊛		✿
168	♣	169	♣	170	♥	171	♠	172	⊙
176	⊙	177	⊙	178	⊙	179	⊙	180	⊙
184	⊙	185	⊙	186	⊙	187	⊙	188	⊙
192	⊙	193	⊙	194	⊙	195	⊙	196	⊙
200	⊙	201	⊙	202	⊙	203	⊙	204	⊙
208	⊙	209	⊙	210	⊙	211	⊙	212	→
216	↘	217	→	218	↗	219	→	220	→
224	→	225	→	226	→	227	→	228	→
232	→	233	→	234	→	235	→	236	→
240	→	241	→	242	→	243	→	244	→
248	→	249	→	250	→	251	→	252	→

```

\documentclass{article}
\usepackage{pifont}

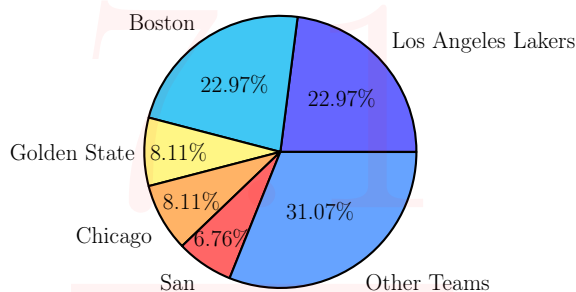
\begin{document}
\begin{itemize}
  \item[\ding{51}] Code 51
  \item[\ding{56}] Code 56
  \item[\ding{43}] Code 43
  \item[\ding{118}] Code 118
  \item[\ding{170}] Code 170
\end{itemize}
\par
\ding{46} \ding{70} \ding{57} \ding{98} \ding{96}
\end{document}

```

Chapter 7

Plots, tikz, pie charts ...

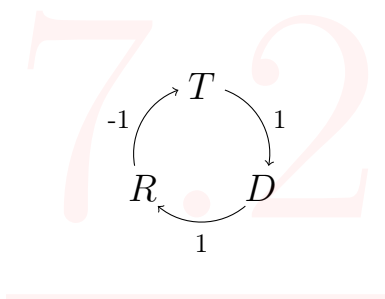
7.1 Simple pie chart



```
\documentclass[border=0.2cm]{standalone}
\usepackage{pgf-pie}

\begin{document}
\begin{tikzpicture}
\pie{22.97/Los Angeles Lakers,
22.97/Boston Celtics,
8.11/Golden State Warriors,
8.11/Chicago Bulls,
6.76/San Antonio Spurs,
31.07/Other Teams}
\end{tikzpicture}
\end{document}
```

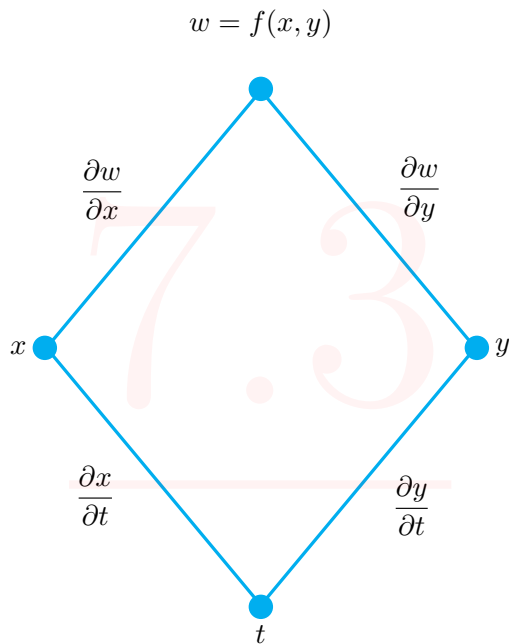
7.2 Circled arrows with text



```
\documentclass{article}
\usepackage{tikz}

\begin{document}
\begin{tikzpicture}[>,>,scale=.7]
\node (i) at (90:1cm) {$T$};
\node (j) at (-30:1cm) {$R$};
\node (k) at (210:1cm) {$D$};
\draw (70:1cm) arc (70:-10:1cm) node[midway, right] {\footnotesize 1};
\draw (-50:1cm) arc (-50:-130:1cm) node[midway, below] {\footnotesize 1};
\draw (190:1cm) arc (190:110:1cm) node[midway, left] {\footnotesize -1};
\end{tikzpicture}
\end{document}
```

