`Beameri`kZ class manual

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University of Warsaw

Setup

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5. See the result.

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5. See the result.

6. Be happy*.

* Item **6** is optional.

Minimal working example

```
\documentclass{beamerikz2}              % defines the document to be BeamerikZ

\begin{document}
\begin{bzFrame}                         % the only frame of that document
\bzOn{                                  % content to appear first
    \bzCenter{Welcome to \beamerikz!}  % a centred text
}
\end{bzFrame}
\end{document}
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\begin{bzFrame}                         % the only frame of that document
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    \bzCenter{Welcome to \beamerikz!}   % a centred text
}
\bzOn{                                  % content to appear second
    \bzCenter{Welcome again, nice to see you!}
    \bzCenter{Hope that you'll stay longer :)}
}
\end{bzFrame}
\end{document}
```

To add more content, create a new `\bzOn{...}` entry, as above.

Minimal working example

```
\documentclass{beamerikz2}               % defines the document to be BeamerikZ

\begin{document}
\begin{bzFrame}                          % the first frame of that document
\bzOn{                                   % content to appear first
    \bzCenter{Welcome to \beamerikz!}    % a centred text
}
\bzOn{                                   % content to appear second
    \bzCenter{Welcome again, nice to see you!}
    \bzCenter{Hope that you'll stay longer :)}
}
\end{bzFrame}

\begin{bzFrame}                          % the second frame
\bzOn{                                   % content to appear first
    \bzCenter{Welcome again!}            % a centred text
}
\end{bzFrame}
\end{document}
```

To add more content, create a new `\bzOn{...}` entry, as above.

Or add a new frame.

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\end{bzFrame}
\end{document}
```

To add more content, create a new `\bzOn{...}` entry, as above.

Or add a new frame.

Hint: All your content (like `\bzCenter{...}`) needs to be put inside `\bzOn{...}` entries (or their variants).

Content

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Use the following commands to draw your content into the frame:

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`\bzCenter{...}` for centred text

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`\bzLeft{...}` for text aligned next to the left edge

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`\bzRight{...}` for text aligned to the right

`\bzBox{...}` for content that exceeds the standard width of the slide and should wrap to another line (other commands may also allow that, see `bzM` below...)

Item and list

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\renewcommand{\bzItemDot}{$\circ$}
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Or, if you need a (non-nested) list (the number of last item is stored in `\bzL`):

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To start your list again, use `\zBzL` (it zeroes `\bzL`), and then:

1. `\bzList{...}` new first entry
2. `\bzList{...}` second...

Hint: `\bzEvalInt` later in the manual will help you manage `\bzL`

More content. . .

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Theorem (Authors)

`\bzTheorem{authors}{statement}` to state a theorem (the statement can take multiple lines if needed)

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The same syntax works for: **Lemma**, **Fact**, **Conjecture**, **Definition**, **Question**, **Problem**, **Proposition**, **Corollary**, **Exercise**, and **Example**.

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Proof

`\bzProof{...}` to provide a proof (again, it can be spread across multiple lines if needed)

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Finally use `\bzQed` to conclude a proof: ■

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Hint: you can leave the authors empty if you don't want to specify them.

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`\bzProof{...}` to provide a proof (again, it can be spread across multiple lines if needed)

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`\bzLine` draws a line:

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The same suffixes with `bz` can be used for the standard content, e.g.:

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`\bzLeft[bzHL]{...}` gives a highlighted left-aligned text

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The same suffixes with `bz` can be used for the standard content, e.g.:

`\bzLeft[bzHL]{...}` gives a highlighted left-aligned text

`\bzCenter[bzHB]{...}`

gives a highlighted&boldfaced centred text

Text style

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The same suffixes with `bz` can be used for the standard content, e.g.:

`\bzLeft[bzHL]{...}` gives a highlighted left-aligned text

`\bzCenter[bzHB]{...}`

gives a highlighted&boldfaced centred text

`\bzRight[bzBO]{...}` **gives a boldfaced right-aligned text**

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Hint: styles also apply to `\bzBox{...}`, `\bzTheorem{...}{...}`, `\bzProof{...}`, etc

Ti*k*Z style

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Each of the following commands (some are explained later):

`\bzLeft{...}`, `\bzText{...}`, `\bzItem{...}`, `\bzList{...}`, `\bzRight{...}`, `\bzCenter{...}`, `\bzNext{...}`,

`\bzPrev{...}`, `\bzBox{...}`, `\bzTheorem{...}{...}`, `\bzProof{...}`

accepts an additional optional first parameter `\bz____[...]{...}`.

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You can put any Ti*k*Z style (applicable to a node) there.

TikZ style

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You can put any TikZ style (applicable to a node) there.

The styles **`bzBO`**, **`bzHL`**, etc from the previous slide are examples of such styles.

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For instance

```
\bzCenter[scale=1.5, draw, inner sep=1mm, ellipse]{egg}
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For instance

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gives:

egg

Titles, authors, references

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Control the footline of your frames using these macros (in the preamble):

```
\documentclass{beamerikz}              % defines the document to be BeamerikZ

\sBzTitle{My title}                    % sets the title of the presentation
\sBzAuthor{Me Mysef}                   % sets the author (or authors)

\begin{document}
```

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You may boldface your title: `\sBzTitle{\bf The Title}`

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You can access these values using `\bzTitle` and `\bzAuthor`.

You may boldface your title: `\sBzTitle{\bf The Title}`

Or underline the speaker: `\sBzAuthor{A. Guy, \underline{My Self}}`

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You may boldface your title: `\sBzTitle{\bf The Title}`

Or underline the speaker: `\sBzAuthor{A. Guy, \underline{My Self}}`

To refer to others' work, you may use:

```
\bzNames{Reference, Relevance [2013]}
```

(Reference, Relevance [2013])

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- `\bzCtext` used for text and drawings (here it's **bzBlack**)

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- `\bzCname` used for references (here it's **bzOrange**)

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You can change each of these colours, by using (in the preamble):

```
\definecolor{mynewcolor}{RGB}{123,255,0}    % the RGB coordinates are between 0 and 255
\renewcommand{\bzCtext}{mynewcolor}
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To make your presentation look uniform, use these colours consequently:

```
\bzCenter{\textcolor{\bzCname}{this is also coloured}}
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this is also coloured

Hint: To choose your colours consistently, I recommend using:

https://coolors.co/

Plain frames

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\begin{bzPlainFrame}
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\end{bzPlainFrame}
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To create such a frame, use

```
\begin{bzPlainFrame}
...
\end{bzPlainFrame}
```

The content of such a frame is generated in the same way as for other frames:

```
\begin{bzPlainFrame}
\bzOn{
    \bzCenter{\textcolor{\bzCtitle}{\bzTitle}}

    \bzCenter{\bzAuthor}
}

\bzOn{
    \bzCenter{\bf READY?}
}
\end{bzPlainFrame}
```

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Hint: 1cm = 1unit of this coordinate system :)

Hint: `\bzGrid` shows the coordinate system

Nodes

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You can use all the Ti*k*Z machinery you like:

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\bzOn{
    \draw (-5, -3) .. controls ++(+3, +2) and ++(-3, -2) .. (+5, -3);
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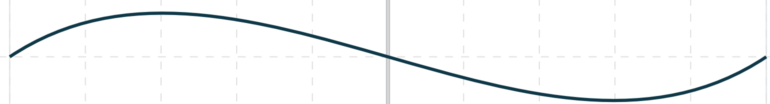

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To write text, you may use styles **`bzR`**, **`bzC`**, and **`bzL`**:

```
\bzOn{
    \node[bzL, draw] at (-8, -9) {aligns to left};
    \node[bzC, draw] at (+0, -9) {aligns to centre};
    \node[bzR, draw] at (+8, -9) {aligns to right};
}
```

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```

aligns to left   lies centrally   aligns to right

Hint: in fact `\bzLeft{...}`, `\bzCenter{...}`, . . . are based on these styles!

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}
```

aligns to left   lies centrally   aligns to right

What is important, is that the baseline of text is kept:

```
\bzOn{
    \node[bzL, draw] at (-8.5, -14) {car};
    \node[bzL, draw] at (-7.0, -14) {trunk};
    \node[bzL, draw] at (-5.0, -14) {yummy};
    \node[bzL, draw] at (-2.5, -14) {Tommy};
}
```

car   trunk   yummy   Tommy

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\bzOn{
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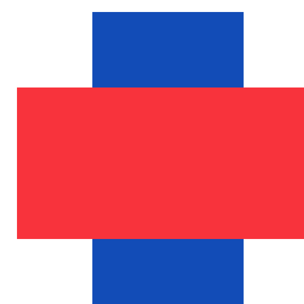

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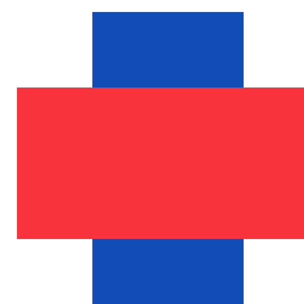
Hint: The possible values are 1, 0, and -1, with 0 default.



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`\zBzHStep` is equivalent to `\sBzHStep{1.0}`, i.e. it restores the value to 1.0.

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Each new line decreases it by `\bzHStep` (usually equal 1.0) so that now it's -4.0.

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You should place **all** your content relatively to `\bzH`(!):

