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A Permuted Index for TEX and LATEX

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Chapter 1

Introduction

This Index is designed to help TEX and LATEX users find the right command among the one thousand-odd commands documented. It is a permuted, or keyword-in-context index. Each command appears under each significant keyword in its definition. For example, `\eject` has the following definition:

```
force a page break
```

The following two entries appear in the Index, alphabetized by the keywords "page" and "break":

force a page	break.	.....	`\eject` P
force a	page break.	.....	`\eject` P

The superscript "P" at the end of the line means this is defined in the plain TEX macros. The full list is:

*	TEX primitive
(none)	plain TEX
L	LATEX command
3	new TEX version 3 command

If a definition is too long to fit on one side of a definition, it is wrapped around. The command definitions appear after the permuted index. There are two sections, one for TEX primitives and plain TEX, and the other for LATEX commands.

There may be some difficulty thinking of the right keyword used in a definition. I have tried to be consistent. Here are a few words I chose (in bold) and some likely synonyms:

create: make

define: create, initialize, set

select, construct: use

space: distance, glue, separation

test: if

The Proceedings of the summer 1989 TEX Users Group meeting contain a description of how this Index was prepared. The Proceedings were published in the *TUGboat* 10, no. 4.

I would like to thank Barbara Beeton, Michael Downes, John Hobby, Howard Trickey, and many others for definitions and suggestions. Doug McIlroy had some helpful suggestions about editing the Index. I'd also like to thank my wife Lorette, who endured my discovery of how much work an index requires.

Chapter 2

Permuted Index

10 point bold font. ..... \tenbf
10 point circle font. ..... \tencirc[L]
10 point LaTeX symbol font. ..... \tenly[L]
10 point line font. ..... \tenln[L]
10 point math extension symbol font. ..... \tenex
10 point math italic font. ..... \teni
10 point math italic font. ..... \tenmi[L]
10 point math symbol font. ..... \tensy
10 point Roman font. ..... \tenrm
10 point sans serif font. ..... \tensf[L]
10 point slanted font. ..... \tensl
10 point text italic font. ..... \tenit
10 point typewriter font. ..... \tentt
10 point wide circle font. ..... \tencircw[L]
10 point wide line font. ..... \tenlnw[L]
ratio for variable delimiters times 1000. ..... \delimiterfactor[*]
magnification ratio times 1000. ..... \mag[*]
11 point bold extended font. ..... \elvbf[L]
11 point italic font. ..... \elvit[L]
11 point LaTeX symbol font. ..... \elvly[L]
use 11 point magnification. ..... \magstephalf
11 point math italic font. ..... \elvmi[L]
11 point math symbol font. ..... \elvsy[L]
11 point Roman font. ..... \elvrm[L]
11 point sans serif font. ..... \elvsf[L]
11 point slanted font. ..... \elvsl[L]
11 point typewriter font. ..... \elvtt[L]
12 point bold extended font. ..... \twlbf[L]
12 point italic font. ..... \twlit[L]
12 point LaTeX symbol font. ..... \twlly[L]
12 point math italic font. ..... \twlmi[L]
12 point math symbol font. ..... \twlsy[L]
12 point Roman font. ..... \twlrm[L]
12 point sans serif font. ..... \twlsf[L]
12 point slanted font. ..... \twlsl[L]
12 point typewriter font. ..... \twltt[L]
14 point bold extended font. ..... \frtnbf[L]
14 point LaTeX symbol font. ..... \frtnly[L]

14 point math italic font. ..... \frtnmi L
14 point math symbol font. ..... \frtnsy L
14 point Roman font. ..... \frtnrm L
1.5-line left math delimiter. ..... \Bigl
1.5-line math delimiter size. ..... \Big
1.5-line middle math delimiter. ..... \Bigm
1.5-line right math delimiter. ..... \Bigr
17 point bold extended font. ..... \svtnbf L
17 point LaTeX symbol font. ..... \svtnly L
17 point math italic font. ..... \svtnmi L
17 point math symbol font. ..... \svtnsy L
17 point Roman font. ..... \svtnrm L
1-line left math delimiter. ..... \bigl
1-line math delimiter size. ..... \big
1-line middle math delimiter. ..... \bigm
1-line right math delimiter. ..... \bigr
an unoriented skip amount with stretch of 1fill. ..... \fill L
20 point bold extended font. ..... \twtybf L
20 point LaTeX symbol font. ..... \twtyly L
20 point math italic font. ..... \twtymi L
20 point math symbol font. ..... \twtysy L
20 point Roman font. ..... \twtyrm L
2.5-line left math delimiter. ..... \Biggl
2.5-line math delimiter size. ..... \Bigg
2.5-line middle math delimiter. ..... \Biggm
2.5-line right math delimiter. ..... \Biggr
2-line left math delimiter. ..... \biggl
2-line math delimiter size. ..... \bigg
2-line middle math delimiter. ..... \biggm
2-line right math delimiter. ..... \biggr
5 point boldface Roman font. ..... \fivebf
5 point LaTeX symbol font. ..... \fivly L
5 point math italic font. ..... \fivei
5 point math italic font. ..... \fivmi L
5 point math symbol font. ..... \fivesy
5 point math symbol font. ..... \fivsy L
5 point Roman font. ..... \fiverm
5 point Roman font. ..... \fivrm L
6 point LaTeX symbol font. ..... \sixly L
6 point math italic font. ..... \sixmi L
6 point math symbol font. ..... \sixsy L
6 point Roman font. ..... \sixrm L
7 point bold Roman font. ..... \sevenbf
7 point italic font. ..... \sevit L
7 point LaTeX symbol font. ..... \sevly L
7 point math italic font. ..... \seveni
7 point math italic font. ..... \sevmi L
7 point math symbol font. ..... \sevensy
7 point math symbol font. ..... \sevsy L
7 point Roman font. ..... \sevenrm
7 point Roman font. ..... \sevrm L
8 point italic font. ..... \egtit L
8 point LaTeX symbol font. ..... \egtly L