7.3 Diamond with text



```
\documentclass[a4paper,14pt]{extreport}
\usepackage[left=1.5cm,right=1.5cm,top=1.5cm,bottom=2cm,bindingoffset=0
  \rightarrow cm]{geometry}
\usepackage{amsmath}
\usepackage{tikz}
\usetikzlibrary{shapes.geometric}

\begin{document}
\begin{tikzpicture}
\node[diamond,font=\small,
line width=0.4mm,scale=0.7,
draw = cyan, minimum width = 7.5cm, %text = red,
minimum height = 9cm] (d) at (0,0) { };
\node [above=0.5cm] (a) at (d.90) {$w = f(x,y)$};
\node [above=0.5cm,right=0.1cm] (b) at (d.45) {$\dfrac{\partial w}{\partial x}$};
\node [above=0.5cm,left=0.1cm] (c) at (d.135) {$\dfrac{\partial w}{\partial y}$};
\node [left=0.1cm] (dd) at (d.180) {$x$};
\node [right=0.1cm] (e) at (d.0) {$y$};
\node [below=0.1cm] (f) at (d.270) {$t$};
\node [below=0.9cm,right=-0.3cm] (g) at (d.-30) {$\dfrac{\partial x}{\partial t}$};
\node [below=0.5cm,left=-0.1cm] (h) at (d.220) {$\dfrac{\partial y}{\partial t}$};
\node at (d.90) [cyan,circle,fill,inner sep=3pt]{};
\node at (d.180) [cyan,circle,fill,inner sep=3pt]{};
\node at (d.0) [cyan,circle,fill,inner sep=3pt]{};
\node at (d.270) [cyan,circle,fill,inner sep=3pt]{};
\end{tikzpicture}
\end{document}
```

7.4 Levels of skills



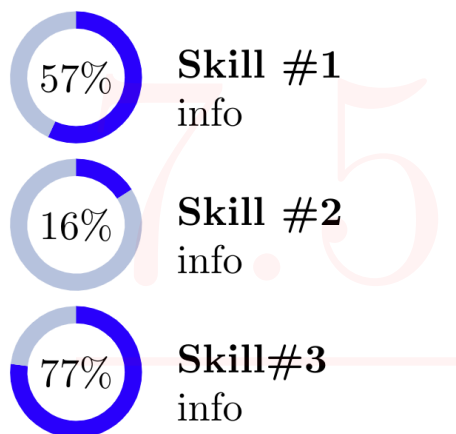
```
\documentclass{report}
\usepackage[T1]{fontenc}
\usepackage{tikz}
\usepackage{xcolor}

\definecolor{white}{RGB}{255,255,255}
\definecolor{gray}{HTML}{4D4D4D}
\definecolor{maingray}{HTML}{B9B9B9}

\newcommand\skills[1]{
\begin{tikzpicture}
\foreach [count=\i] \x/\y in {#1}{
\draw[fill=maingray,maingray] (0,\i) rectangle (6,\i+0.4);
\draw[fill=white,gray](0,\i) rectangle (\x,\i+0.4);
\node[above right] at (0,\i+0.4) {\x};
}
\end{tikzpicture}
}

\begin{document}
\skills{{b/2}}
\skills{{a/1}}
\end{document}
```

