1

\left \right

These commands must be used together in the pattern:

$$\langle delim_1 \rangle \langle subformula \rangle \langle delim_2 \rangle$$

This construct causes  $T_EX$  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\cr c&d\cr}\right\Vert
 \qquad \left\uparrow q\_1\atop q\_2\right.\$\$
produces: