Brackets and Parentheses

Parentheses and brackets are very common in mathematical formulas. You can easily control the size and style of brackets in LaTeX, this article explains how.

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Introduction

The size of the brackets can be manually set, or they can be resized dynamically in your document, as shown in the next example:

```
\[
\left \{
    \begin{tabular}{ccc}
    1 & 5 & 8 \\
    0 & 2 & 4 \\
    3 & 3 & -8
    \end{tabular}
\right \}
\]
```

In a LaTeX document the brackets are re-sized automatically

$$\left\{ \begin{matrix} 1 & 5 & 8 \\ 0 & 2 & 4 \\ 3 & 3 & -8 \end{matrix} \right\}$$

(/learn/File:ParenthesesEx1.png)

Notice that to insert the brackets, the `\left` and `\right` commands are used. Even if you are using only one bracket *both* commands are mandatory.

Controlling types and sizes

The size of the brackets can be controlled explicitly

Manually sized brackets

Manually sized brackets

Manually Sized Brackets

$$\Bigg \langle 3x+7 \Bigg \rangle$$

```
\[
\Bigg \langle 3x+7 \Bigg
\rangle
\]
```

(/learn/File:ParenthesesEx2.png)

The commands `\Bigg` and `\bigg` stablish the size of the delimiters < and > respectively. For a complete list of parentheses and sizes see the reference guide.

Reference guide

LaTeX markup	Renders as
`\big( \Big( \bigg( \Bigg(`	$\big(\Big(\bigg(\Bigg($
`\big] \Big] \bigg] \Bigg]`	$\big] \Big] \bigg] \Bigg]$
`\big\{ \Big\{ \bigg\{ \Bigg\{`	$\big\{ \Big\{ \bigg\{ \Bigg\{$
`\big \langle \Big \langle \bigg \langle \Bigg \langle`	$\big\langle \Big\langle \bigg\langle \Bigg\langle$
`\big \rangle \Big \rangle \bigg \rangle \Bigg \rangle`	$\big\rangle \Big\rangle \bigg\rangle \Bigg\rangle$

Further reading

- Mathematical expressions
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- Subscripts and superscripts
  (/learn/Subscripts_and_superscripts)
- Aligning equations with amsmath
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- Display style in math mode
  (/learn/Display_style_in_math_mode)
- Operators (/learn/Operators)
- The not so short introduction to LaTeX 2_ε
  (http://www.ctan.org/tex-archive/info/lshort/)

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