8 point math italic font. ..... \egtmi L
8 point math symbol font. ..... \egtsy L
8 point Roman font. ..... \egtrm L
9 point bold extended font. ..... \ninbf L
9 point italic font. ..... \ninit L
9 point LaTeX symbol font. ..... \ninly L
9 point math italic font. ..... \ninmi L
9 point math symbol font. ..... \ninsy L
9 point Roman font. ..... \ninrm L
9 point typewriter font. ..... \nintt L
Scandinavian letter: a with circle (å). ..... \aa
Scandinavian letter: capital A with circle (Å). ..... \AA
place math limits above and below math operators. ..... \limits *
stack one equation above another. ..... \stackrel L
extra space above displays. ..... \abovedisplayskip *
lines. extra space above displays following short \abovedisplayshortskip *
math accent: acute ($\acute{x}$). ..... \acute
math accent: bar ($\bar{x}$). ..... \bar
math accent: bar under ($\underline{x}$). ..... \b
math accent: breve ($\breve{x}$). ..... \breve
cedilla accent (ç). ..... \c
math accent: check ($\check{x}$). ..... \check
check accent (x̌). ..... \v
math accent: dot ($\dot{x}$). ..... \dot
math accent: double dot ($\ddot{x}$). ..... \ddot
dot under accent ($\underline{x}$). ..... \d
acute accent (é). ..... \'
grave accent (è). ..... \`
math accent: grave ($\grave{x}$). ..... \grave
math accent: hat ($\hat{x}$). ..... \hat
tilde accent (ñ). ..... \~
circumflex accent (ô). ..... \^
macron or bar accent ($\bar{o}$). ..... \=
put an accent over the next character. ..... \accent *
place an accent over the next math field. ..... \mathaccent *
diæresis or umlaut accent (ẍ). ..... \"
long Hungarian umlaut accent (ő). ..... \H
tie-after accent (o͡o). ..... \t
math accent: tilde ($\tilde{x}$). ..... \tilde
breve accent (x̆). ..... \u
math accent: vector ($\vec{x}$). ..... \vec
math accent: wide hat ($\widehat{x}$). ..... \widehat
math accent: wide tilde ($\widetilde{x}$). ..... \widetilde
dot accent (ẋ). ..... \.
default horizontal kern character to position accents. ..... \defaultskewchar *
shift super accents. ..... \skew
horizontal kern to position accents. ..... \skewchar *
produce TeX accents in tabbing environment. ..... \a L
accept looser line and page breaks. ..... \sloppy L
set @ alphabetic to access internal commands. ..... \makeatletter L
category code for active characters. ..... \active
acute accent (é). ..... \'
math accent: acute ($\acute{x}$). ..... \acute

add a box to the vertical list shifted left. .. \moveleft*
add a box to the vertical list shifted right. \moveright*
or tabular environment. add extra space before a column in array \extracolsep[L]
add extra vertical space. ..... \addvspace[L]
add footnote to title page. ..... \thanks[L]
add horizontal space. ..... \hskip*
un-box an hbox and add it to the horizontal list. ..... \unhbox*
un-box a copy of an hbox and add it to the horizontal list. ..... \unhcopy*
un-box a vbox and add it to the vertical list. ..... \unvbox*
un-box a copy of a vbox and add it to the vertical list. ..... \unvcopy*
tables. add text to table contents, figures, or \addtocontents[L]
add vertical space. ..... \vskip*
paragraph. amount added to badness of every line in a ..... \linepenalty*
remove a kern just added to the current list. ..... \unkern*
remove a penalty just added to the current list. ..... \unpenalty*
remove a skip just added to the current list. ..... \unskip*
extra space added to top of page. ..... \topmargin[L]
additional authors on title page. ..... \and[L]
between lines. additional penalty for page break \interlinepenalty*
table. adds an entry to the specified list or \addcontentsline[L]
demerits for adjacent incompatible lines. ..... \adjdemerits*
advance \pageno by one. ..... \advancepageno
ligature digraph symbol ae (æ). ..... \ae
ligature digraph symbol capital AE (Æ). ..... \AE
penalty for page break just after a display. ..... \postdisplaypenalty*
permit a line break after a slash. ..... \slash
penalty for line break after binary operation. ..... \binoppenalty*
penalty for line break after discretionary hyphen. ..... \hyphenpenalty*
pause after each line is read from a file. ..... \pausing*
tokens to insert after every \cr or nonredundant \crcr. .... \everycr*
penalty for line break after explicit hyphen. ..... \exhyphenpenalty*
penalty if page break after first line of paragraph. ..... \clubpenalty*
create end-of-sentence space after following punctuation. ..... \@[L]
penalty if page break after hyphenated line. ..... \brokenpenalty*
badness tolerance after hyphenation. ..... \tolerance*
a word. minimum number of characters after hyphenation at the end of \righthyphenposition[3]
place superscripts and subscripts after math operators. ..... \nolimits*
penalty for line break after math relation. ..... \relpenalty*
suppress special spacing after punctuation. ..... \frenchspacing
enable special spacing after punctuation. ..... \nonfrenchspacing
hanging indentation changes after specified number of lines. ..... \hangafter*
extra space after subscript or superscript. ..... \scriptspace*
insert a token after the current group is completed. .... \aftergroup*
insert a token after the next assignment command. \afterassignment*
math symbol: aleph (ℵ). ..... \aleph
align a stack of equations. ..... \eqalign
numbers. align a stack of equations with equation .. \eqalignno
numbers. align a stack of equations with left equation \leqalignno
align zero or more columns. ..... \valign*
space between aligned tab entries. ..... \tabskip*
create an aligned table. ..... \halign*
create a multicolumn entry in an aligned table. ..... \span*
end a line in \halign aligned text. ..... \cr*