```
\draw (-4, \bzH) rectangle (+4, \bzH-1);
```

`\bzH` $= -7.0$

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That *increases* (in fact decreases. . .) `\bzH` by `\bzHStep` `\bzH` $= -11.0$

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Which *increases* (in fact decreases. . .) `\bzH` by 0.8 `\bzH` $= -13.8$

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All these commands accept arithmetic, like:

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\newcommand{\x}{1.6}
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All these commands accept arithmetic, like:

```
\newcommand{\x}{1.6}
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```

Hint: you may put such commands both **inside** and **outside** of `\bzOn{...}`

(all the commands above the given one do affect it)

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Available commands:

- `\sBzI{5.0}` — set the value of the counter
- `\iBzI` — increase indent by 1 (+parametrised `\iBzI[2.8]`)
- `\dBzI` — decrease indent by 1 (+parametrised `\dBzI[1.3]`)
- `\zBzI` — reset `\bzI` to 0

Hint: you may modify `\bzI` **outside** `\bzOn{...}`

Multiline nodes

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\iBzI[3.5]
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Hint: **`bzM`** aligns vertically to the first line of text and allows explicit newlines `\\`

Multiline nodes — width

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By default, the width of the text is adjusted so that it spreads until the end of the working area $(-10, \ldots, +10)$ (or $(-13.0, \ldots, +13.0)$ in `wide` mode).

In `\bzCenter{...}`, margins of width given by `\bzI` are left on both sides.

Multiline nodes — width

By default, the width of the text is adjusted so that it spreads until the end of the working area $(-10, \dots, +10)$ (or $(-13.0, \dots, +13.0)$ in `wide` mode).

In `\bzCenter{...}`, margins of width given by `\bzI` are left on both sides.

Text aligned to left by `\bzLeft{...}` and being broken to a new line.

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Text aligned to left by `\bzLeft{...}` and being broken to a new line.

Text aligned to right by `\bzRight{...}` and being broken to a new line.

Text centered via `\bzCenter{...}` and broken to new lines.

You can set your own width of text, by using `bzM=<num>` like here

```
\bzLeft[bzM=5.5, draw]{Text of width 5.5 with automatic line breaks}
```

Text of width 5.5 with automatic line breaks

Mathematics

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- To use displayed mathematics `\[...\]`, the option `bzM` is required:

```
\bzCenter[bzM]{\[\sum_{i=1}^n i=\frac{n\cdot(n+1)}{2}\]}
```

$$\sum_{i=1}^{n} i = \frac{n \cdot (n+1)}{2}$$

…but `\[...\]` introduces additional vertical space. **Better avoid it.**

Similarly `align*` is also not suggested…

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- Instead, use `\bzEq{...}` as below:

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- Instead, use `\bzEq{...}` as below:

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\bzRight{$\bzEq{\sum_{i=1}^n i=\frac{n\cdot(n+1)}{2}}$}
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$$\sum_{i=1}^{n} i = \frac{n \cdot (n+1)}{2}$$

- It allows formatting as in `align*`:

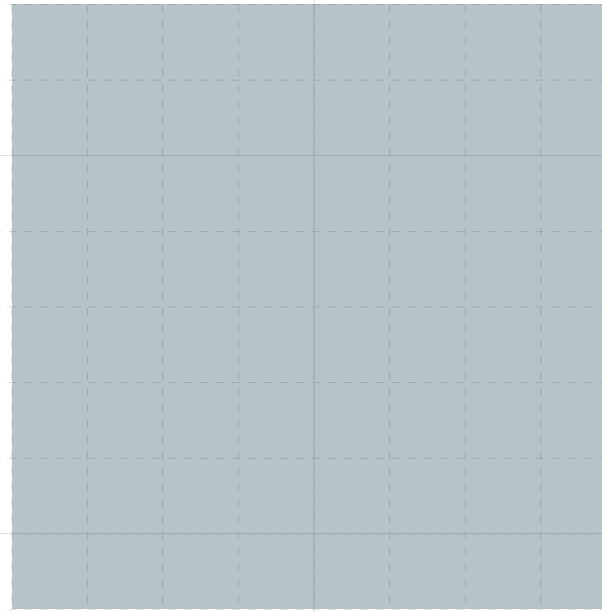
```
\bzCenter{$\bzEq{
  x_0 &= x_1 = 0 &\quad\text{(1)}\\
  x_{n+2} &= x_{n+1}+x_n &\quad\text{(2)}
}$}
```

$$\begin{aligned} x_0 &= x_1 = 0 &\quad\text{(1)}\\ x_{n+2} &= x_{n+1}+x_n &\quad\text{(2)} \end{aligned}$$

Graphics

Graphics

To include graphics, you may use:



