

[BookCover]

Class for book covers and dust jackets

bookcover.cls

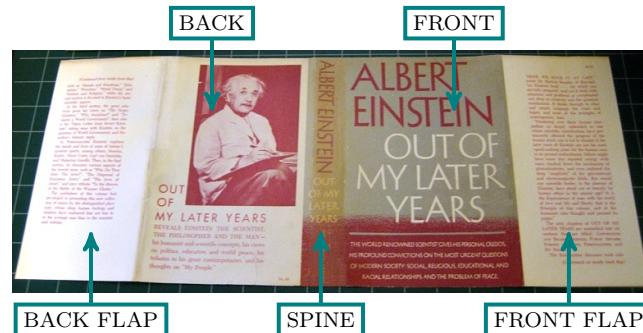
v2.5 (2020/11/16)

Tibor Tómacs

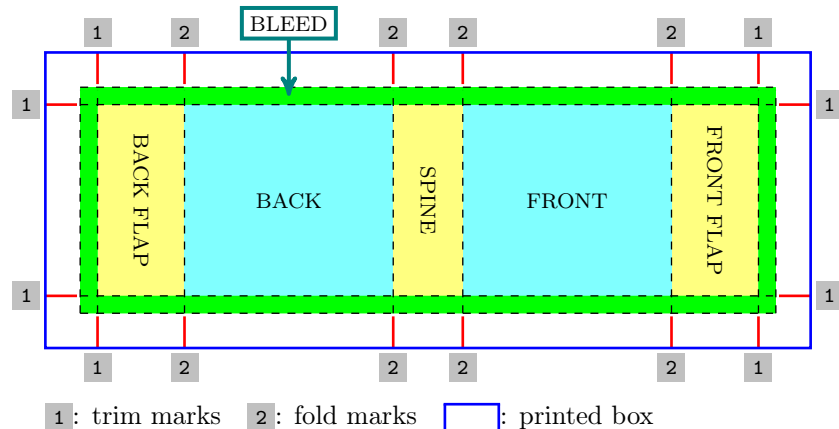
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1 Introduction

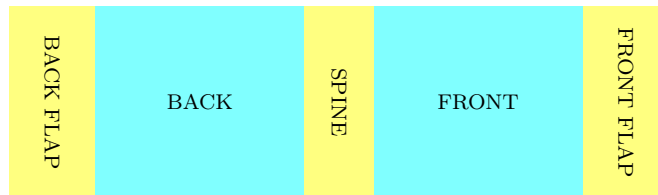
In the following picture we can see a typical dust jacket. Its parts are back flap, back, spine, front and front flap. Typographically, a book cover is a dust jacket without flaps, the only difference is that the book cover is a fixed part of the book, whereas the dust jacket is removable.



When we prepare a cover for printing, some marks are needed to know where to trim or fold the paper. These marks determine a special area of the sheet, which is called “bleed” (see the green area in the next figure). The background will be expanded onto the bleed, taking account of slight inaccuracy when trimming.



We get the following result after trimming:



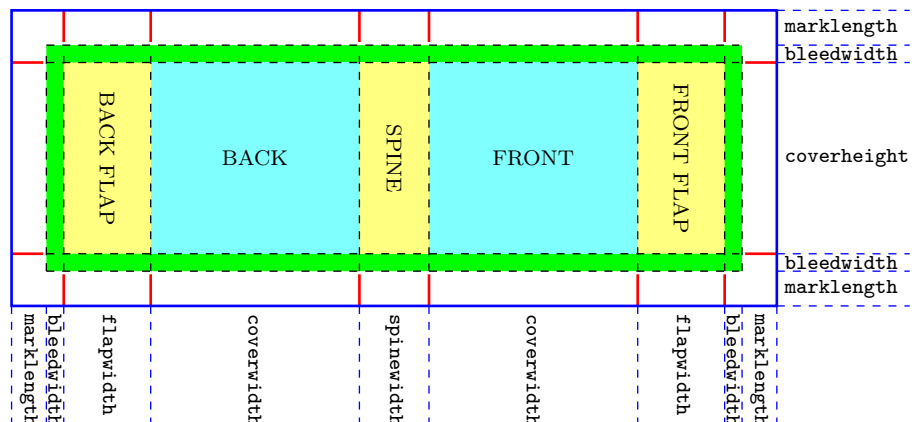
2 Loading class

The class `bookcover` requires the services of the class `article` and the following packages: `kvoptions`, `geometry`, `graphicx`, `calc`, `ifthen`, `tikz`, `environ`, `fgruler`.

Load the class as usual, with

```
\documentclass[<options>]{bookcover}
```

option	description	default value
<code>coverwidth=<length></code>	See the next figure	170mm
<code>coverheight=<length></code>		240mm
<code>spinewidth=<length></code>		5mm
<code>flapwidth=<length></code>		0mm
<code>marklength=<length></code>		10mm
<code>bleedwidth=<length></code>		5mm
<code>markthick=<length></code>	Thickness of marks	0.4pt
<code>markcolor=<color></code>	Color of marks	red
10pt	Normal font size (default: 10pt)	
11pt		
12pt		
<code>trimmed</code>	It shows trimmed version	false



EXAMPLE

```
\documentclass[flapwidth=50mm,spinewidth=15mm]{bookcover}
```

3 Creating book cover

3.1 Commands and environments

Use `bookcover` environment in the body of the document to make a new book cover. In this environment, you can create a component of the book cover by the following command or environment:

```
\bookcovercomponent{<component type>}{<part>}{<content>}
```

or

```
\begin{bookcoverelement}{\langle component type \rangle}{\langle part \rangle}
\langle content \rangle
\end{bookcoverelement}
```

See the subsection 3.3 for the description of *\langle component type \rangle*. You can read the description of *\langle part \rangle* in subsection 3.2 and section 4. The *\langle content \rangle* depends on the *\langle component type \rangle* (see subsection 3.3).

Every `\bookcovercomponent` command and `bookcoverelement` environment generates a layer on the sheet. The first one generates the bottom layer and the last one generates the top layer.

The following two examples are equivalent.

EXAMPLE

```
\begin{bookcover}
  \bookcovercomponent{color}{bg whole}{blue}
  \bookcovercomponent{normal}{front}{
    \vspace{5cm}
    \begin{center}
      \bfseries\huge Book title
    \end{center}
  }
\end{bookcover}
```

EXAMPLE

```
\begin{bookcover}
  \begin{bookcoverelement}{color}{bg whole}
    blue
  \end{bookcoverelement}
  \begin{bookcoverelement}{normal}{front}
    \vspace{5cm}
    \begin{center}
      \bfseries\huge Book title
    \end{center}
  \end{bookcoverelement}
\end{bookcover}
```

Use `bookcoverdescription` environment in the body of the document for adding the description of the book cover and other information. Don't use it in `bookcover` environment! You can set the page geometry of the description by the following command:

```
\bookcoverdescgeometry{\langle geometry parameters \rangle}
```

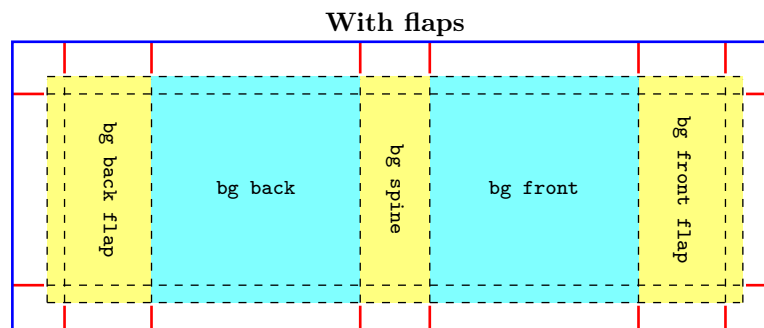
See the *\langle geometry parameters \rangle* in the `geometry` package. Its default value is `margin=1in`. See an example in the subsection 5.4.

