1

`\vcenter {` ⟨*vertical mode material*⟩ `}`
`\vcenter to` ⟨*dimen*⟩ `{` ⟨*vertical mode material*⟩ `}`
`\vcenter spread` ⟨*dimen*⟩ `{` ⟨*vertical mode material*⟩ `}`

Every math formula has an invisible "axis" that TEX treats as a kind of horizontal centering line for that formula. For instance, the axis of a formula consisting of a fraction is at the center of the fraction bar. The `\vcenter` command tells TEX to place the ⟨*vertical mode material*⟩ in a vbox and to center the vbox with respect to the axis of the formula it is currently constructing.

The first form of the command centers the material as given. The second and third forms expand or shrink the material vertically as in the `\vbox` command (p. '`\vbox`').

Example:

```
$${n \choose k} \buildrel \rm def \over \equiv \>
\vcenter{\hsize 1.5 in \noindent the number of
combinations of $n$ things taken $k$ at a time}$$
```

produces:

$$\binom{n}{k} \stackrel{\text{def}}{\equiv} \text{the number of combinations of } n \text{ things taken } k \text{ at a time}$$