

# PACKAGE DELIMSEASY

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ABSTRACT. Provides commands to give consistent, easy-to-remember, easy to edit way to control the size and blackness of delimiters: append 1-4 “b”s to command for larger sizes; prepend “B” for boldface. These commands reduce the likelihood of incomplete delimiter pairs and typically use fewer characters than the  $\text{\LaTeX}$  default.

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## 1. INSTALLATION AND THE BASIC DELIMITERS

Put `delimseasy.sty` in a convenient folder and add `\usepackage{delimseasy}` to your preamble. If  $\text{\LaTeX}$  can’t find the `sty` file, move it to the folder of your `tex` file or add a `PATH` to the `\usepackage` parameter, so you have (for example) `\usepackage{C:/user/YOU/Documents/WHEREYOUPUTIT/delimseasy}`.

Here are the basic macros:

| the macro             | typesets like                  | common name          |
|-----------------------|--------------------------------|----------------------|
| <code>\prn[1]</code>  | <code>(#1)</code>              | round parens         |
| <code>\sqpr[1]</code> | <code>[#1]</code>              | square braces        |
| <code>\crl[1]</code>  | <code>{#1}</code>              | curly braces         |
| <code>\ceil[1]</code> | <code>\lceil #1\rceil</code>   | ceiling              |
| <code>\flr[1]</code>  | <code>\lfloor #1\rfloor</code> | floor                |
| <code>\ngl[1]</code>  | <code>\langle #1\rangle</code> | langle/rangle        |
| <code>\abs[1]</code>  | <code>\vert #1\vert</code>     | absolute value       |
| <code>\nrm[1]</code>  | <code>\Vert #1\Vert</code>     | norm                 |
| <code>\stgt[1]</code> | <code>&lt; #1&gt;</code>       | lessthan greaterthan |

1.1. **Adding “b”s to change the size.** Add one to four “b”s to the end of a macro; each “b” raises size by one step. Example: `\prnb{x^2 - 1}` gives  $(x^2 - 1)$ .

1.2. **Adding “l” or “r” for one-sided delimiters.** Prepend “l” (ell) or “r” to the front of the macro (after the backslash) for the single sided (left or right). These macros take no parameter. Example: `\lprnb` gives  $($ .

1.3. **Prepending a “B” for boldface.** Prepend a capital “B” to the front of the macro for boldface (poor man’s bold); if the macro is already a left or right, the “B” must precede the “l” or “r”. Needs a parameter if the non-bolded macro does. Example: `\Blprnb` gives  $($ .

1.4. **Warnings about paired delimiters.** The paired delimiter macros take as a single parameter the expression to be inside of the pair. Curley brackets around the expression will be essential here, as always in L<sup>A</sup>T<sub>E</sub>X. See the examples below.

Paired delimiters cause an error if the alignment ampersand & is used between them. The same issue arises with `\left( --- & -- \right)`, as you may have discovered. There may be other formatting characters which break paired delimiters; please let me know if you encounter an instance.

1.4.1. *Workarounds to the & problem.*

- (1) Rewrite. If you don’t like the looks of

$$\begin{aligned} \int \text{A very very very very long expression} &\leq \text{a shorter one} \\ &\leq \text{another short one} \\ &= \text{the final expression} \end{aligned}$$

perhaps you can break up the computations into smaller pieces so that you end with something like, “ putting (3.12)-(3.36) together we see that

$$\int \text{A very very very very long expression} \leq \text{the final expression.}”$$

- (2) Use the left-right versions of the delimiters. They do not have the ampersand problem that the two-sided versions and `\left...\right` do.  
 (3) Use `\phantom`

```
&\int \text{A very very very very long  expression }
      \le \text{a shorter one}\\
&\phantom{\int \text{A very }}\le \text{the final expression}
```

to get

$$\begin{aligned} \int \text{A very very very very long expression} &\leq \text{a shorter one} \\ &\leq \text{the final expression} \end{aligned}$$