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\node[bzG] at (5,-7) {\includegraphics[width=6cm]{logo.png}};
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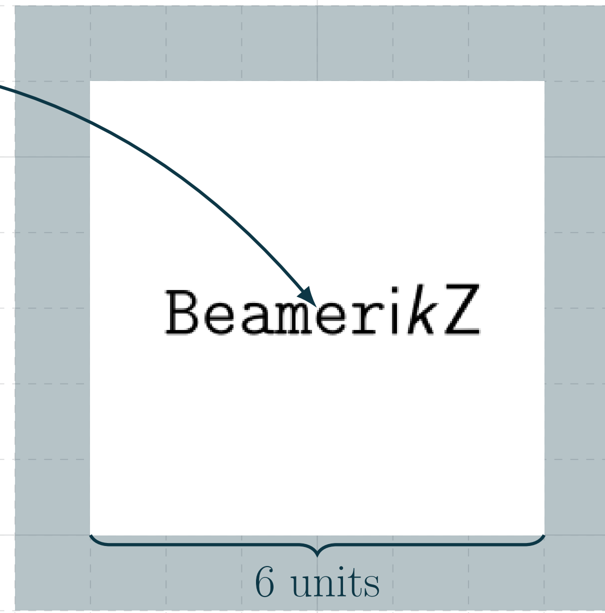
- The centre is at `(5,-7)`
- Width is `6cm` = 6 units



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\node[bzG] at (5,-7) {\includegraphics[width=6cm]{logo.png}};
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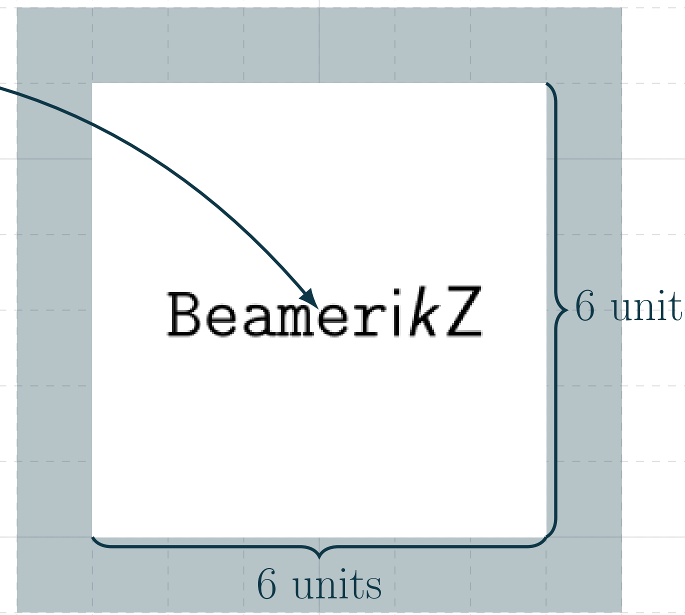
- The centre is at `(5,-7)`
- Width is `6cm` = 6 units
- Height is proportional to the ratio



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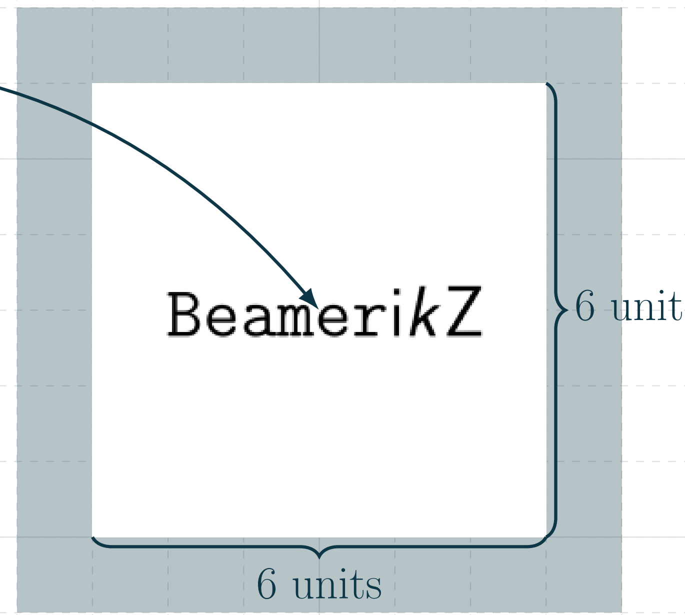
```

- The centre is at `(5,-7)`
- Width is `6cm` = 6 units
- Height is proportional to the ratio
- There are no margins or spacing



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You may use `\bzEval{\curH}{\bzH}` to store in the variable `\curH`

the current value of `\bzH` for later use!

And then use:

```
\draw (0, \bzH-1) edge[Circle-Latex, bend right=40] (9, \curH);
```

to use that value!

Arithmetic and scripting

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To avoid syntactic problems, use `\bzEval` to give names to parameters of your macros.

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```
\newcommand{\putDot}[2]{
  \bzEval{\x}{#1}
  \bzEval{\r}{#2}
  \node[draw, circle, rotate=\r] at (\x, \bzH) {Hi!};
}

\bzOn{
  \foreach \i in {0,...,9} {
    \putDot{\bzI+2*\i+1}{\i*20}
  }
}
```

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Gives:

Hint: For readability, you can put your macros outside `bzFrame` environment

Slide counter — basics

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`\bzS` $= 2$

To control the flow of time within a frame, a counter `\bzS` is used.