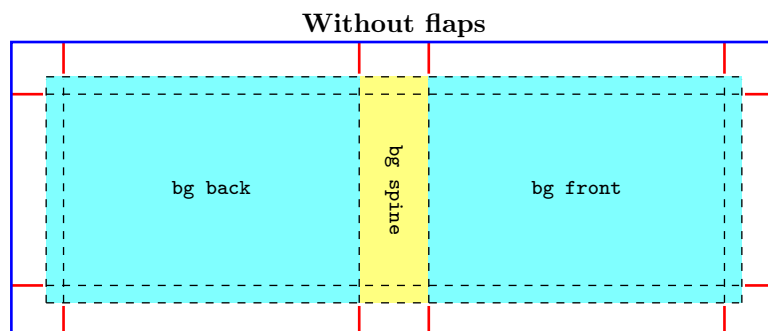
3.2 Parts

It is important, that the background parts are expanded onto the bleed, taking account of slight inaccuracy when trimming!

3.2.1 One-piece background parts

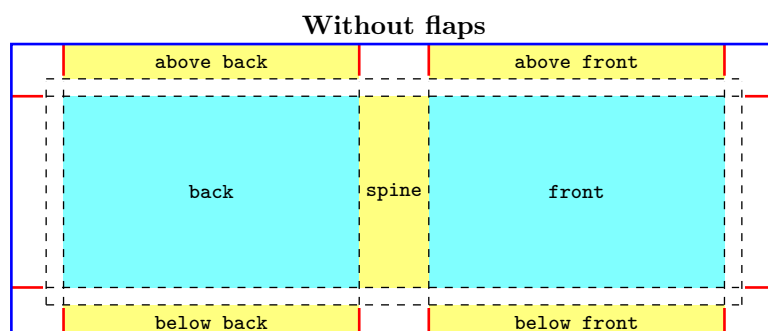
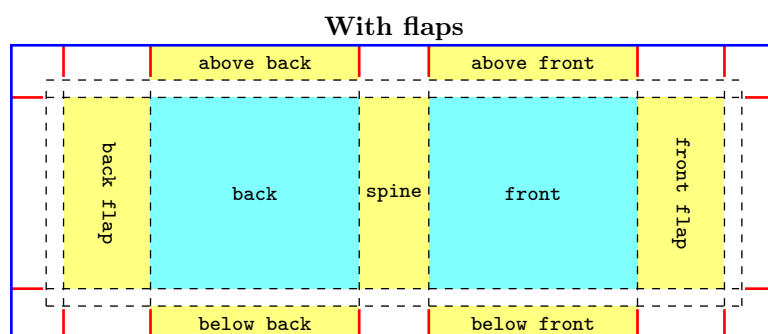
`bg back flap`, `bg back`, `bg spine`, `bg front`, `bg front flap`





3.2.2 One-piece foreground parts

back flap, back, spine, front, front flap, above back, above front, below back, below front



3.2.3 Combined parts

The following combined parts are defined. You can see illustrations in the section 4.

background	foreground
bg back and flap	back and flap
bg back and spine	back and spine
bg front and spine	front and spine
bg front and flap	front and flap
bg back and flap and spine	back and flap and spine
bg front and flap and spine	front and flap and spine
bg whole without front flap	whole without front flap
bg whole without back flap	whole without back flap
bg whole without flaps	whole without flaps
bg whole	whole
whole page	

3.3 Component types

The following component types are defined: color, picture, tikz, tikz clip, normal, center, ruler.

3.3.1 Component type: color

It determines the color of the part. The $\langle content \rangle$ is the options of the `\fill` in the `tikz` package:

$\langle color name \rangle$ (See it in the `xcolor` package.)
`color= $\langle color name \rangle$` (It is equivalent to the previous one.)
`top color= $\langle color name \rangle$`
`bottom color= $\langle color name \rangle$`
`middle color= $\langle color name \rangle$`
`inner color= $\langle color name \rangle$`
`outer color= $\langle color name \rangle$`
`ball color= $\langle color name \rangle$`
`shading angle= $\langle degree \rangle$` It rotates the shading by the given angle.

EXAMPLE

```
\bookcovercomponent{color}{bg whole without flaps}{red}
```

EXAMPLE It is equivalent to the previous example.

```
\bookcovercomponent{color}{bg whole without flaps}{color=red}
```

EXAMPLE

```
\bookcovercomponent{color}{bg whole without flaps}{  
  top color=white, bottom color=blue!50!black, shading angle=60}
```

3.3.2 Component type: picture

The $\langle content \rangle$ is a picture file, which will be rescaled according to the sizes of the $\langle part \rangle$.

EXAMPLE

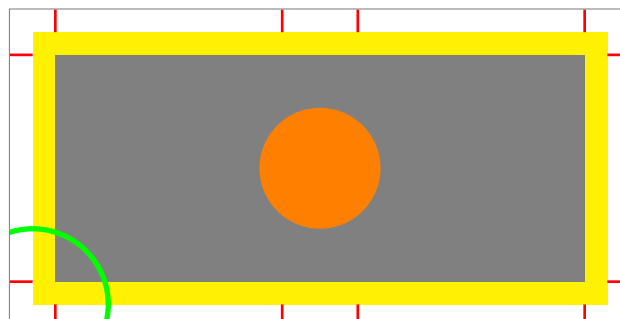
```
\bookcovercomponent{picture}{bg front flap}{fig.png}
```

3.3.3 Component type: tikz

The $\langle content \rangle$ is a TikZ code without `\tikz` command and `tikzpicture` environment. The origin of the TikZ figure is the lower left corner of the $\langle part \rangle$. Two rectangle nodes come into being: `part` and `trimmed part`. (Thanks to Zunbeltz Izaola for the idea.)

EXAMPLE

```
\bookcovercomponent{tikz}{bg whole}{  
  \fill[yellow] (part.south west) rectangle (part.north east);  
  \fill[gray] (trimmed part.south east) rectangle (trimmed part.north west);  
  \draw[green] (0,0) circle [radius=10mm];}  
\bookcovercomponent{tikz}{bg spine}{  
  \fill[orange] (part.center) circle [radius=8mm];}
```

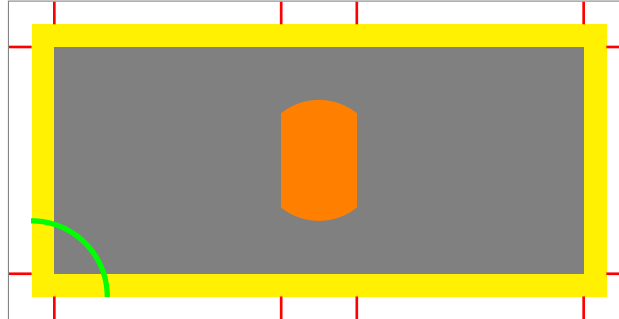


3.3.4 Component type: tikz clip

It works the same as the `tikz component` type, but it clips the *<part>*.

EXAMPLE

```
\bookcovercomponent{tikz clip}{bg whole}{
  \fill[yellow] (part.south west) rectangle (part.north east);
  \fill[gray] (trimmed part.south east) rectangle (trimmed part.north west);
  \draw[green] (0,0) circle [radius=10mm];}
\bookcovercomponent{tikz clip}{bg spine}{
  \fill[orange] (part.center) circle [radius=8mm];}
```



3.3.5 Component type: normal

In this case, the *<content>* is not specific. You can choose it as text or picture etc.

