\valign

"The control sequence \valign is analogous to \halign, but rows and columns change rôles. In this case \cr marks the bottom of a column, and the aligned columns are vboxes that are put together in horizontal mode. The individual entries of each column are vboxed with depth zero (i.e., as if \boxmaxdepth were zero, as explained in Chapter 12); the entry heights for each row of a \valign are maximized in the same fashion as the entry widths for each column of an \halign are maximized. The \noalign operation can now be used to insert horizontal mode material between columns; the \span operation now spans rows. *People usually work with T_EX at least a year before they find their first application for* \valign; and then it's usually a one-row '\valign{\vfil#\vfil\cr...}'. But the general mechanism is there if you need it."

D.E. Knuth