7.5 Round levels of skills



```
\documentclass{svgnames}{article}
\usepackage{tikz}
\usetikzlibrary{calc}
\usepackage{siunitx}% only to force percentages to be integers
\usepackage{enumitem}

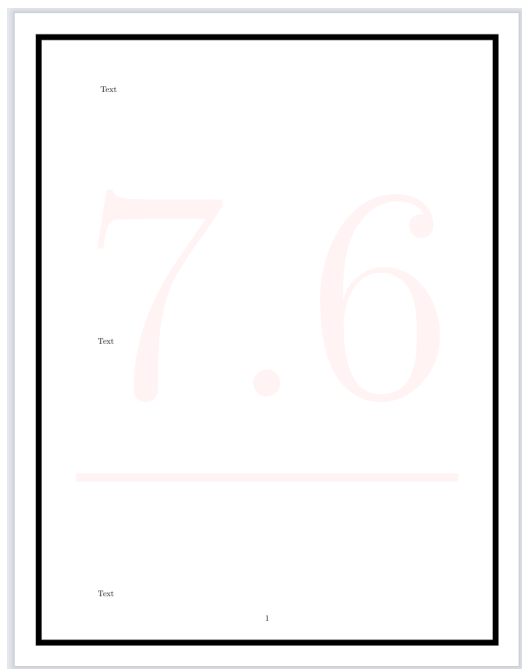
\let\realItem\item% save for later use
\newcommand\percentageItem[1][10]{%
\realItem[\smash{\tikz[baseline]{%
\node[minimum width=4em] at (0,0) {\num[round-mode=places,round-
\rightarrow precision=0]{#1}\%}};
\draw[thick,line width=1.5mm,Blue](90:5mm)
arc [radius=5mm, start angle=90, delta angle=-#1*3.6];
\draw[thick,line width=1.5mm,LightSteelBlue](90-#1*3.6:5mm)
arc [radius=5mm, start angle=90-#1*3.6, end angle=-270];
}}}%
}
\newlist{achievements}{itemize}{1}
\setlist[achievements]{
before=\let\item\percentageItem,%make \item = \percentageItem
leftmargin=*,
label={},
itemsep=3mm,
}

\begin{document}

\begin{achievements}
\item[57]\textbf{Skill \#1}\info
\item[16]\textbf{Skill \#2}\info
\item[77]\textbf{Skill \#3}\info
\end{achievements}

\end{document}
```

7.6 Huge margin line



```

\documentclass{article}
\usepackage{margin=3cm}{geometry}
\usepackage{tikz}

\begin{document}
\tikz[overlay, remember picture] \draw[line width=2.5mm] ([xshift=1cm, yshift
  ↳ =-1cm|current page.north west) rectangle ([xshift=-1cm, yshift=1cm]
  ↳ current page.south east);
Text
\fill
Text
\fill
Text
\end{document}

```

7.7 Aligning anything to a corner



```

\documentclass[14pt]{extreport}
\usepackage{tikz}
\usepackage{qrcode}

\begin{document}
\begin{tikzpicture}[remember picture,overlay]
\node[anchor=north west,yshift=0pt,xshift=0pt]%
at (current page.north west)
{\qrcode[height=0.5cm]{https://github.com/AnMnv/eBook}}% <--- put here
  ↳ anything
};
\end{tikzpicture}
\end{document}

```

OR the

- ↳ rainbow
- ↳ variant
- ↳ (see
- ↳ example
- ↳ 9.7)

```

\begin{tikzpicture}[remember picture,overlay]
\node at ($(current page.north west)+(.70cm,-.75cm)$)
{ \fadingtext[scale=0.5]{path picture shading=rainbow}
  \qrcode[height=3cm]{https://github.com/AnMnv/eBook}}};
\end{tikzpicture}

```

Chapter 8

Highlighting

8.1 Words highlighting 1

The quick brown fox jumps over the lazy dog.
 The quick brown fox jumps over the lazy dog.