EXAMPLE

```
\bookcovercomponent{normal}{front}{
  \vspace{5cm}
  \begin{center}
    {\bfseries\huge Book title}\[5mm]
    \includegraphics[width=6cm]{fig.png}
  \end{center}}
```

3.3.6 Component type: center

It works the same as the `normal` component type, but the position of the content is the center of the part (horizontally and vertically).

EXAMPLE

```
\bookcovercomponent{center}{above front}{
  \textcolor{blue}{Remark above front}}
\bookcovercomponent{center}{spine}{
  \rotatebox[origin=c]{90}{\bfseries\Large Book title}}
```

3.3.7 Component type: ruler

Use the `ruler` component type to check the sizes of the part. The *<content>* is

```
\setruler[<unit>]{<coordsys>}{<shift x>}{<shift y>}{<color>}
```

<unit> The ruler unit:

- cm** Metric ruler (centimeter). Default value.
- in** English ruler (inch).

<coordsys> The type of the coordinate system:

- upper left** The origin is the upper left corner of the part.

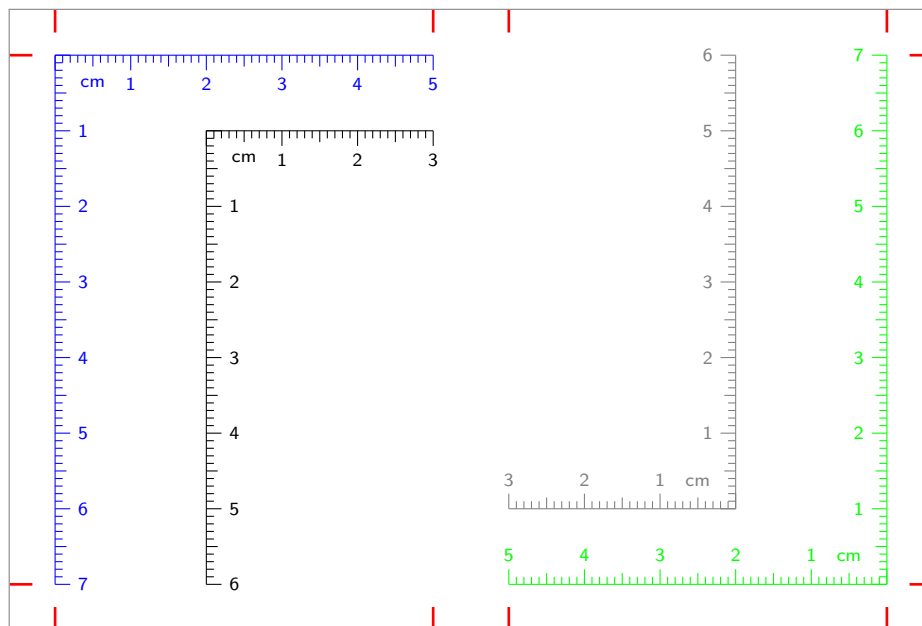
upper right The origin is the upper right corner of the part.
lower left The origin is the lower left corner of the part.
lower right The origin is the lower right corner of the part.

$\langle shift\ x\rangle, \langle shift\ y\rangle$ Moving the origin of the ruler to the vector $(\langle shift\ x\rangle, \langle shift\ y\rangle)$.

$\langle color\rangle$ The color of the ruler.

EXAMPLE

```
\bookcovercomponent{ruler}{back}{\setruler{upper left}{0cm}{0cm}{blue}}
\bookcovercomponent{ruler}{back}{\setruler{upper left}{2cm}{1cm}{black}}
\bookcovercomponent{ruler}{front}{\setruler{lower right}{0cm}{0cm}{green}}
\bookcovercomponent{ruler}{front}{\setruler{lower right}{2cm}{1cm}{gray}}
```



3.4 Defining component type

You can define a new component type, redefine or rename a defined component type with the following commands:

```
\newbookcovercomponenttype{new component type name}{formatting}
\renewbookcovercomponenttype{defined component type name}{formatting}
\newnamebookcovercomponenttype{new component type name}{defined component type name}
```

You can use the following length commands in $\langle formatting\rangle$:

\partwidth Width of the part.
\parheight Height of the part.

You have to reference the content as #1.

EXAMPLE

```
\documentclass[spinewidth=1cm]{bookcover}
\newbookcovercomponenttype{center rotate}{
  \parbox[t][\parheight][c]{\partwidth}{
    \begin{center}
      \rotatebox[origin=c]{90}{#1}
    \end{center}}}
\begin{document}
\begin{bookcover}
```

```

\bookcovercomponent{center rotate}{spine}{Author -- Book title}
\end{bookcover}
\end{document}

```

3.5 Defining part

You can define a new part, redefine or rename a defined part with the following commands:

```

\newbookcoverpart{<new part name>}{<setting>}
\renewbookcoverpart{<defined part name>}{<setting>}
\newnamebookcoverpart{<new part name>}{<defined part name>}

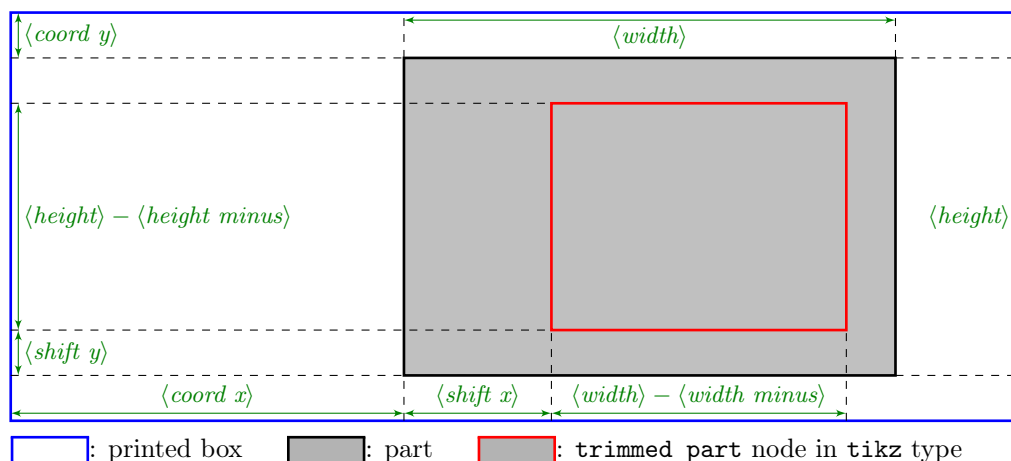
```

In *<setting>* you have to set the new part sizes, the coordinates of its upper left corner (the origin is the upper left corner of the printed box), and the parameters of the `trimmed part` rectangle node in `tikz` and `tikz clip` component types. For this purpose, use the following commands:

```

\setpartposx{<coord x>}
\setpartposy{<coord y>}
\setpartwidth{<width>}
\setpartheight{<height>}
\settrimmedpart{<width minus>}{<height minus>}{<shift x>}{<shift y>}

```



To give the previous lengths, you can use the following length commands:

```

\marklength \bleedwidth \flapwidth \coverwidth \spinewidth \coverheight