Slide counter — basics

`\bzS` $= 3$

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Each `\bzOn{...}` shows a new content, increasing `\bzS`.

Slide counter — basics

`\bzS` $= 4$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

`\bzOne{...}` shows its content for one slide and disappears.

Slide counter — basics

`\bzS` $= 5$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

Slide counter — basics

`\bzS` $= 6$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

`\bzTwo{...}` shows its content for two slides and disappears.

Slide counter — basics

`\bzS` $= 7$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

`\bzTwo{...}` shows its content for two slides and disappears.

The next `\bzOn{...}` appears afterwards.

Slide counter — basics

`\bzS` $= 8$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

The next `\bzOn{...}` appears afterwards.

And only the second `\bzOn{...}` appears when `\bzTwo{...}` disappears.

Slide counter — basics

`\bzS` $= 9$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

The next `\bzOn{...}` appears afterwards.

And only the second `\bzOn{...}` appears when `\bzTwo{...}` disappears.

`\bzOnly{...}` appears for one slide and takes one more to disappear.

Slide counter — basics

`\bzS` $= 10$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

The next `\bzOn{...}` appears afterwards.

And only the second `\bzOn{...}` appears when `\bzTwo{...}` disappears.

Slide counter — basics

`\bzS` $= 11$

To control the flow of time within a frame, a counter `\bzS` is used.

Each `\bzOn{...}` shows a new content, increasing `\bzS`.

The next `\bzOn{...}` appears at the moment when `\bzOne{...}` disappears.

The next `\bzOn{...}` appears afterwards.

And only the second `\bzOn{...}` appears when `\bzTwo{...}` disappears.

The next `\bzOn{...}` appears after one more click.

Slide counter — basics

To control the flow of time within a frame, a counter `\bzS` is used.

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The next `\bzOn{...}` appears afterwards.

And only the second `\bzOn{...}` appears when `\bzTwo{...}` disappears.

The next `\bzOn{...}` appears after one more click.

Hint: Some package options display the current value of `\bzS`, see

`draft` and **`brief`** later on.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 1$

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 2$

Because of the order of drawing (or other reasons), you may need

to manually handle when content (dis)appears.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 3$

Because of the order of drawing (or other reasons), you may need

to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 4$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

Slide counter — `\bzIn{from}{to}{...}`

`\bzS` $= 5$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

```
\bzIn{\curS+2}{\curS+7}{...}
```

`\curS` $= 3$

Rules:

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 6$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

`\bzIn{\curS+2}{\curS+7}{...}` `\curS` $= 3$

Rules:

1. If both arguments are equal, then the content lasts one slide.

Slide counter — `\bzIn{from}{to}{...}`

`\bzS` $= 7$

Because of the order of drawing (or other reasons), you may need
to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

`\bzIn{\curS+2}{\curS+7}{...}` `\curS` $= 3$

Rules:

1. If both arguments are equal, then the content lasts one slide.

2. If the first argument is empty, it's visible from the beginning.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 8$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

`\bzIn{\curS+2}{\curS+7}{...}` `\curS` $= 3$

Rules:

1. If both arguments are equal, then the content lasts one slide.

2. If the first argument is empty, it's visible from the beginning.

3. If the second argument is empty, it's visible until the end of the frame.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 9$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

`\bzIn{\curS+2}{\curS+7}{...}` `\curS` $= 3$

Rules:

1. If both arguments are equal, then the content lasts one slide.

2. If the first argument is empty, it's visible from the beginning.

3. If the second argument is empty, it's visible until the end of the frame.

4. You can do any (integer) arithmetic within the arguments.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 10$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

```
\bzIn{\curS+2}{\curS+7}{...}
```

`\curS` $= 3$

Rules:

1. If both arguments are equal, then the content lasts one slide.

2. If the first argument is empty, it's visible from the beginning.

3. If the second argument is empty, it's visible until the end of the frame.

4. You can do any (integer) arithmetic within the arguments.

5. You can use `\bzS` within the arguments — it takes its current value.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 11$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

Rules:

1. If both arguments are equal, then the content lasts one slide.
2. If the first argument is empty, it's visible from the beginning.
3. If the second argument is empty, it's visible until the end of the frame.
4. You can do any (integer) arithmetic within the arguments.
5. You can use `\bzS` within the arguments — it takes its current value.
6. `\bzIn{from}{to}{...}` does not modify `\bzS`.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` = 12

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

Rules:

1. If both arguments are equal, then the content lasts one slide.

2. If the first argument is empty, it's visible from the beginning.

3. If the second argument is empty, it's visible until the end of the frame.

4. You can do any (integer) arithmetic within the arguments.

5. You can use `\bzS` within the arguments — it takes its current value.

6. `\bzIn{from}{to}{...}` does not modify `\bzS`.