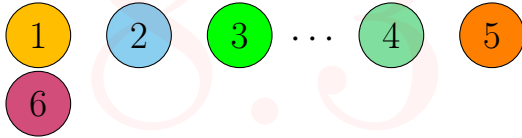
```
\documentclass{article}
\usepackage{tcolorbox}
\newtcbox{\mybox}[1][red]{on line,
arc=0pt,outer arc=0pt,colback=#1!10!white,colframe=#1!50!black,
boxsep=0pt,left=1pt,right=1pt,top=2pt,bottom=2pt,
boxrule=0pt,bottomrule=1pt,toprule=1pt}
\newtcbox{\xmybox}[1][red]{on line,
arc=7pt,colback=#1!10!white,colframe=#1!50!black,
before upper={\rule[-3pt]{0pt}{10pt}},boxrule=1pt,
boxsep=0pt,left=6pt,right=6pt,top=2pt,bottom=2pt}
\begin{document}
The \mybox[green]{quick} brown \mybox{fox}...\par
The \xmybox[green]{quick} brown \xmybox{fox} ...
\end{document}
```

8.2 Unusual words highlighting

Here You can see
 more examples and learn
 something new.

```
\usepackage[many]{tcolorbox}
\newtcbox{\mylib}{enhanced,nobeforeafter, tcbox raise base, boxrule=0.4pt,
↪ top=0mm, bottom=0mm,
right=0mm, left=4mm, arc=1pt, boxsep=2pt, before upper={\vphantom{dlg
↪ }}, colframe=green!50!black, coltext=green!25!black, colback=green
↪ !10!white, overlay={\begin{tcbclipinterior} \fill[green!75!blue!50!
↪ white] (frame.south west) rectangle node[text=white,font=\sffamily\
↪ bfseries\tiny,rotate=90] {TYP} ([xshift=4mm]frame.north west);\
↪ end{tcbclipinterior}}}}
\begin{document}
\mylib{recieve}
\end{document}
```

8.3 Colored circles



```
\usepackage{tikz}
\usepackage[framemethod=TikZ]{mdframed}
\usepackage{xcolor}
\usetikzlibrary{calc}
\makeatletter
\newlength{\mylength}
\xdef\CircleFactor{1.1}
\setlength\mylength{\dimexpr\f@size pt}
\newsavebox{\mybox}
\newcommand*\circled[2][draw=blue]{\savebox\mybox{\vbox{\vphantom{
  ↪ WL1/}#1}}\setlength\mylength{\dimexpr\CircleFactor\dimexpr\ht\
  ↪ mybox+\dp\mybox\relax\relax}\tikzset{mystyle/.style={circle,#1,
  ↪ minimum height={\mylength}}}\tikz[baseline=(char.base)]
\node[mystyle] (char) {#2};}
\makeatother
\definecolor{amber}{rgb}{1.0, 0.75, 0.0}
\definecolor{babyblue}{rgb}{0.54, 0.81, 0.94}
usage --> \circled[fill=amber,draw=black]{1}
```

8.4 Whole line colored



```
\documentclass{article}
\usepackage{xcolor}
\newcommand{\hly}[2]{\colorbox{#1!80}{\parbox{\textwidth}{#2}}}

\begin{document}
% \hly{YOURcolor}{some text}
\hly{green}{some text}
\hly{yellow}{some text}
\hly{red}{some text}
\end{document}
```

8.5 Circle text in points to other text

your comment here

This is just some text that I will repeat for this section again and again. This is just some text that I will repeat for this section again and again.

```
\documentclass{article}
\usepackage{tikz}
\usetikzlibrary{tikzmark}

\begin{document}
\tikzset{mynode/.style={inner sep=2pt,fill=cyan!50,draw=blue,line width=1pt
  ↳ ,rounded corners}}

This is just some \tikzmarknode[mynode]{A}{text that} I will repeat for this
  ↳ section again and again. This is just some text that I will repeat for
  ↳ this section again and again.

\begin{tikzpicture}[remember picture, overlay]
  \draw[->,line width=1pt,blue] (A) --++ (1,1) node[above right] {your
    ↳ comment here};
\end{tikzpicture}

\end{document}
```


