1

☞ `\over`
`\atop`
`\above` ⟨*dimen*⟩
`\choose`
`\brace`
`\brack`

These commands stack one subformula on top of another one. We will explain how `\over` works, and then relate the other commands to it.

`\over` is the command that you'd normally use to produce a fraction. If you write something in one of the following forms:

`$$`⟨*formula*$_1$⟩`\over`⟨*formula*$_2$⟩`$$`
`$`⟨*formula*$_1$⟩`\over`⟨*formula*$_2$⟩`$`
`\left`⟨*delim*⟩⟨*formula*$_1$⟩`\over`⟨*formula*$_2$⟩`\right`⟨*delim*⟩
`{`⟨*formula*$_1$⟩`\over`⟨*formula*$_2$⟩`}`

you'll get a fraction with numerator ⟨*formula*$_1$⟩ and denominator ⟨*formula*$_2$⟩, i.e., ⟨*formula*$_1$⟩ over ⟨*formula*$_2$⟩. In the first three of these forms the `\over` is not implicitly contained in a group; it absorbs everything to its left and to its right until it comes to a boundary, namely, the beginning or end of a group.

You can't use `\over` or any of the other commands in this group more than once in a formula. Thus a formula such as:

```
$$a \over n \choose k$$
```

isn't legal. This is not a severe restriction because you can always enclose one of the commands in braces. The reason for the restriction is that if you had two of these commands in a single formula, TEX wouldn't know how to group them.

The other commands are similar to `\over`, with the following exceptions:

- `\atop` leaves out the fraction bar.
- `\above` provides a fraction bar of thickness ⟨*dimen*⟩.
- `\choose` leaves out the fraction bar and encloses the construct in parentheses. (It's called "choose" because $\binom{n}{k}$ is the notation for the number of ways of choosing k things out of n things.)
- `\brace` leaves out the fraction bar and encloses the construct in braces.
- `\brack` leaves out the fraction bar and encloses the construct in brackets.

2 \ §0

Example:

```
$${n+1 \over n-1}      \qquad {n+1 \atop n-1}   \qquad
  {n+1 \above 2pt n-1} \qquad {n+1 \choose n-1} \qquad
  {n+1 \brace n-1}     \qquad {n+1 \brack n-1}$$
```

produces:

$$\frac{n+1}{n-1} \qquad n+1 \atop n-1 \qquad \frac{n+1}{n-1} \qquad \binom{n+1}{n-1} \qquad \left\{ n+1 \atop n-1 \right\} \qquad \left[n+1 \atop n-1 \right]$$