7. You should ensure that **`from`** $\leq$ **`to`**.

Slide counter — `\bzIn{from}{to}{...}` `\bzS` $= 13$

Because of the order of drawing (or other reasons), you may need to manually handle when content (dis)appears.

First, use `\bzEvalInt{\curS}{\bzS}` to store the current value of `\bzS`.

Then, use `\bzIn{from}{to}{...}` to control when some content is visible.

Rules:

1. If both arguments are equal, then the content lasts one slide.

2. If the first argument is empty, it's visible from the beginning.

3. If the second argument is empty, it's visible until the end of the frame.

4. You can do any (integer) arithmetic within the arguments.

5. You can use `\bzS` within the arguments — it takes its current value.

6. `\bzIn{from}{to}{...}` does not modify `\bzS`.

7. You should ensure that **`from`** $\leq$ **`to`**.

8. `\bzS` starts with 1.

Slide counter — summary

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Available commands:

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- `\sBzS{4}` — set slide counter value

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- `\zBzS` — reset `\bzS` to 1

Hint: if possible, avoid guessing correct numbers for `\bzIn{from}{to}{...}`,

use a variant of `\bzEvalInt{\curS}{\bzS}` instead!

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Available commands:

- `\sBzS{4}` — set slide counter value
- `\iBzS` — increase slide counter by 1 (+parametrised `\iBzS[2]`)
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Hint: if possible, avoid guessing correct numbers for `\bzIn{from}{to}{...}`,

use a variant of `\bzEvalInt{\curS}{\bzS}` instead!

Hint: remember that the content overlays each other.

The order comes from the order of entries in the source file,

not from the values of `\bzS`.

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Hint: remember that the content overlays each other.

The order comes from the order of entries in the source file,

not from the values of `\bzS`.

Hint: to layerize the content, use the optional argument of `\bzOn[z]{...}`, . . .

Order of compilation

Named nodes

Named nodes

These commands create Ti*k*Z nodes:

`\bzLeft{...}`, `\bzText{...}`, `\bzItem{...}`, `\bzList{...}`,

`\bzCenter{...}`, `\bzRight{...}`, `\bzNext{...}`, `\bzBox{...}`.

Named nodes

Named nodes

You can append new content to the last node using `\bzNext{...}`:

Named nodes

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```
\bzLeft{...}
```

Named nodes

You can append new content to the last node using `\bzNext{...}`:

```
\bzLeft{...}\bzNext{...}
```

Named nodes

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```
\bzLeft{...}\bzNext{...}\bzNext{...}
```

Named nodes

You can append new content to the last node using `\bzNext{...}`:

```
\bzLeft{...}\bzNext{...}\bzNext{...}
```

You can also attach content to the left (once):

Named nodes

You can append new content to the last node using `\bzNext{...}`:

```
\bzLeft{...}\bzNext{...}\bzNext{...}
```

You can also attach content to the left (once):

```
\bzCenter{...}
```

Named nodes

You can append new content to the last node using `\bzNext{...}`:

```
\bzLeft{...}\bzNext{...}\bzNext{...}
```

You can also attach content to the left (once):

```
\bzPrev{...}\bzCenter{...}
```

Named nodes

You can append new content to the last node using `\bzNext{...}`:

```
\bzLeft{...}\bzNext{...}\bzNext{...}
```

You can also attach content to the left (once):

```
\bzPrev{...}\bzCenter{...}\bzNext{...}
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```
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```

Hint: to surround a node:

first use `\bzPrev{...}` and then `\bzNext{...}`!

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Hint: to surround a node:

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This is controlled by a counter named `\bzN`.

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You can store the number of the last node using:

```
\bzEvalInt{\curN}{\bzN}
```

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```

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Hint: to surround a node:

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You can store the number of the last node using:

`\bzEvalInt{\curN}{\bzN}`**I'm next**

You can later append content to that node using parametrised versions:

```
\bzNext{\bf I'm next}[\curN]
```

Named nodes

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```
\bzNext{\bf I'm next}[\curN]
```

```
\bzPrev{\bf I'm prev}[\curN]
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Named nodes

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I'm prev`\bzEvalInt{\curN}{\bzN}`**I'm next**

You can later append content to that node using parametrised versions:

```
\bzNext{\bf I'm next}[\curN]