Chapter 9

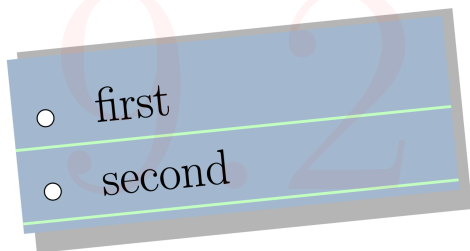
For Fun

9.1 LaTeX Coffee Stains

Download `coffee4.sty` and put in the same directory

```
\documentclass{article}
\usepackage{tikz}
\usetikzlibrary{arrows,shapes}
\usepackage{coffee4}
\enum{\cofeAm{1}{0.6}{0}{0.cm}{6cm}
\cofeCm{0.9}{0.5}{180}{-7.cm}{11cm}
\cofeDm{0.4}{0.2}{90}{1.0cm}{3.0cm}
\cofeBm{0.5}{0.5}{0}{-3.cm}{10cm}
%\cofeAm{alpha}{scale}{angle}{xoff}{yoff} <-- usage
\end{document}
```

9.2 Sticky notes



```
\documentclass{article}
\usepackage{xparse}
\usepackage{fancy par}
\usetikzlibrary{calc,shadows}
\NewDocumentCommand\StickyNoteP{O{6cm}mO{6cm}}{%
\begin{tikzpicture}
\node[
drop shadow={shadow xshift=3pt,},
inner xsep=0pt,
xslant=-0.1,yslant=0.1,
inner ysep=0pt,
text depth=\the\dimexpr#1+2.5ex\relax
]{\parbox[t][#1][c]{#3}{#2}};
\end{tikzpicture}}

\begin{document}
\StickyNoteP[2.5cm]{%
\NotebookPar[spiral=false]{
\LARGE first\second }}[6.5cm]
\end{document}
```

9.3

9.3

```

\documentclass{article}
\usepackage{tikz}
\usetikzlibrary{fadings, shadings}
\newcounter{fadcnt}\setcounter{fadcnt}{0}
\newcommand\fadingtext[3][l]{%
\stepcounter{fadcnt}
\begin{tikzfadingfrompicture}[name=fading letter\thefadcnt]
\ode{text=transparent!0,inner xsep=0pt,outer xsep=0pt,#1}{#3};
\end{tikzfadingfrompicture}%
\begin{tikzpicture}[baseline=(textnode.base)]
\ode{inner sep=0pt,outer sep=0pt,#1}(textnode){\phantom{#3}};
\shade[path fading=fading letter\thefadcnt,#2,fit fading=false]
(textnode.south west) rectangle (textnode.north east);%
\end{tikzpicture}%
}
\usetikzlibrary{calc}
\newbox\shbox
\def\shboxset{%
\path picture shading/.style={%
\path picture={%
%
\pgfpointdiff{\pgfpointanchor{path picture bounding box}{south west}}{
\pgfpointanchor{path picture bounding box}{north east}}%
\pgfgetlastxy\pathwidth\pathheight%
\pgfinterruptpicture%
\global\setbox\shbox=\hbox{\pgfuses shading{#1}}%
\endpgfinterruptpicture%
\pgftransformshift{\pgfpointanchor{path picture bounding box}{center}}%
\pgftransformxscale{\pathwidth/(\wd\shbox)}%
\pgftransformyscale{\pathheight/(\ht\shbox)}% \dp will (should) be 0pt
\pgftext{\box\shbox}%
%
}
}
}
\pgfdeclarehorizontalshading{rainbow}{10bp}{color(0bp)=(violet);
color(1.6667bp)=(blue);
color(3.3333bp)=(cyan);
color(5bp)=(green);
color(6.6667bp)=(yellow);
color(8.3333bp)=(orange);
color(10bp)=(red)}
\begin{document}
\fadingtext[scale=10, font=\bfseries]{upper left=red, upper right=green,
\rightarrow lower left=blue,lower right=yellow}{\LaTeX}

\fadingtext[scale=10, font=\bfseries]{path picture shading=rainbow}{\LaTeX}

\noindent\fadingtext[scale=0.7, font=\bfseries]{path picture shading=
\rightarrow rainbow}{\parbox[b]{1.5\linewidth}{\strut\lipsum[1]}}
\end{document}