```

EXAMPLE

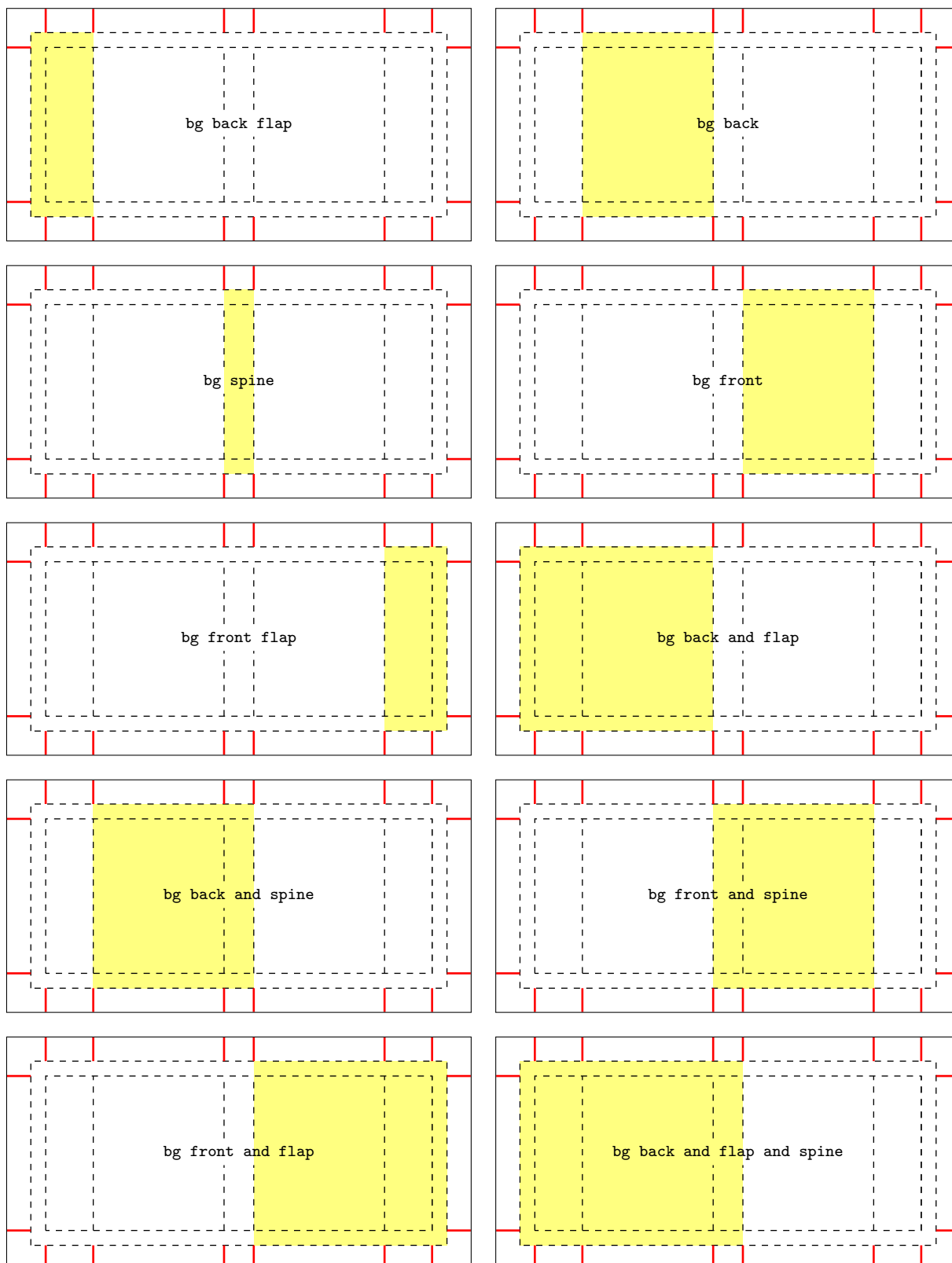
```

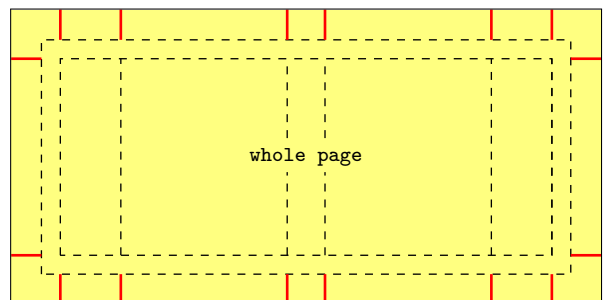
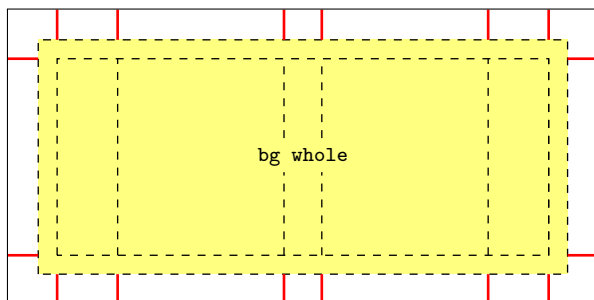
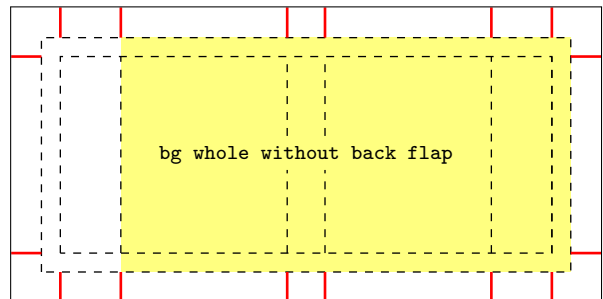
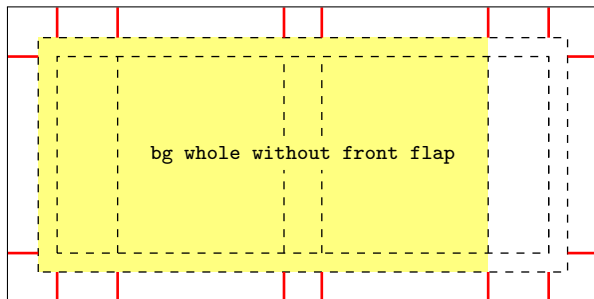
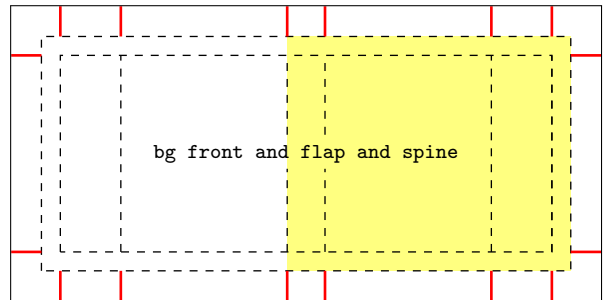
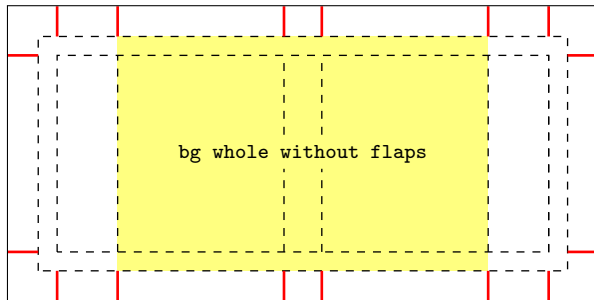
\documentclass[flapwidth=3cm]{bookcover}
\newbookcoverpart{bg half front}{
  \setpartposx{\marklength+\bleedwidth+\flapwidth+\spinewidth+1.5\coverwidth}
  \setpartposy{\marklength}
  \setpartheight{\coverheight+2\bleedwidth}
  \ifdim\flapwidth>0mm
    \setpartwidth{.5\coverwidth}
    \settrimmedpart{0pt}{2\bleedwidth}{0pt}{\bleedwidth}
  \else
    \setpartwidth{.5\coverwidth+\bleedwidth}
    \settrimmedpart{\bleedwidth}{2\bleedwidth}{0pt}{\bleedwidth}\fi}
\begin{document}
\begin{bookcover}
  \bookcovercomponent{tikz}{bg half front}{
    \fill[blue] (part.south west) rectangle (part.north east);
    \fill[green] (trimmed part.south west) rectangle (trimmed part.north east);}
\end{bookcover}
\end{document}