\bzPrev{\bf I'm prev}[\curN]
```

Hint: nodes created by `\bzPrev{...}` do not have labels!

Named nodes — hints and tricks

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Hint: you can style these nodes: `\bzPrev[draw]{...}`

Named nodes — hints and tricks

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To create an aligned large mathematical equation, you can use:

Named nodes — hints and tricks

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To create an aligned large mathematical equation, you can use:

```
\bzCenter[scale=1.3]{$=$}
\bzPrev[scale=1.3]{$\int_a^b f'(x)\ $}
\bzNext[scale=1.3]{$\ f(x)\Big|_a^b$}
```

```
\bzCenter[scale=1.3]{$\leq$}
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$$\int_a^b f'(x) = f(x)\Big|_a^b$$

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Hint: you can break a word using `[bzR]` and `[bzL]` (and the nodes match):

```
\node[bzR] at (0, \bzH) {deoxyribo}; \node[bzL] at (0, \bzH) {nucleic acid};
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deoxyribo

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```

deoxyribonucleic acid

Named nodes — explicit references

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Let's create a referable node:

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```
\bzCenter{Referable node!}
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It's label can be obtained by `\bzLabel{\nodeN}`:

```
\draw (7, \bzH) edge[Circle-Latex, bend right=50] (\bzLabel{\nodeN}.mid east);
```

Named nodes — explicit references

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Hint: you cannot draw relatively to a node that has disappeared :)

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You may use `calc`-based references, like:

```
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```

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```

$$\underbrace{\text{Referable node!}}_{\text{the one}}$$

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You may use `calc`-based references, like:

```
\draw (8, \bzH) edge[Circle-Latex, bend right=50] ($(\bzLabel{\nodeN}.east)+(4,0)$);
```

You may also use the great `|-` and `-|` features of Ti*k*Z:

```
\coordinate (base) at ($(\bzLabel{\nodeN}.east)+(0,-0.5)$);
\draw
    (\bzLabel{\nodeN}.west |- base)
    edge[bzBraceU] node{the one}
    (base -| \bzLabel{\nodeN}.east);
```

Braces

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Use the following commands to draw braces:

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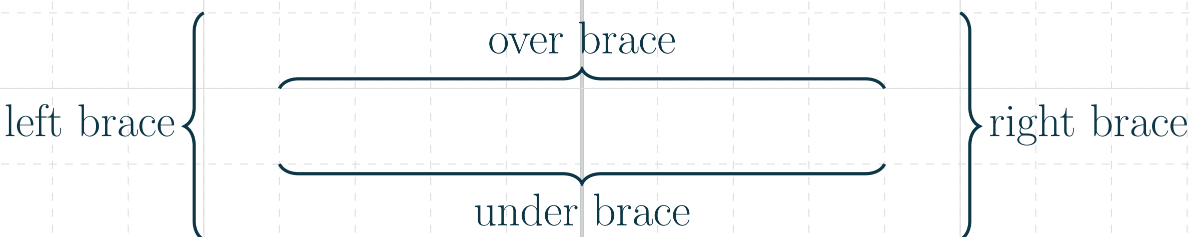
```
\path (-4, -11) edge[bzBraceU] node{under brace} (+4, -11);
\path (-4, -6)  edge[bzBraceO] node{over brace}  (+4, -6);
\path (-5, -10) edge[bzBraceL] node{left brace}  (-5, -7);
\path (+5, -10) edge[bzBraceR] node{right brace} (+5, -7);
```



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```

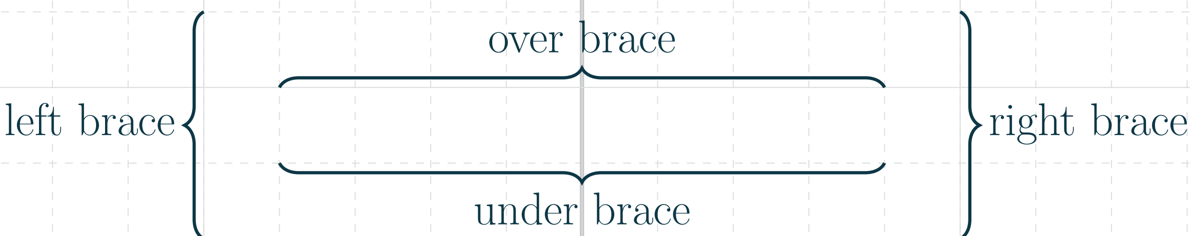

You can also create braces similarly to `\bzNext{...}`:

