

`\left`  
`\right`

These commands must be used together in the pattern:

`\left <delim1> <subformula> \right <delim2>`

This construct causes T<sub>E</sub>X to produce  $\langle subformula \rangle$ , enclosed in the delimiters  $\langle delim_1 \rangle$  and  $\langle delim_2 \rangle$ . The vertical size of the delimiter is adjusted to fit the vertical size (height plus depth) of  $\langle subformula \rangle$ .  $\langle delim_1 \rangle$  and  $\langle delim_2 \rangle$  need not correspond. For instance, you could use ‘]’ as a left delimiter and ‘(’ as a right delimiter in a single use of `\left` and `\right`.

`\left` and `\right` have the important property that they define a group, i.e., they act like left and right braces. This grouping property is particularly useful when you put `\over` (p. ‘`\over`’) or a related command between `\left` and `\right`, since you don’t need to put braces around the fraction constructed by `\over`.

If you want a left delimiter but not a right delimiter, you can use ‘.’ in place of the delimiter you don’t want and it will turn into empty space (of width `\nulldelimiterspace`).

*Example:*

`$$\left\Vert\matrix{a&b\\c&d}\right\Vert\quad\left\uparrow\matrix{q_1\\q_2}\right.`

*produces:*

$$\left\| \begin{matrix} a & b \\ c & d \end{matrix} \right\| \quad \begin{matrix} \uparrow q_1 \\ q_2 \end{matrix}$$