```

9.4 Single Watermark

Loquen hpm dū sūt amē, consēcutetur adspiciēc ei. Ut parus eēt,
vestibulum ut, placat ac, adspiciēc velle. felis. Carabitur dictum gravita
mauris. Nam aere libro, nōnamq; eēt, consēcutetur ut, vulpate a, magna.
Dante vedicula angue et neque. Pelletestoe habitant morbi tristitia senectus
et tuets et maudosa fama ac turpis elegit. Mauris ut leo. Cras virena
metus rhodens met. Nulla et lectus vestibulum una fringilla trullitas. Phylaeus
ut illius mēcti tector gravita placeat. Integer sicut ē, nullis in, pretium
quos vellet. Quia quidam, quāvis, quāvis, quāvis, quāvis, quāvis, quāvis,
faucibus. Morbi docto nulla, maudosa en, vulpinar at, mollis ea, nulla.
Carabitur auctor senper nulla. Dantes varius cori eget rursi. Dux nulla mē, conque
en, accensum elefand, sagittis quis, diam. Duis eget orci sāt dignissia

Nam dai 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 neque. Pellentesque a massa. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum tincidunt. Pellentesque a massa. Aliquam tincidunt urna.

Nulla molestia parturit diem. Donec felis erat, cognue nam, voluitque at, tunc diem tridie. Inter, Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed lacina turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, tpsam. Morbi blandit ligula fentesque magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt puris vel magna. Integer non quam. Praesent euismod nunc eu puris. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum

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. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, fisis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae

cibus semper, leo venit ultimates tellus, ac venenatis arcu visus vel nidi. Vestibulum
diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue
quam in hendrerit rive ante erat felle. Maecenas erat erat in cordis mattis

facillior. Morbis sanguinis visis in diguissim interdum, juxta lectu sagittis duci et vehicula libero et curvus duci. Mauris tempore ligula sed locus. Duis curus enim ut augue. Carus ac magna. Carus nulla. Nopla ogueas. Curabitur a leo. Quisque ogueas visis eget nunc. Nunc fugiat lacus vel est. Curabitur consectetur. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nunc acur 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. Carus viverra

1

```
\documentclass[a4paper]{article}
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[pages=some]{background}% change "some" to "all" to see WM on
↪ all pages
```

```
\usepackage{lipsum}
\backgroundsetup{color=green, opacity=0.3, scale=10, contents={A n M n V
  ↪ }}

```

```
\begin{document}
\lipsum[1-5]
\BgThispage
\lipsum[1-5]
\end{document}
```

9.5 Full page of Watermarks

Plenum ipsum dote sit ante, consecretetur adipiscit elit. Ut purus est,
 vestibulum ut, placenter adipiscit vitas, felix. Curabitur ditione gravia
 mauris. Nam arcu libero, nonummy eget, consecretetur id, vulpinate a, ma-
 gna. Donec vulgata augeat neque. Pellentesque habstant morbi tristique
 senectus et netus et malesuada fames ac turpis egestas. Mauris id nolo. Cras
 viverra metus nonummy sem. Nulla et lectus vestibulum dicit fringilla ultra
 Lorem ipsum, et tellus sit amet tortor gravida volutpat. Id eget sapien
 ac iaculis fin primium qui, viverra ac, morbi. Praesentibus sem vel sit
 bibendum. Aenean faucibus. Semper dote nulla, malesuada eu, vulpinate et,
 mollis nulla. Curabitur anctor semper nulla. Donec varius eget eget risus.
 Dui nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Dicit eget
 orci sit amet orci diammetrum nullam.

Nam dui ligula, tringilla a, euistard 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 ornate odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cuius nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum tursip. Pellentesque cursus tectus mauris.