```

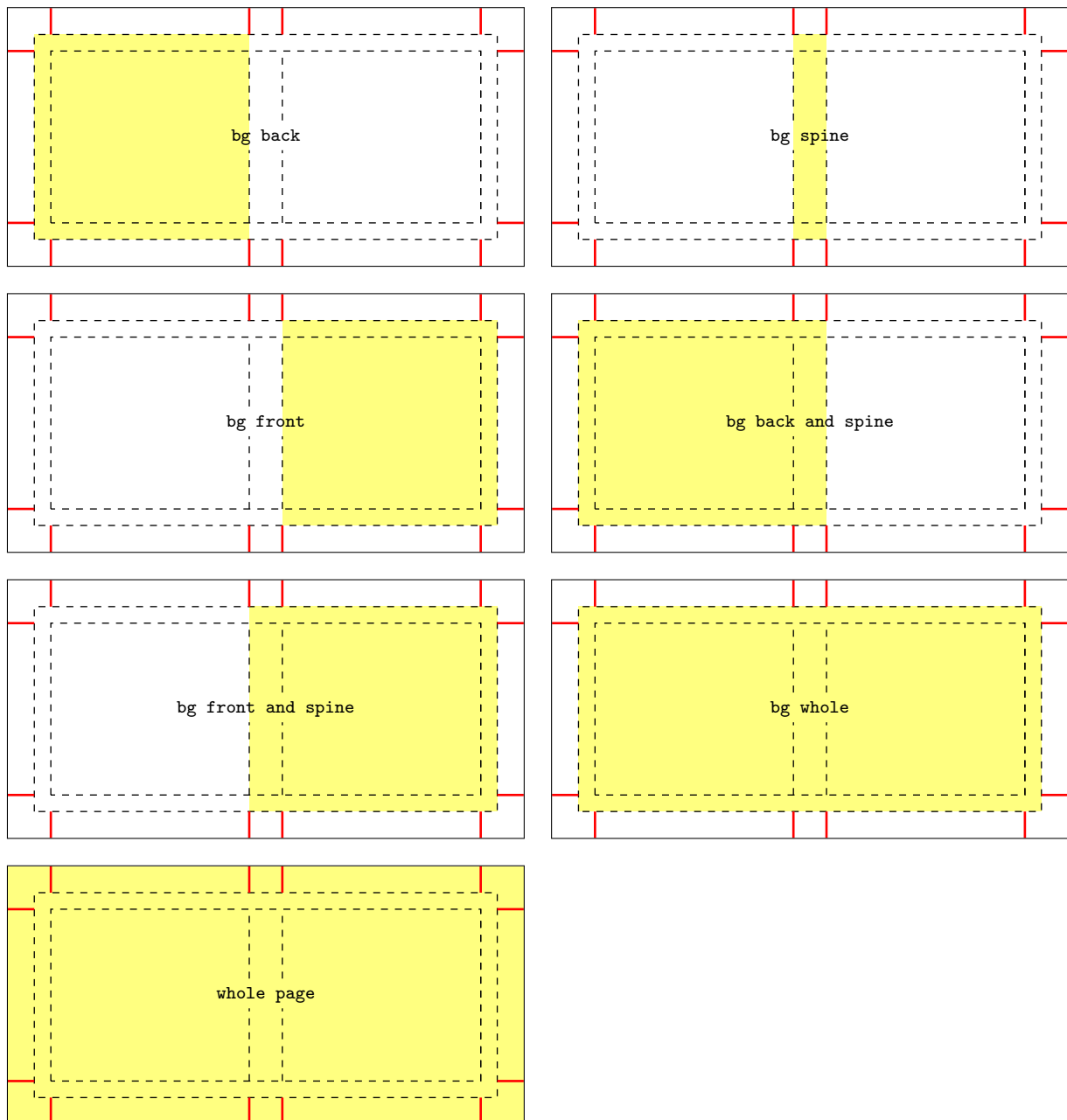

4 Illustration of the predefined parts

4.1 Background parts (cover width flaps)

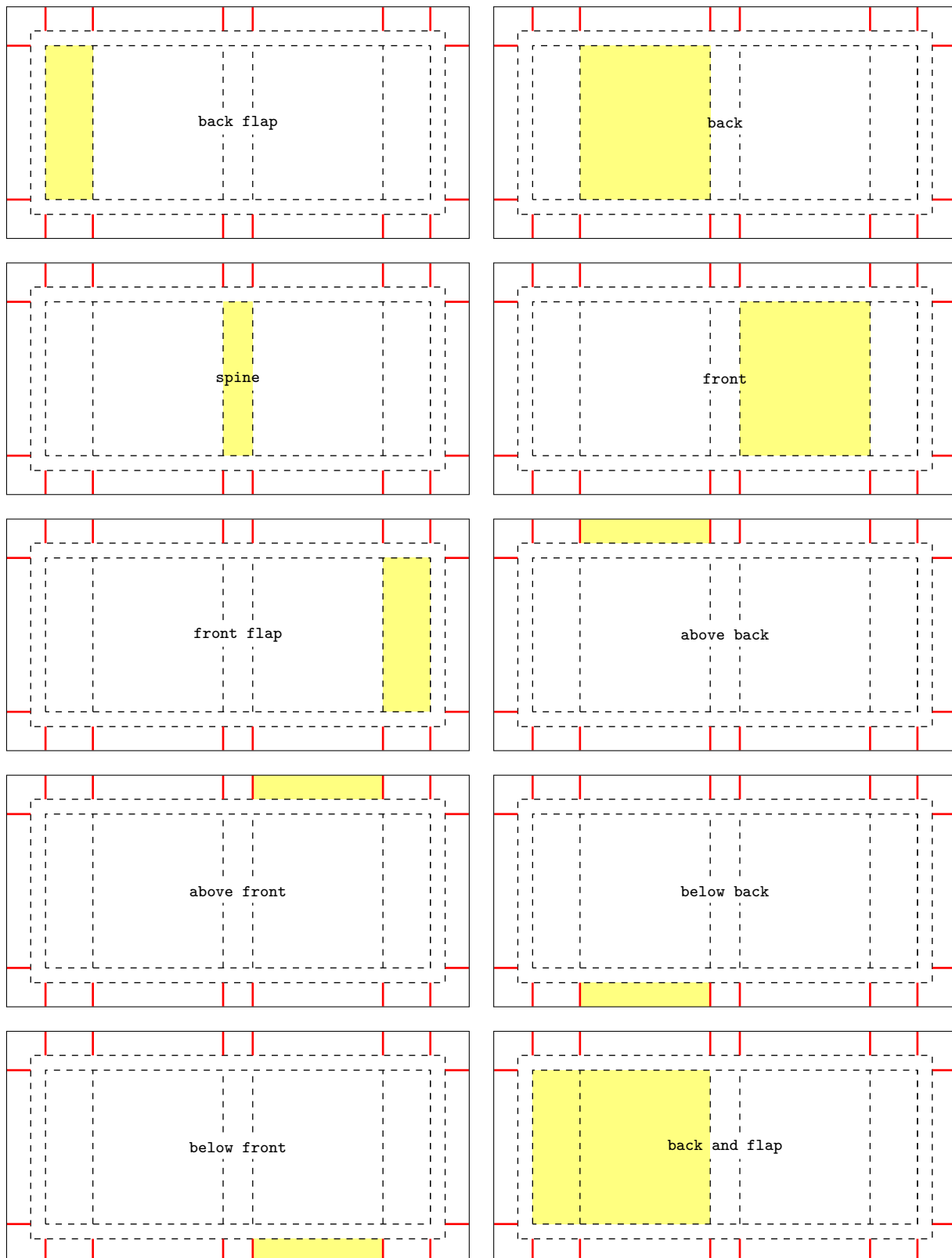


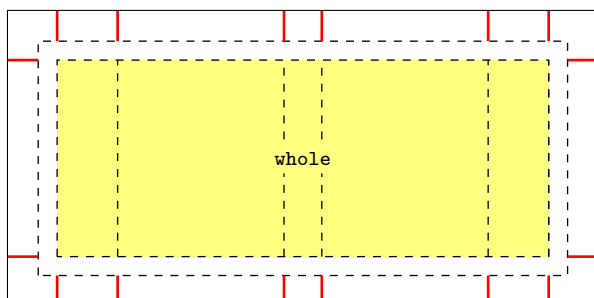
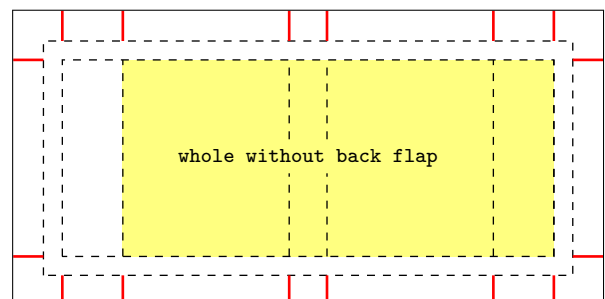
