`\show` ⟨*token*⟩
`\showthe` ⟨*argument*⟩
`\showbox` ⟨*number*⟩
`\showlists`

These commands record information in the log of your TEX run:

- `\show` records the meaning of ⟨*token*⟩.
- `\showthe` records whatever tokens would be produced by `\the` ⟨*argument*⟩ (see p. '`\the`').
- `\showbox` records the contents of the box register numbered ⟨*number*⟩. The number of leading dots in the log indicates the number of levels of nesting of inner boxes.
- `\showlists` records the contents of each of the lists that TEX is currently constructing. (These lists are nested one within another.) See pages 88–89 of *The TEXbook* for further information about interpreting the output of `\showlists`.

For `\show` and `\showthe`, TEX also displays the information at your terminal. For `\showbox` and `\showlists`, TEX displays the information at your terminal only if `\tracingonline` (p. '`\tracingonline`') is greater than zero; if `\tracingonline` is zero or less (the default case), the information is not displayed.

Whenever TEX encounters a `\show`-type command it stops for interaction. The request for interaction does *not* indicate an error, but it does give you an opportunity to ask TEX to show you something else. If you don't want to see anything else, just press ⟨return⟩.

You can control the amount of output produced by `\showbox` by setting `\showboxbreadth` and `\showboxdepth` (p. '`\showboxbreadth`'). These parameters respectively have default values of 5 and 3, which is why just five items appear for each box described in the log output below. (The '`..etc.`' indicates additional items within the boxes that aren't displayed.)

Example:

```
\show a
\show \hbox
\show \medskip
\show &
```

produces in the log:

```
> the letter a.
> \hbox=\hbox.
> \medskip=macro:
->\vskip \medskipamount .
> alignment tab character &.
```

Example:

```
\showthe\medskipamount
\toks27={\hbox{Joe's\quad\ Diner}}
\showthe\toks27
```

produces in the log:

```
> 6.0pt plus 2.0pt minus 2.0pt.
> \hbox {Joe's\quad \ Diner}.
```

Example:

```
\setbox 3=\vbox{\hbox{A red dog.}\hrule A black cat.}
\showbox 3
```

produces in the log:

```
> \box3=
\vbox(16.23332+0.0)x53.05565
.\hbox(6.94444+1.94444)x46.41675
..\tenrm A
..\glue 3.33333 plus 1.66498 minus 1.11221
..\tenrm r
..\tenrm e
..\tenrm d
..etc.
.\rule(0.4+0.0)x*
.\hbox(6.94444+0.0)x53.05565
..\tenrm A
..\glue 3.33333 plus 1.66498 minus 1.11221
..\tenrm b
..\tenrm l
..\tenrm a
..etc.
```

Example:

```
\vbox{A \hbox
   {formula
       $x \over y\showlists$}}
```

produces in the log:

```
### math mode entered at line 3
\mathord
.\fam1 y
this will be denominator of:
\fraction, thickness = default
\\mathord
\.\fam1 x
### restricted horizontal mode entered at line 2
\tenrm f
\tenrm o
\tenrm r
\tenrm m
\kern-0.27779
\tenrm u
\tenrm l
\tenrm a
\glue 3.33333 plus 1.66666 minus 1.11111
spacefactor 1000
### horizontal mode entered at line 1
\hbox(0.0+0.0)x20.0
\tenrm A
\glue 3.33333 plus 1.66498 minus 1.11221
spacefactor 999
### internal vertical mode entered at line 1
prevdepth ignored
### vertical mode entered at line 0
prevdepth ignored
```