Nulla malis dactylis portitorum dactylis. Dones felis ceteri conque non, volu-
pat at, tridindum tristisque, libero. Viravimus viverra, fertentibus felis. Dones
nonumquam pellicenteque ante. Phasellus adipiscens, cunper elit. Proin ferme
turpi massa ac quam. Sed diam turpis, molestis vitae, placenta, a molestie
neque. Maecenas lacina. Nam ipsium lacina, clement at, accusamus nec, su-
scipit, a ipsum. Morbi blandit lacina fergat magna. Nunc elegend consequat
ferit. Sed lacina malis vitae enim. Pellicenteque tridindum turpis vel magna
Integer non enim. Present eximius nunc et purus. Dones bilensund quibus
in tellus. Nullam cursum pulvinar lecti. Dones et mi. Nam vulpate meque
enim. Vestibulum tellusque lacina felis ac massa.

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. Integer tempus connullis augue. Etiam placerat. Nunc elegerimus fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus

[illegible][illegible]

```
\begin{document}
\drop=0.1\textheight \BgThispage \lipsum[1-8]
\end{document}
```

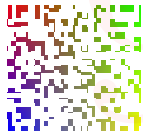
9.6 Generating QR code



```
\documentclass{article}
\usepackage{qrcode}

\begin{document}
\qrcode[height=0.5in]{https://github.com/AnMnv/eBook}
\textcolor{blue}{\qrcode[height=0.5in]{https://github.com/AnMnv/eBook}}
\textcolor{green}{\qrcode[height=0.5in]{https://github.com/AnMnv/eBook}}
\end{document}
```

9.7 Gradient QR code

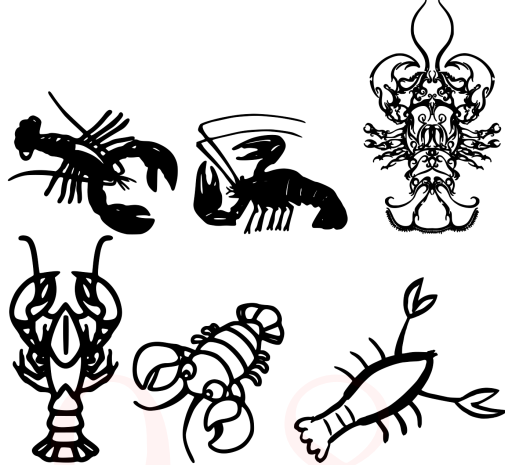
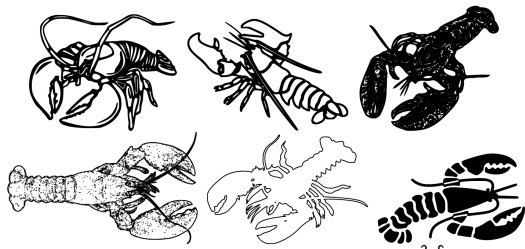


```
\documentclass{article}
\usepackage{qrcode}[]
\usepackage{tikz}
\usetikzlibrary{fadings, shadings}
\newcounter{fadcnt}\setcounter{fadcnt}{0}
\newcommand\fadingtext[3][\]{%
\stepcounter{fadcnt}
\begin{tikzfadingfrompicture}[name=fading letter\thefadcnt]
\node[transparent!0,inner xsep=0pt,outer xsep=0pt,#1]{#3};
\end{tikzfadingfrompicture}%
\begin{tikzpicture}[baseline=(textnode.base)]
\node[inner sep=0pt,outer sep=0pt,#1](textnode){\phantom{#3}};
\shade[path fading=fading letter\thefadcnt,#2,fit fading=false]
(textnode.south west) rectangle (textnode.north east);%
\end{tikzpicture}}
\usetikzlibrary{calc}
\newbox\shbox
\tikzset{%
path picture shading/.style={%
path picture={%
\pgfpointdiff{\pgfpointanchor{path picture bounding box}{south west}}%
{\pgfpointanchor{path picture bounding box}{north east}}%
\pgfgetlastxy\pathwidth\pathheight%
\pgfinterruptpicture%
\global\setbox\shbox=\hbox{\pgfuses shading{#1}}%
\endpgfinterruptpicture%
\pgftransformshift{\pgfpointanchor{path picture bounding box}{center}}%
\pgftransformxscale{\pathwidth/(\wd\shbox)}%
\pgftransformyscale{\pathheight/(\ht\shbox)}% \dp will (should) be 0pt
\pgftext{\box\shbox}%
}}}%
\pgfdeclarehorizontalshading{rainbow}{10bp}{color(0bp)=(violet);
color(1.6667bp)=(blue);
color(3.3333bp)=(cyan);
color(5bp)=(green);
color(6.6667bp)=(yellow);
color(8.3333bp)=(orange);
color(10bp)=(red)}
\pgfdeclareverticalshading{rainbow_vertical}{10bp}{color(0bp)=(violet);
color(1.6667bp)=(blue);
color(3.3333bp)=(cyan);
color(5bp)=(green);
color(6.6667bp)=(yellow);
color(8.3333bp)=(orange);
color(10bp)=(red)}

\begin{document}
\fadingtext[scale=0.5]{upper left=red, upper right=green, lower left=blue,lower
→ right=yellow}{\qrcode[height=5cm]{https://github.com/AnMnv/
→ eBook}}
\fadingtext[scale=0.5]{path picture shading=rainbow}{\qrcode[height=5cm]{
→ https://github.com/AnMnv/eBook}}
\fadingtext[scale=0.5]{path picture shading=rainbow_vertical}{\qrcode[height
→ =5cm]{https://github.com/AnMnv/eBook}}
\end{document}
```