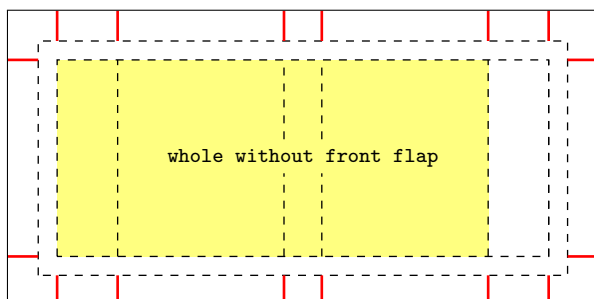
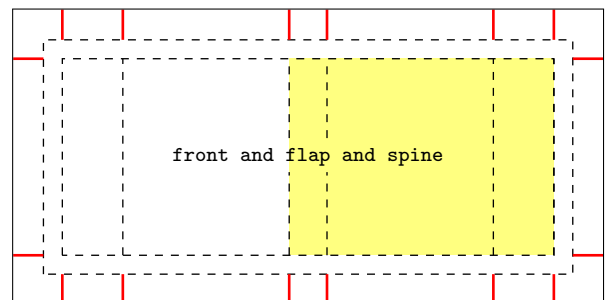
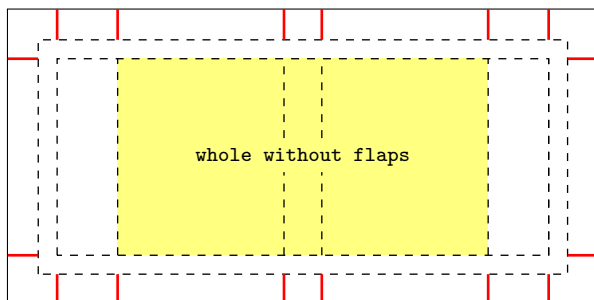
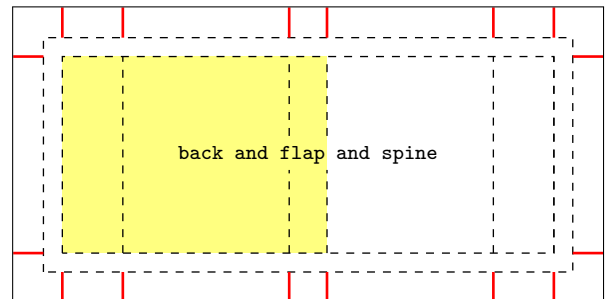
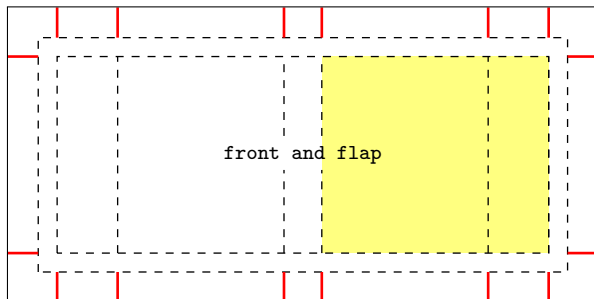
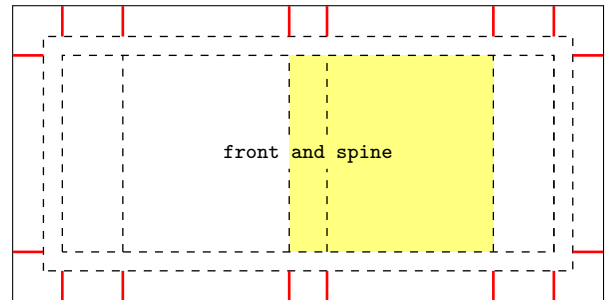
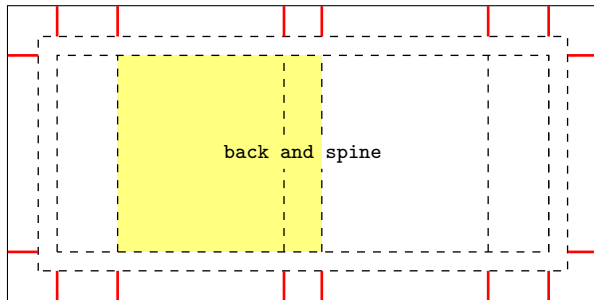