Braces

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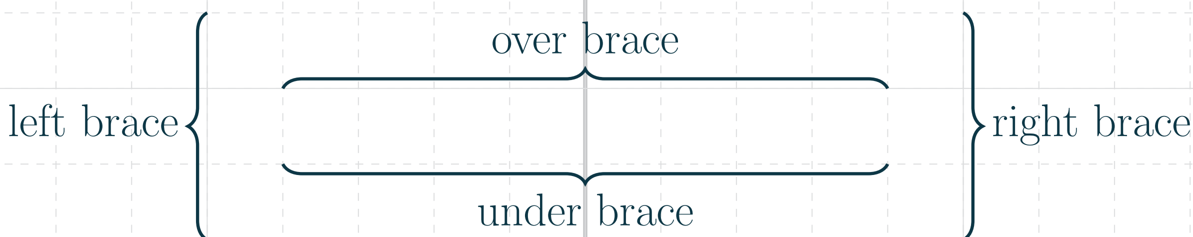
\path (-4, -11) edge[bzBraceU] node{under brace} (+4, -11);
\path (-4, -6)  edge[bzBraceO] node{over brace}  (+4, -6);
\path (-5, -10) edge[bzBraceL] node{left brace}  (-5, -7);
\path (+5, -10) edge[bzBraceR] node{right brace} (+5, -7);
```



You can also create braces similarly to `\bzNext{...}`:

```
\bzCenter{First}
\bzBraceU{1}
\bzNext{\ }

\bzNext{Second}
\bzEvalInt{\secondN}{\bzN}
\bzNext{\ }

\bzNext{Third}
\bzBraceU{3}

\bzBraceU{2}[\secondN]
```

Braces

Use the following commands to draw braces:

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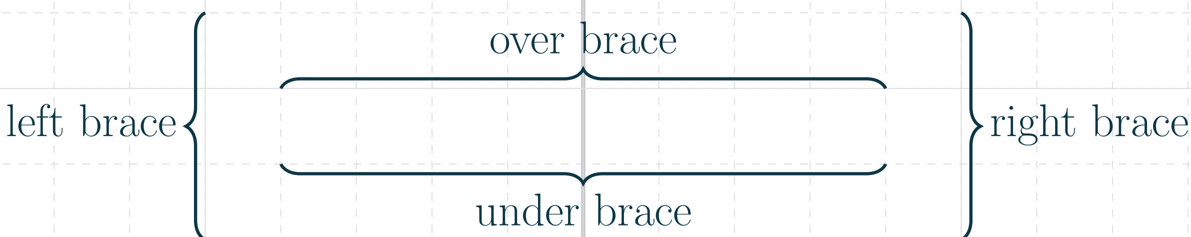

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Beamer-like blocks

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You can draw blocks like in Beamer.

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The basic command is `\bzBlock{...}{...}`:

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\bzBlock{0.5}{0.5}
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which produces a simple block with border, positioned relatively to `\bzH`:

A simple block!

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```
\bzBlock[fill=red]{...}{...}
```

The topmost block of this frame is obtained as:

```
\bzBlock[draw=none, fill=\bzCtext, opacity=0.4]{0.5}{0.5}
\bzBlock[]{0.5}{1.5}
\bzCenter[bzEB]{Beamer-like blocks}
\bzLeft{You can draw blocks like in Beamer.}
```

Class options — font size and `plain`

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All the class options are processed sequentially, so the following code gives the default 17pt font size:

```
\documentclass[large, small, basic, large, basic, large, basic]{beamerikz}
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If you really hate "Powered by **`Beameri`***k*Z" on the first plain frame, use the class option **`plain`**.

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Package option `wide` sets the aspect ratio of the presentation to 16:9

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However, the horizontal space is then: (-13.0 – +13.0) (plus margins)

This means that the default value of `bzI` becomes -13.

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Class options — `[show]` frames

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Frames of interest should be marked with the option **`[show]`**:

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Hint: to make use of these options, read on!

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Class options — compilation modes

Similarly as `normal` and `large`, `BeamerikZ` reacts to the following options:

- `final` — the default option, when all the frames are normally compiled
- `ready` — similar to `final`, but add compile info (see later)
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- `final` — the default option, when all the frames are normally compiled
- `ready` — similar to `final`, but add compile info (see later)
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- `short` — compiles all the frames in one-shot, `[show]` is ignored
- `brief` — compiles only `[show]` frames, others are blank

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- `short` — compiles all the frames in one-shot, `[show]` is ignored
- `brief` — compiles only `[show]` frames, others are blank

Thus, in terms of compilation time we get (assuming few `[show]` frames):

$$\texttt{brief} < \texttt{short} \leq \texttt{draft} < \texttt{final} \leq \texttt{ready}$$

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Hint: use this counter to synchronize `\bzIn{from}{to}{...}` arguments!

Moreover, **`draft`** speeds-up the compilation process by skipping pictures.

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- Makes it easier for you to make sure which version you are to present.
- Allows you to test your slide-switcher without unravelling the next slide :)

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