9.8 Lobsrets

9.9 Watermark over everything



1



2

```
\documentclass[14pt]{extreport}
\usepackage[left=1.5cm,right=3cm,top=1.5cm,
bottom=1.5cm,bindingoffset=0cm]{geometry}
\usepackage{loblib}

\begin{document}
\lob{1} \lob{12}
\lob{2} \lob{20}
\lob{3} \lob{21}
\lob{4} \lob{22}
\lob{5} \lob{28}
\lob{6} \lob{32}
\lob{7} \lob{33}
\lob{8} \lob{74}
\lob{9} \lob{76}

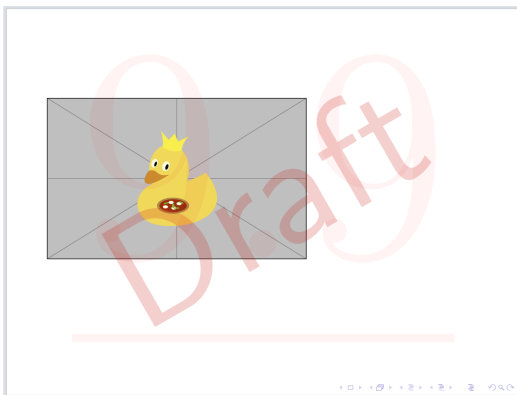
\vspace*{2cm}
\hspace*{-2.8cm}
\definecolor{shadow}{rgb}{0.85,0.85,0.85}
\lob[rotate=-90,shadow,xscale=-1.2,yscale=1.2]{77}

\lobwatermark
\end{document}
```

LobLib documentation on [GitHub](https://github.com/bryce-evans/LobLib) in [LobLib-package](#) folder.

Origins of the package <https://github.com/bryce-evans/LobLib>

However, to print lobsters put [objects](#) folder and [loblib.sty](#) from the [LobLib-package](#) folder into the same directory with your [.tex](#) file.



```
\documentclass{beamer}

\usepackage{tikz}
\AddToHook{shipout/foreground}{
  \begin{tikzpicture}[remember picture,overlay]
    \node[red,rotate=30,scale=10,opacity=0.2] at (current page.center) {Draft
    ↪ };
  \end{tikzpicture}}

\begin{document}
\begin{frame}
\includegraphics{example-image-duck}
\end{frame}
\end{document}
```