4.2 Background parts (cover widthout flaps)

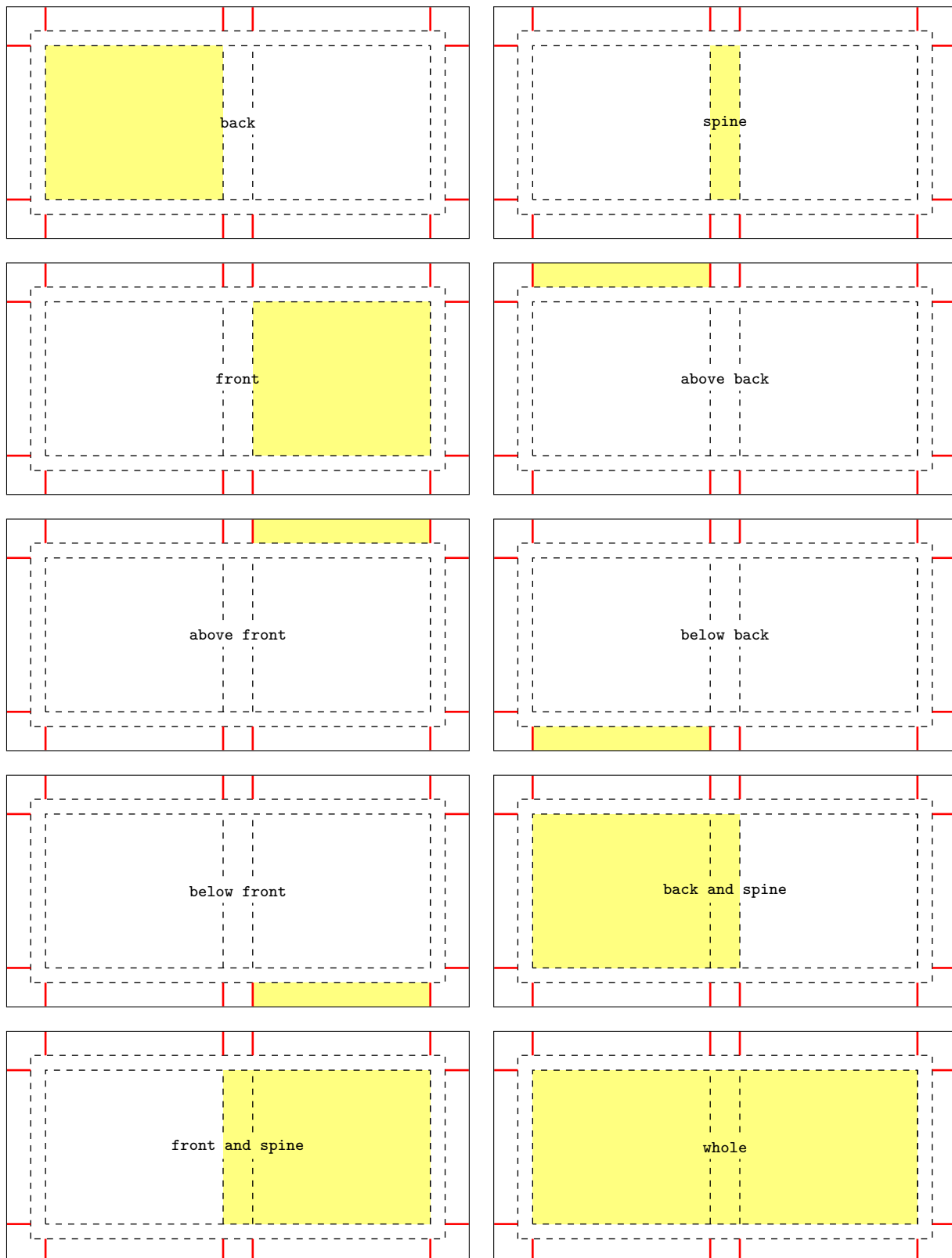


4.3 Foreground parts (cover width flaps)



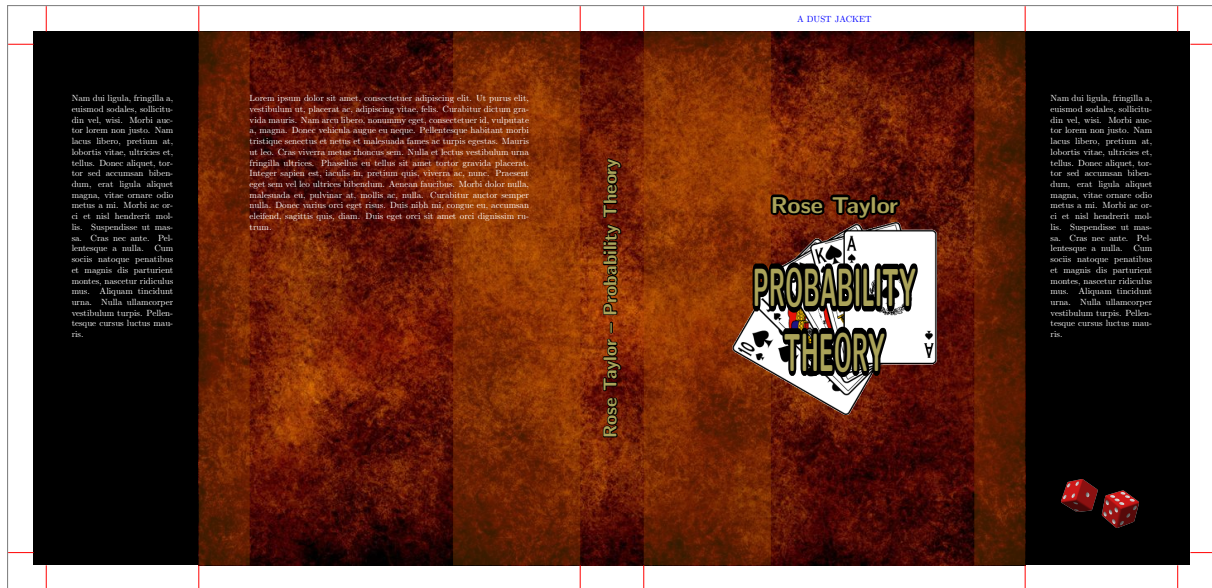


4.4 Foreground parts (cover widthout flaps)



5 Examples

5.1 A dust jacket



```
\documentclass[spinewidth=25mm,coverwidth=15cm,coverheight=20cm,flapwidth=6cm]{bookcover}

\newbookcovercomponenttype{center rotate}{
  \parbox[t][\partheight][c]{\partwidth}{
    \begin{center}
      \rotatebox[origin=c]{90}{#1}
    \end{center}}
}

\usepackage[outline]{contour}% It doesn't work with xelatex and lualatex
\contourlength{1pt}
\definecolor{lightbrown}{RGB}{176,88,0}
\colorlet{title}{yellow!60!black}
\usepackage[latin]{babel}
\usepackage{lipsum}

\begin{document}

\begin{bookcover}

% Remark
\begin{bookcoverelement}{center}{above front}
  \textcolor{blue}{A DUST JACKET}
\end{bookcoverelement}

% Black background color on the whole cover
\begin{bookcoverelement}{color}{bg whole}
  black
\end{bookcoverelement}

% Brown background picture on the whole cover, without the flaps
\begin{bookcoverelement}{picture}{bg whole without flaps}
  ./figures/bg.jpg
\end{bookcoverelement}

% Vertical light brown transparent trails on the back cover by a tikz code
\begin{bookcoverelement}{tikz}{bg back}
  \fill[opacity=0.3,color=lightbrown]
    (0mm,0mm) rectangle (20mm,210mm) (100mm,0mm) rectangle (150mm,210mm);
\end{bookcoverelement}

\end{bookcover}

\end{document}
```

```

\end{bookcoverelement}

% Vertical light brown transparent trails on the front cover by a tikz code
\begin{bookcoverelement}{tikz}{bg front}
  \fill[opacity=0.3,color=lightbrown]
    (0mm,0mm) rectangle (50mm,210mm) (130mm,0mm) rectangle (150mm,210mm);
\end{bookcoverelement}

% Picture on the front, behind the title
\begin{bookcoverelement}{normal}{front}
  \vspace{70mm}
  \centering
  \includegraphics[width=8cm]{./figures/cards.png}
\end{bookcoverelement}

% Text on the front cover
\begin{bookcoverelement}{normal}{front}
  \centering
  \vspace{60mm}
  \color{title}\sffamily\bfseries
  \resizebox*{50mm}{8mm}{\contour{black}{Rose Taylor}}
  \par\vspace{20mm}
  \resizebox*{90mm}{40mm}{\parbox{35mm}{
    \centering
    \contour{black}{PROBABILITY}\\
    \contour{black}{THEORY}\\}}
\end{bookcoverelement}

% Text on the spine
\begin{bookcoverelement}{center rotate}{spine}
  \contour{black}{%
    \color{title}\huge\sffamily\bfseries
    Rose Taylor -- Probability Theory}
\end{bookcoverelement}

% Text on the back cover
\begin{bookcoverelement}{normal}{back}
  \centering
  \vspace{20mm}
  \parbox{110mm}{\color{white}\lipsum[1]}
\end{bookcoverelement}

% Text and picture on the front flap
\begin{bookcoverelement}{normal}{front flap}
  \centering
  \vspace{20mm}
  \parbox{40mm}{\color{white}\lipsum[2]}
  \vfill
  \includegraphics[width=30mm]{./figures/dice.png}
  \vspace{10mm}
\end{bookcoverelement}

% Text on the back flap
\begin{bookcoverelement}{normal}{back flap}
  \centering
  \vspace{20mm}
  \parbox{40mm}{\color{white}\lipsum[2]}
\end{bookcoverelement}

\end{bookcover}

\end{document}

```


5.2 A two-sided book cover



```

\documentclass[markcolor=black,spinewidth=15mm]{bookcover}
\usepackage[latin]{babel}
\usepackage{lipsum}
\definecolor{amiyellow}{cmyk}{0,0,.6,0}

\begin{document}

% The outside of the book cover
\begin{bookcover}

% Remark
\bookcovercomponent{center}{above front}{
  \textcolor{red}{\textsc{Annales Mathematicae et Informaticae} book cover -- outside}}

% Yellow triangle on the back cover by tikz code
\bookcovercomponent{tikz}{bg back}{
  \fill[amiyellow](.5,.5)--(17.5,24.5)--(17.5,0)--(.5,0)--cycle;}

% Yellow triangle on the front cover by tikz code
\bookcovercomponent{tikz}{bg front}{
  \fill[amiyellow](0,0)--(0,24.5)--(17,.5)--(17,0)--cycle;}

% Yellow background color on the spine
\bookcovercomponent{color}{bg spine}{amiyellow}

% Text on the spine
\bookcovercomponent{center}{spine}{
  \rotatebox[origin=c]{90}{\footnotesize\bfseries
    ANNALES MATHEMATICAE ET INFORMATICAЕ 43.~(2020)}}

% Text and pictures on the front cover
\bookcovercomponent{normal}{front}{
  \vspace{30mm}
  \centering
  {\huge\bfseries ANNALES\ MATHEMATICAE ET\ INFORMATICAЕ\ [13mm]}
  {\large\bfseries TOMUS 43.~(2020)}\ [10mm]
  \includegraphics{./figures/summa.pdf}
  \vfill
  {\large COMMISSIO REDACTORIUM}\ [3mm]
  \parbox{123mm}{\centering\lipsum[2]\par}
  \vfill
  {\large\bfseries HUNGARIA}
  \vspace{10mm}}

% Text on the back cover
\bookcovercomponent{normal}{back}{
  \vspace{30mm}
  \centering
  {\large\bfseries Contents}\ [5mm]
  \parbox{126mm}{\lipsum[1-4]}}

\end{bookcover}

% The inside of the book cover
\begin{bookcover}

% Remark
\bookcovercomponent{center}{above front}{
  \textcolor{red}{\textsc{Annales Mathematicae et Informaticae} book cover -- inside}}

% Text on the front cover (it is back of the inside book cover!)
\bookcovercomponent{normal}{front}{
  \vspace{27mm}

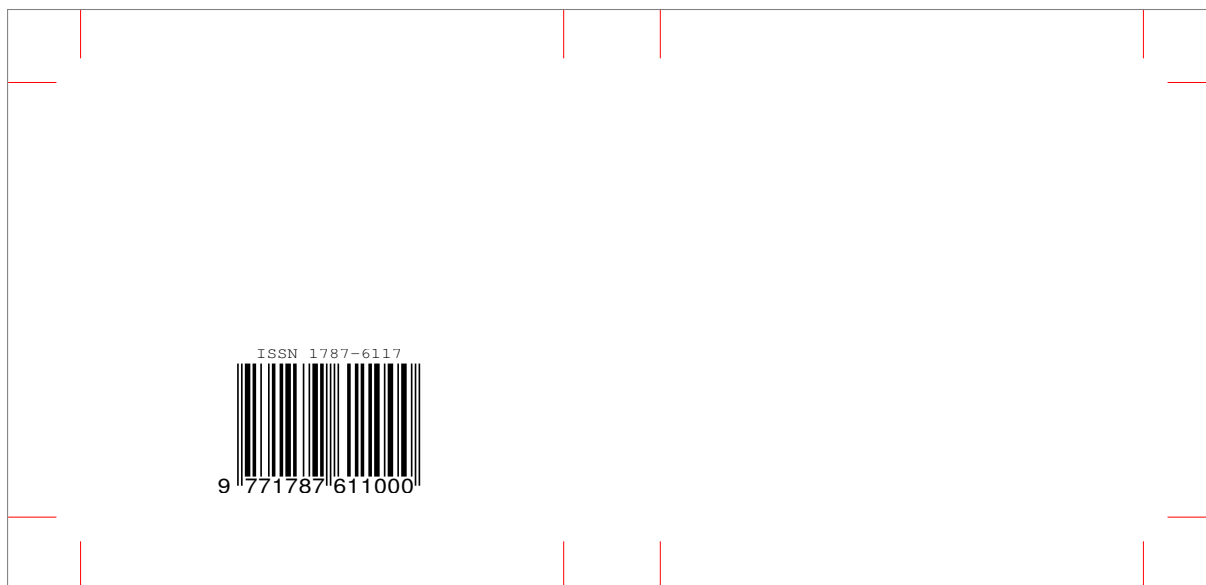
```

```

\begin{center}
  \bfseries
  ANNALES MATHEMATICAE ET INFORMATICAЕ\[\[3mm]
  International journal for mathematics and computer science\[\[3mm]
  Referred by\
  Zentralblatt f\{"{u}r Mathematik\
  and\
  Mathematical Reviews\
\end{center}
\bigskip
\begin{center}
  \parbox{126mm}{\lipsum[1]}
\end{center}
\end{bookcover}
\end{document}

```

5.3 Barcode



```

\documentclass{bookcover}
\usepackage{pst-barcode}
\begin{document}
\begin{bookcover}
  \bookcovercomponent{normal}{back}{
    \vfill
    \centering
    \begin{pspicture}(1.5in,1in)
      \psbarcode{1787-6117}{includetext height=1 width=1.5}{issn}
    \end{pspicture}
    \vspace{5mm}}
\end{bookcover}
\end{document}

```

You can compile this file with `latex` or `xelatex`. Using `pdflatex` or `lualatex`, write the following code into the preamble:

```
\usepackage[pdfcrop={-hires}]{auto-pst-pdf}
```

In this case, the `pdflatex` or `lualatex` must be called with the `-shell-escape` option.

5.4 Adding description

```
\documentclass{bookcover}
\usepackage[latin]{babel}
\usepackage{lipsum,multicol}
\bookcoverdescgeometry{vmargin=25mm,hmargin=9cm}

\begin{document}

\begin{bookcoverdescription}
\title{Description}
\author{John Taylor}
\date{}
\maketitle
\begin{multicols}{3}
\lipsum
\end{multicols}
\end{bookcoverdescription}

\begin{bookcover}
% book cover components
\end{bookcover}

\end{document}
```