Matrices

There are a couple of equivalent xxx-yyy ways to show matrices. Choose whichever you prefer, but please be consistent.

The amsmath package defines 中 the `matrix` environment and its friends:

$$\begin{matrix} a & b \\ c & d \end{matrix} \qquad \begin{pmatrix} a & b \\ c & d \end{pmatrix} \qquad \begin{Bmatrix} a & b \\ c & d \end{Bmatrix} \qquad \begin{bmatrix} a & b \\ c & d \end{bmatrix} \qquad \begin{vmatrix} a & b \\ c & d \end{vmatrix} \qquad \begin{Vmatrix} a & b \\ c & d \end{Vmatrix}$$

The memoir class defines the `array`[1] environment:

$$\begin{array}{cc} a & b \\ c & d \end{array} \qquad \left(\begin{array}{cc} a & b \\ c & d \end{array} \right) \qquad \left| \begin{array}{cc} a & b \\ c & d \end{array} \right| \qquad \left\{ \begin{array}{cc} a & b \\ c & d \end{array} \right\}$$

In both cases, the various enclosed matrices or arrays are simply shorthand ways of wrapping the naked environment with `\left(...\right)` (or whatever delimiter) pairs. The `array` environment is more flexible because it supports the same column formatting arguments as the `tabular` environment.

[1] Also see the array package if you're not using memoir