equivalent to \cr, end of aligned text. ..... \endline
display a stack of formulas without alignment. ..... \displaylines
special Plain TEX space used in alignment. ..... \hideskip
span several columns in an alignment. ..... \multispan
permit an alignment entry to stick out of its column. \hidewidth
suppress the template in the alignment preamble for this entry. ..... \omit*
allocate a new box register. ..... \newbox
allocate a new count register. ..... \newcount
allocate a new dimension register. ..... \newdimen
allocate a new input file. ..... \newread
allocate a new insert register. ..... \newinsert
allocate a new math skip register. ..... \newmuskip
allocate a new output file. ..... \newwrite
allocate a new skip register. ..... \newskip
allocate a new token register. ..... \newtoks
most recently allocated register number. ..... \allocationnumber
allow a line break. ..... \allowbreak
math Greek letter: alpha (α). ..... \alpha
set @ alphabetic to access internal commands. \makeatletterL
alternative to an \if. ..... \else*
test always false. ..... \iffalse*
test always succeeds. ..... \iftrue*
math operator: amalgamated sum, co-product ($\amalg$). ..... \amalg
vertical skip a large amount. ..... \bigskipL
vertical skip a medium amount. ..... \medskipL
vertical skip a small amount. ..... \smallskipL
a paragraph. amount added to badness of every line in \linepenalty*
fail to span included material. amount by which delimiters can \delimitershortfall*
split off a specified amount from a vbox. ..... \vsplit*
an index. amount of extra space between entries in \indexspaceL
amount of fil space in current page. \pagefilstretch*
amount of fill space in current page. \pagefillstretch*
amount of filll space in current page. \pagefilllstretch*
amount of glue shrinkage in current page. \pageshrink*
amount of glue stretch in current page. \pagestretch*
generate a short amount of verbatim text. ..... \verbL
an unoriented skip amount with stretch of 1fill. ..... \fillL
ampersand. ..... \&
math delimiter: left angle bracket ($\langle$). ..... \langle
math delimiter: right angle bracket ($\rangle$). ..... \rangle
angle symbol ($\angle$). ..... \angle
stack one equation above another. ..... \stackrelL
the following macro must not be called from another macro. ..... \outer*
current list. append a discretionary item to the .. \discretionary*
width of rules appended to overfull boxes. ..... \overfullrule*
set sectional units to appendix style. ..... \appendixL
math relation: approximately equal ($\approx$). ..... \approx
display counter as Arabic numerals. ..... \arabicL
math function: arc cosine. ..... \arccos
math function: arc sine. ..... \arcsin
math function: arc tangent. ..... \arctan
math function: arg. ..... \arg
protect fragile commands and moving arguments. ..... \protectL

perform arithmetic on a register. ..... \advance*
vertical space around a float in the middle of a page. ... \intextsepL
define kerning around math in text. ..... \mathsurround*
put a frame around some text. ..... \frameL
horizontal line in array and tabular environments. ..... \hlineL
vertical line in array and tabular environments. ..... \vlineL
column separation in array environment. ..... \arraycolsepL
begin array environment. ..... \arrayL
end array environment. ..... \endarrayL
space between rows of array or tabular environment. ..... \arraystretchL
multicolumn line in array or tabular environment. ..... \clineL
double rule separation in array or tabular environment. ..... \doublerulesepL
add extra space before a column in array or tabular environment. ..... \extracolsepL
multicolumn entry in array or tabular environment. ..... \multicolumnL
set width of array rules. ..... \arrayrulewidthL
fill a space with a left arrow. ..... \leftarrowfill
fill a space with a right arrow. ..... \rightarrowfill
math symbol: down arrow (↓). ..... \downarrow
math symbol: downward double arrow (⇓). ..... \Downarrow
math symbol: hook left arrow (↩). ..... \hookleftarrow
math symbol: hook right arrow (↪). ..... \hookrightarrow
math symbol: left arrow (←). ..... \leftarrow
math symbol: left double arrow (⇐). ..... \Leftarrow
math symbol: left-right arrow (↔). ..... \leftrightarrow
math symbol: left-right double arrow (⇔). ..... \Leftrightarrow
math symbol: long left arrow (⟵). ..... \longleftarrow
math symbol: long left double arrow (⟸). ..... \Longleftarrow
math symbol: long left and right arrow (⟷). ..... \longleftrightarrow
math symbol: long left-right double arrow (⟺). ..... \Longleftrightarrow
math symbol: long right arrow (⟶). ..... \longrightarrow
math symbol: long right double arrow (⟹). ..... \Longrightarrow
math symbol: northeast arrow (↗). ..... \nearrow
math symbol: northwest arrow (↖). ..... \nwarrow
left arrow over a math formula. ..... \overleftarrow
right arrow over a math formula. ..... \overrightarrow
math symbol: right arrow (→). ..... \rightarrow
math symbol: right double arrow (⇒). ..... \Rightarrow
math symbol: southeast arrow (↘). ..... \searrow
math symbol: southwest arrow (↙). ..... \swarrow
math delimiter: upward arrow (↑). ..... \uparrow
math symbol: upward double arrow (⇑). ..... \Uparrow
math delimiter: up-and-down arrow (↕). ..... \updownarrow
math symbol: up-and-down double arrow (⇕). ..... \Updownarrow
Plain TEX command to piece together long arrows. internal ..... \joinrel
help message to display if user asks for help. ..... \errhelp*
insert a token after the next assignment command. ..... \afterassignment*
sequence and continues.
command. assigns the second token to a control ..... \futurelet*
associate a counter with an item-type ... \usecounterL
math operator: asterisk (∗). ..... \ast
math relation: asymptote (≍). ..... \asymp
badness tolerance before hyphenation is attempted. ..... \pretolerance*
title page author. ..... \authorL
additional authors on title page. ..... \andL

suppress writing all auxiliary files. ..... \nofiles[L]
select largest available font. ..... \Huge[L]
math delimiter: backslash (\). ..... \backslash
extra space in badly-stretched lines. ..... \emergencystretch[3]
badness of a box. ..... \badness[3]
amount added to badness of every line in a paragraph. ... \linepenalty[*]
badness tolerance after hyphenation. ..... \tolerance[*]
attempted. badness tolerance before hyphenation is \pretolerance[*]
write balanced error message to the terminal. . \errmessage[*]
include balanced text in DVI file for post-processing. \special[*]
list. place balanced text into a mark item on the current \mark[*]
translate balanced text to lower-case. ..... \lowercase[*]
write balanced text to terminal. ..... \message[*]
translate balanced text to upper-case. ..... \uppercase[*]
macron or bar accent (ō). ..... \=
math accent: bar ($\bar{x}$). ..... \bar
math symbol: double vertical bar ($\Vert$). ..... \Arrowvert
math symbol: vertical bar ($\vert$). ..... \arrowvert
math symbol: double relation bar (=). ..... \Relbar
math symbol: relation bar (−). ..... \relbar
math symbol: vertical bar (‖). ..... \|
math accent: bar under ($\underline{x}$). ..... \b
math delimiter: double vertical bar (‖). ..... \Vert
math delimiter: vertical bar (|). ..... \vert
create a box with vertical mode material with the baseline at the top. ..... \vtop[*]
multiple of normal \baselineskip. ..... \baselinestretch[L]
normal \baselineskip. ..... \normalbaselineskip
extra space between lines if \baselineskip isn't enough. ..... \lineskip[*]
begin a floating figure. ..... \figure[L]
begin a group. ..... \begingroup[*]
begin a group. ..... \bgroup
begin a loop. ..... \loop
begin a new math list with a left delimiter. . \left[*]
begin a tabbed line in an inner environment. \tabalign
begin a tabbed line in an outer environment. \+
begin and cross reference an equation. ..... \equation[L]
begin array environment. ..... \array[L]
begin centering environment. ..... \center[L]
begin comment. ..... %
begin display math mode. ..... \[[L]
command name. begin expanding tokens to construct a ..... \csname[*]
begin flush left environment. ..... \flushleft[L]
begin flush right environment. ..... \flushright[L]
begin math mode. ..... \([L]
begin picture environment. ..... \picture[L]
environment. begin theorem with special format in math \proclaim
penalty at the beginning of a list. ..... \@beginparpenalty[L]
mark the beginning of a major subdivision. ..... \beginsection
beginning of an environment. ..... \begin[L]
positive if hyphenating words beginning with capital letters. ..... \uchyph[*]
tokens to insert when display math begins. ..... \everydisplay[*]
tokens to insert when an hbox begins. ..... \everyhbox[*]

tokens to insert when the job begins. ..... \everyjob*
tokens to insert when math in text begins. ..... \everymath*
tokens to insert when a paragraph begins. ..... \everypar*
tokens to insert when a vbox begins. ..... \everyvbox*
break a page unless there is a better below. ..... \filbreak
extra space just below displays. ..... \belowdisplayskip*
lines. extra space just below displays following short \belowdisplayshortskip*
place math limits above and below math operators. ..... \limits*
math Greek letter: beta (β). ..... \beta
\framebox. space between a box and its contents in \fbox and \fboxsepL
space between a label and text of a list item. .... \labelsepL
space between aligned tab entries. ..... \tabskip*
space between columns in double column text. .. \columnsepL
space between double-column floats. ..... \dblfloatsepL
rule between double-column floats and text. . \dblfigruleL
text. space between double-column floats and . \dbltextfloatsepL
amount of extra space between entries in an index. ..... \indexspaceL
paragraph. space between first list item and preceding ..... \topsepL
space between floats. ..... \floatsepL
space between floats and the text. ..... \textfloatsepL
normal space between lines. ..... \baselineskip*
additional penalty for page break between lines. ..... \interlinepenalty*
turn off extra space between lines. ..... \offinterlineskip
extra space between lines if \baselineskip isn't enough. \lineskip*
minimum space between lines in a vertical list. ..... \lineskiplimit*
penalty for breaking between lines of a display. \interdisplaylinepenalty
footnote. penalty for breaking between lines of a ..... \interfootnotelinepenalty
penalty between list items. ..... \@itempenaltyL
space between main text and footnotes. ..... \footinsL
distance between marginal note and text. ..... \marginparsepL
vertical space between marginal notes. ..... \marginparpushL
space between page header and text. ..... \headsepL
define space between paragraphs. ..... \parskip*
environment. space between paragraphs within an item in a list \parsepL
environment. space between rows of array or tabular ..... \arraystretchL
space between sentences. ..... \xspaceskip*
space between successive items in a list environment. \itemsepL
distance left by \' command between tabbing fields. ..... \tabbingsepL
place rule between text and bottom floats. ..... \botfigruleL
space between text and page footer. ..... \footskipL
place rule between top floats and text. ..... \topfigruleL
space between words. ..... \spaceskip*
specify bibliographic style for BibTeX. .. \bibliographystyleL
create a bibliography entry. ..... \bibitemL
end bibliography environment. ..... \endthebibliographyL
enable BibTeX bibliography interface. ..... \bibliographyL
specify bibliographic style for BibTeX. ..... \bibliographystyleL
enable BibTeX bibliography interface. ..... \bibliographyL
reference a BibTeX item without citation. ..... \nociteL
big font size. ..... \bigL
bigger font size. ..... \BigL
biggest font size. ..... \BIGL
\bigskip space. ..... \bigskipamount

define a binary math operator. ..... \mathbin*
math operator: binary modulo (mod). ..... \bmod
penalty for line break after binary operation. ..... \binoppenalty*
math binary operator: join or V (∨). ..... \vee
math binary operator: meet or wedge (∧). ..... \wedge
math binary operator: wreath product (≀). ..... \wr
a blank space. ..... \space
end of a \loop body. ..... \repeat
produce a vertical list of the body of a page. ..... \pagecontents
select bold extended font. ..... \bf
11 point bold extended font. ..... \elvbf L
14 point bold extended font. ..... \frtnbf L
9 point bold extended font. ..... \ninbf L
17 point bold extended font. ..... \svtnbf L
12 point bold extended font. ..... \twlbf L
20 point bold extended font. ..... \twtybf L
10 point bold font. ..... \tenbf
bold font family. ..... \bffam
bold font style. ..... \bf L
select bold math italic and symbol fonts. ..... \boldmath L
unselect bold math italic and symbol fonts. ..... \unboldmath L
7 point bold Roman font. ..... \sevenbf
5 point boldface Roman font. ..... \fivebf
value of \botmark just before current page was boxed. \topmark*
math symbol: bottom (⊥). ..... \bot
place rule between text and bottom floats. ..... \botfigrule L
fraction of column for bottom floats. ..... \bottomfraction L
suppress bottom justification of page text. ..... \raggedbottom
justify page bottoms to the same height. ..... \flushbottom L
justify page bottoms to the same height. ..... \normalbottom
justify page bottoms to their natural height. ..... \raggedbottom L
upper bound on output routine calls. ..... \maxdeadcycles*
math relation: bowtie (⋈). ..... \bowtie
badness of a box. ..... \badness 3
use a box. ..... \box*
use a copy of a box. ..... \copy*
depth of a box. ..... \dp*
create and frame a box. ..... \fbox L
thickness of rule surrounding framed box. ..... \fboxrule L
height of a box. ..... \ht*
test for a horizontal box. ..... \ifhbox*
test for a vertical box. ..... \ifvbox*
test for an empty box. ..... \ifvoid*
create a box. ..... \mbox L
suppress interline space before next vertical box. ..... \nointerlineskip
put a paragraph in a box. ..... \parbox L
create and name a box. ..... \sbox L
show a box. ..... \showbox*
mark text last encountered in a split box. ..... \splitbotmark*
mark text first encountered in a split box. ..... \splitfirstmark*
maximum depth of boxes in a split box. ..... \splitmaxdepth*
space at top of a split box. ..... \splittopskip*
use a named box. ..... \usebox L

width of a box. ..... \wd*
raise a box a distance. ..... \raisebox[L]
lower a box a given distance. ..... \lower*
raise a box a given distance. ..... \raise*
space between a box and its contents in \fbox and \framebox. \fboxsep[L]
math symbol: box (□). ..... \Box[L]
box containing a strut. ..... \strutbox
box containing current tabs. ..... \tabs
maximum box depth shown. ..... \showboxdepth*
create a box in dashes, with positioning. ..... \dashbox[L]
create a box of current line width. ..... \line
put page contents in a box of the proper height. ..... \pagebody
fetch last box off the current list. ..... \lastbox*
depth of the last box on the vertical list. ..... \prevdepth*
surround a space with a repeated box or rule. ..... \cleaders*
fill a space with a repeated box or rule. ..... \leaders*
fill a space with an evenly distributed box or rule. ..... \xleaders*
allocate a new box register. ..... \newbox
define a new box register. ..... \newsavebox[L]
store an hbox or vbox in a box register. ..... \setbox*
send a box to the DVI file. ..... \shipout*
add a box to the vertical list shifted left. ..... \moveleft*
add a box to the vertical list shifted right. ..... \moveright*
create a box with a single column of items. ..... \shortstack[L]
create a box with an underline. ..... \underbar
create a box with horizontal mode material. ..... \hbox*
create and frame a box, with positioning. ..... \framebox[L]
create a box, with positioning. ..... \makebox[L]
create and name a box, with positioning. ..... \savebox[L]
create an underlined box with text in it. ..... \underline[L]
create a zero-width box with text to the left. ..... \llap
create a zero-width box with text to the right. ..... \rlap
constructs a box with the page foot. ..... \makefootline
constructs a box with the page header. ..... \makeheadline
create a box with vertical mode material. ..... \vbox*
baseline at the top. create a box with vertical mode material with the ... \vtop*
mark text last encountered on page just boxed. ..... \botmark*
mark text first encountered on page just boxed. ..... \firstmark*
value of \botmark just before current page was boxed. ..... \topmark*
maximum boxed items shown at a given depth. \showboxbreadth*
width of rules appended to overfull boxes. ..... \overfullrule*
maximum depth of boxes in a split box. ..... \splitmaxdepth*
maximum depth of boxes on explicit pages. ..... \boxmaxdepth*
maximum depth of boxes on main pages. ..... \maxdepth*
show boxes that are shipped out. ..... \tracingoutput*
lower left piece of a horizontal brace. ..... \braceld
upper left piece of a horizontal brace. ..... \bracelu
lower right piece of a horizontal brace. ..... \bracerd
upper right piece of a horizontal brace. ..... \braceru
fill a space with a downward brace. ..... \downbracefill
fill a space with an upward brace. ..... \upbracefill
piece of a vertical brace (|). ..... \bracevert

generate a matrix with a left ... \cases
math delimiter: left curly ... \lbrace
horizontal ... \overbrace
math delimiter: right curly ... \rbrace
close ... \}
open ... \{
horizontal ... \underbrace
fraction without a rule with ... \brace
math delimiter: left angle ... \langle
math delimiter: left ... \lbrack
math delimiter: left ceiling ... \lceil
math delimiter: left floor ... \lfloor
math delimiter: right angle ... \rangle
math delimiter: right ... \rbrack
math delimiter: right ceiling ... \rceil
fraction without a rule with ... \brack
allow a line ... \allowbreak
large vertical space or a good page ... \bigbreak
large vertical ... \bigskip
force a line ... \break
force a page ... \eject
good page ... \goodbreak
encourage a line ... \linebreak[1]
medium vertical space or a good page ... \medbreak
prohibit a line or page ... \nobreak
suppress a line ... \nolinebreak[1]
suppress a page ... \nopagebreak[1]
penalty at the current page ... \outputpenalty*
encourage a page ... \pagebreak[1]
specify penalty for a line or page ... \penalty*
small vertical space and a good page ... \smallbreak
\filbreak below.
permit a line ... \filbreak
penalty for line ... \slash
penalty for line ... \binoppenalty*
penalty for line ... \hyphenpenalty*
penalty for line ... \exhyphenpenalty*
penalty if page ... \clubpenalty*
penalty if page ... \brokenpenalty*
penalty for line ... \relpenalty*
additional penalty for page ... \interlinepenalty*
force a line ... \\[1]
force a line ... \newline[1]
penalty for page ... \postdisplaypenalty*
penalty for page ... \predisplaypenalty*
inhibit a page ... \samepage[1]
large ... \qquad
... \quad
... \enskip
display. penalty for ... \interdisplaylinepenalty
a footnote. penalty for ... \interfootnotelinepenalty
require strict line and page ... \fussy[1]
accept looser line and page ... \sloppy[1]
verbatim line ... \obeylines

breve accent (x̆). ..... \u

math accent: breve ($\breve{x}$). ..... \breve

British pound symbol (£). ..... \pounds[L]

demerits for a penultimate broken line. ..... \finalhyphendemerits*

demerits for consecutive broken lines. ..... \doublehyphendemerits*

math operator: bullet (•). ..... \bullet

show page-break calculations. ..... \tracingpages*

show line-break calculations. ..... \tracingparagraphs*

math mode calligraphic letters font. ..... \cal

upper bound on output routine calls. ..... \maxdeadcycles*

number of output routine calls since last \shipout. ..... \deadcycles*

amount by which delimiters can fail to span included material. \delimitershortfall*

environment. cancel effect of one \+ command in tabbing \<[L]

cancel infinitely stretchable horizontal space. \hfilneg*

cancel infinitely stretchable vertical space. .. \vfilneg*

math operator: large cap ($\bigcap$). ..... \bigcap

math operator: intersection or cap ($\cap$). ..... \cap

math operator: square cap ($\sqcap$). ..... \sqcap

Scandinavian letter: capital A with circle (Å). ..... \AA

ligature digraph symbol capital AE (Æ). ..... \AE

math Greek letter: capital delta (Δ). ..... \Delta

math Greek letter: capital gamma (Γ). ..... \Gamma

math Greek letter: capital lambda (Λ). ..... \Lambda

positive if hyphenating words beginning with capital letters. ..... \uchyph*

Norwegian letter: capital O with slash (Ø). ..... \O

ligature digraph symbol capital OE (Œ). ..... \OE

math Greek letter: capital omega (Ω). ..... \Omega

math Greek letter: capital phi (Φ). ..... \Phi

math Greek letter: capital pi (Π). ..... \Pi

math Greek letter: capital psi (Ψ). ..... \Psi

math Greek letter: capital sigma (Σ). ..... \Sigma

math Greek letter: capital theta (Θ). ..... \Theta

math Greek letter: capital upsilon (Υ). ..... \Upsilon

math Greek letter: capital xi (Ξ). ..... \Xi

select small caps font. ..... \sc[L]

produce a numbered caption. ..... \caption[L]

place a footnote in a caption or other vertical list. ..... \vfootnote

defines a carriage return as \\. ..... \obeycr[L]

restores a carriage return to its usual meaning. ..... \restorecr[L]

separate cases in an \ifcase. ..... \or*

category code for active characters. ..... \active

test category codes. ..... \ifcat*

set a character's processing category type. ..... \catcode*

set a math character's processing category type. ..... \mathcode*

cedilla accent (ç). ..... \c

math delimiter: left ceiling bracket ($\lceil$). ..... \lceil

math delimiter: right ceiling bracket ($\rceil$). ..... \rceil

declaration to center lines. ..... \centering[L]

center text in a line. ..... \centerline

math operator: centered dot ($\cdot$). ..... \cdot

mode. centered dot with special spacing in math .. \cdotp

three centered dots in math mode ($\cdots$). ..... \cdots

create a centered vbox in a math list. ..... \vcenter*

internal Plain TEX space used for centering. ..... \centering
begin centering environment. ..... \center[L]
end centering environment. ..... \endcenter[L]
hanging indentation changes after specified number of lines. ... \hangafter*
start a chapter. ..... \chapter[L]
math symbol: maps to char (|). ..... \mapstochar
put an accent over the next character. ..... \accent*
word delimiter character. ..... \boundarychar[3]
define a name for a character. ..... \chardef*
test the next character. ..... \@ifnextchar[L]
lower-case code for a character. ..... \lccode*
define a name for a math character. ..... \mathchardef*
suppress expansion of a character. ..... \noexpand*
space character. ..... ␣*
upper-case code for a character. ..... \uccode*
define a character as a delimiter. ..... \delcode*
specify a character by its numeric code. ..... \char*
specify a math character code. ..... \mathchar*
change the characters. character code for a set of special ..... \dospecials
compare two character codes. ..... \if*
hyphenation character for this font. ..... \hyphenchar*
escape tokens. character in the output of control sequence \escapechar*
input line. character placed at the right end of an . \endlinechar*
a write statement. character that starts a new output line in \newlinechar*
default horizontal kern character to position accents. ..... \defaultskewchar*
expand a control sequence into character tokens. ..... \string*
category code for active characters. ..... \active
change the character code for a set of special characters. ..... \dospecials
a font with no characters. ..... \nullfont*
minimum number of characters after hyphenation at \righthyphenposition[3]
minimum number of characters before hyphenation at \lefthyphenposition[3]
show characters not in the font. ..... \tracinglostchars*
set a character's processing category type. ..... \catcode*
set a math character's processing category type. ..... \mathcode*
set a character's space factor. ..... \sfcode*
set a character's spacing factor. ..... \spacefactor*
check accent (x̌). ..... \v
math accent: check ($\check{x}$). ..... \check
math Greek letter: chi (χ). ..... \chi
Scandinavian letter: a with circle (å). ..... \aa
Scandinavian letter: capital A with circle (Å). ..... \AA
math operator: large circle ($\bigcirc$). ..... \bigcirc
math operator: circle ($\circ$). ..... \circ
math operator: circle dot ($\odot$). ..... \odot
10 point circle font. ..... \tencirc[L]
10 point wide circle font. ..... \tencircw[L]
circle in a picture environment. ..... \circle[L]
math operator: circle minus ($\ominus$). ..... \ominus
math operator: direct sum, circle plus ($\oplus$). ..... \oplus
math operator: circle slash ($\oslash$). ..... \oslash
math operator: tensor product, circle times ($\otimes$). ..... \otimes
math operator: large circle with dot ($\bigodot$). ..... \bigodot
math operator: large circle with plus ($\bigoplus$). ..... \bigoplus

math operator: large — circle with times (⊗). ..... \bigotimes
thick lines for lines and — circles. ..... \thicklines L
thin lines for lines and — circles. ..... \thinlines L
— circumflex accent (ô). ..... \^
reference a BibTeX item without — citation. ..... \nocite L
generate an in-text — citation of a reference. ..... \cite L
insertion — class for footnote inserts. ..... \footins
insertion — class for inserts at the top of a page. ..... \topins
end of an \if — clause. ..... \fi *
select math spacing of a — closing delimiter for the next item. ..... \mathclose *
math symbol: — club suit (♣). ..... \clubsuit
specify a character by its numeric — code. ..... \char *
specify a math character — code. ..... \mathchar *
lower-case — code for a character. ..... \lccode *
upper-case — code for a character. ..... \uccode *
change the character — code for a set of special characters. ..... \dospecials
category — code for active characters. ..... \active
compare two character — codes. ..... \if *
test category — codes. ..... \ifcat *
— colon in a math formula. ..... \colon
width of a — column. ..... \columnwidth L
permit an alignment entry to stick out of its — column. ..... \hidewidth
fraction of — column for bottom floats. ..... \bottomfraction L
fraction of — column for top floats. ..... \topfraction L
add extra space before a — column in array or tabular environment. \extracolsep L
put text flush right in a — column in tabbing environment. ..... \' L
create a box with a single — column of items. ..... \shortstack L
— column separation in array environment. \arraycolsep L
space between columns in double — column text. ..... \columnsep L
size of — column that must contain text. ..... \textfraction L
generate a matrix labeled on rows and — columns. ..... \bordermatrix
width of rule separating double — columns. ..... \columnseprule L
align zero or more — columns. ..... \valign *
half the width separating — columns in a tabular environment. ..... \tabcolsep L
span several — columns in an alignment. ..... \multispan
space between — columns in double column text. ..... \columnsep L
increment the value of a length — command. ..... \addtolength L
insert a token after the next assignment — command. ..... \afterassignment *
define a new — command. ..... \newcommand L
define a new length — command. ..... \newlength L
includes the section number in a \contentsline — command. ..... \numberline L
redefine a — command. ..... \renewcommand L
set a length — command. ..... \setlength L
define a new \if — command. ..... \newif
associate a counter with an item-type — command. ..... \usecounter L
distance left by \' — command between tabbing fields. ..... \tabbingsep L
execute a — command from the terminal. ..... \typein L
cancel effect of one \+ — command in tabbing environment. ..... \< L
begin expanding tokens to construct a — command name. ..... \csname *
internal Plain TeX — command to piece together long arrows. .... \joinrel
set a length — command to width of text. ..... \settowidth L
enable only specific \include — commands. ..... \includeonly L
set @ alphabetic to access internal — commands. ..... \makeatletter L

set @ non-alphabetic to hide internal commands. ..... \makeatother L
turn on all debugging commands. ..... \tracingall
protect fragile commands and moving arguments. ..... \protect L
show commands before they are executed. \tracingcommands *
begin comment. ..... %
compare tokens. ..... \ifx *
compare two character codes. ..... \if *
insert a token after the current group is completed. ..... \aftergroup *
math relation: congruent (≅). ..... \cong
demerits for consecutive broken lines. .... \doublehyphendemerits *
math symbol: Planck's constant or h-bar (ħ). ..... \hbar
begin expanding tokens to construct a command name. ..... \csname *
constructs a box with the page foot. .. \makefootline
constructs a box with the page header. \makeheadline
size of column that must contain text. ..... \textfraction L
box containing a strut. ..... \strutbox
box containing current tabs. ..... \tabs
math relation: contains (∋). ..... \ni
generate a table of contents. ..... \tableofcontents L
add text to table contents, figures, or tables. ..... \addtocontents L
put page contents in a box of the proper height. ..... \pagebody
space between a box and its contents in \fbox and \framebox. ..... \fboxsep L
display the contents of a register. ..... \showthe *
includes the section number in a \contentsline command. ..... \numberline L
number of lines of context to be displayed in an error message. \errorcontextlines 3
the second token to a control sequence and continues. assigns ..... \futurelet *
math operator: contour integral (∮). ..... \oint
define a synonym for the current meaning of a control sequence. ..... \let *
an undefined control sequence. ..... \undefined
assigns the second token to a control sequence and continues. ..... \futurelet *
expand a control sequence into character tokens. ..... \string *
escape character in the output of control sequence tokens. ..... \escapechar *
redefinable scratch control sequence used by \dospecials. .... \do
scratch control sequence used in preloading fonts. \preloaded
control space. ..... \␣ *
convert a number to a token string. ..... \number *
convert a number to lower-case Roman numerals. \romannumeral *
convert a numeric register to displayable form. \the *
place several copies of a picture object. ..... \multiput L
math operator: amalgamated sum, co-product (II). ..... \amalg
math operator: large co-product (∐). ..... \coprod
use a copy of a box. ..... \copy *
un-box a copy of a vbox and add it to the vertical list. \unvcopy *
un-box a copy of an hbox and add it to the horizontal list. \unhcopy *
copyright symbol (©). ..... \copyright
italic correction. ..... \/ *
math function: cosecant. ..... \csc
math function: arc cosine. ..... \arccos
math function: cosine. ..... \cos
math function: hyperbolic cosine. ..... \cosh
math function: cotangent. ..... \cot
math function: hyperbolic cotangent. ..... \coth
use a count register. ..... \count *

define a name for a count register. ..... \countdef*
allocate a new count register. ..... \newcount
increment a counter. ..... \addtocounterL
increment and reference a counter. ..... \refstepcounterL
set value of a counter. ..... \setcounterL
increment a counter. ..... \stepcounterL
current value of the third-level item counter. ..... \theenumiiiL
current value of the second-level item counter. ..... \theenumiiL
current value of the first-level item counter. ..... \theenumiL
current value of the fourth-level item counter. ..... \theenumivL
current value of the sixth-level item counter. ..... \theenumviL
current value of the fifth-level item counter. ..... \theenumvL
current value of the figure counter. ..... \thefigureL
produce the value of a counter. ..... \valueL
display counter as Arabic numerals. ..... \arabicL
display counter as footnote symbol. ..... \fnsymbolL
display counter as lower-case letter. ..... \alphL
display counter as lower-case Roman numerals. ..... \romanL
display counter as upper-case letter. ..... \AlphL
display counter as upper-case Roman numerals. ..... \RomanL
define a new counter variable. ..... \newcounterL
associate a counter with an item-type command. ..... \usecounterL
equivalent to \cr, end of aligned text. ..... \endline
ensure a \cr in \halign. ..... \crcr*
tokens to insert after every \cr or nonredundant \crcr. ..... \everycr*
tokens to insert after every \cr or nonredundant \crcr. ..... \everycr*
create a bibliography entry. ..... \bibitemL
create a box. ..... \mboxL
create a box in dashes, with positioning. ..... \dashboxL
create a box of current line width. ..... \line
create a box with a single column of items. \shortstackL
create a box with an underline. ..... \underbar
create a box with horizontal mode material. \hbox*
create a box, with positioning. ..... \makeboxL
create a box with vertical mode material. ..... \vbox*
the baseline at the top. create a box with vertical mode material with \vtop*
create a centered vbox in a math list. ..... \vcenter*
create a footnote. ..... \footnote
create a formula with zero height. ..... \smash
create a multicolumn entry in an aligned table. \span*
create a rule or line. ..... \ruleL
create a small sample page. ..... \minipageL
formula. create a zero-height hbox with the width of a \hphantom
create a zero-width box with text to the left. \llap
create a zero-width box with text to the right. \rlap
depth of a formula. create a zero-width vbox the height and ... \vphantom
create an aligned table. ..... \halign*
create an index entry. ..... \indexL
create an underlined box with text in it. ..... \underlineL
create and frame a box. ..... \fboxL
create and frame a box, with positioning. ..... \frameboxL
create and name a box. ..... \sboxL
create and name a box, with positioning. ... \saveboxL

punctuation. create end-of-sentence space after following . \@ L
create item label for a list environment. .. \makelabel L
create some horizontal space. ..... \hglue
create some vertical space. ..... \vglue
penalty for creating a widow line at top of page. .. \widowpenalty *
display. penalty for creating a widow line before a \displaywidowpenalty *
enable index creation. ..... \makeindex L
begin and cross reference an equation. ..... \equation L
define a cross reference label. ..... \label L
page number of a cross reference label. ..... \pageref L
refer to a cross reference label. ..... \ref L
terminate a \csname token list. ..... \endcsname *
math operator: large cup (⋃). ..... \bigcup
math operator: large square cup (⨆). ..... \bigsqcup
math operator: union or cup (∪). ..... \cup
math operator: square cup (⊔). ..... \sqcup
math delimiter: left curly brace ({). ..... \lbrace
math delimiter: right curly brace (}). ..... \rbrace
current day of the month. ..... \day *
number of the current displayed equation. ..... \theequation L
current family number. ..... \fam *
insert a token after the current group is completed. ..... \aftergroup *
line. stop reading current input file at the end of the current . \endinput *
current language used for hyphenation. .... \language 3
produces current left page heading. ..... \leftmark L
stop reading current input file at the end of the current line. ..... \endinput *
width of the current line. ..... \linewidth L
discard current line in tabbing environment. ..... \kill L
create a box of current line width. ..... \line
append a discretionary item to the current list. ..... \discretionary *
fetch last box off the current list. ..... \lastbox *
fetch last kern off the current list. ..... \lastkern *
fetch last penalty off the current list. ..... \lastpenalty *
fetch last skip off the current list. ..... \lastskip *
place balanced text into a mark item on the current list. ..... \mark *
remove a kern just added to the current list. ..... \unkern *
remove a penalty just added to the current list. ..... \unpenalty *
remove a skip just added to the current list. ..... \unskip *
show the current lists. ..... \showlists *
define a synonym for the current meaning of a control sequence. ..... \let *
depth of the current month of the year. ..... \month *
amount of filll space in current page. ..... \pagedepth *
amount of fill space in current page. ..... \pagefilllstretch *
amount of fil space in current page. ..... \pagefillstretch *
amount of glue shrinkage in current page. ..... \pagefilstretch *
amount of glue stretch in current page. ..... \pageshrink *
penalty at the current page. ..... \pagestretch *
current page break. ..... \outputpenalty *
current page number. ..... \pageno
set current page number. ..... \thepage L
value of \botmark just before current page style. ..... \thispagestyle L
insert at current page was boxed. ..... \topmark *
current position in page. ..... \midinsert

produces current right page heading. ..... \rightmark L
choose a math formula based on the current style. ..... \mathchoice *
save current tab stops in tabbing environment. . \pushtabs L
box containing current tabs. ..... \tabs
name of current TEX format package. ..... \fmtname
version of current TEX format package. ..... \fmtversion
current time of day. ..... \time *
current value of the fifth-level item counter. \theenumv L
current value of the figure counter. ..... \thefigure L
current value of the first-level item counter. \theenumi L
counter. current value of the fourth-level item ..... \theenumiv L
counter. current value of the second-level item ..... \theenumii L
current value of the sixth-level item counter. \theenumvi L
counter. current value of the third-level item ..... \theenumiii L
current year of our Lord. ..... \year *
math operator: dagger (†). ..... \dagger
math operator: double dagger (‡). ..... \ddagger
dagger symbol (†). ..... \dag
double dagger symbol (‡). ..... \ddag
math relation: dash V (⊣). ..... \dashv
math relation: dash (⊢). ..... \vdash
create a box in dashes, with positioning. ..... \dashbox L
display today's date. ..... \today L
date on title page. ..... \date L
current time of day. ..... \time *
turn on all debugging commands. ..... \tracingall
declaration to center lines. ..... \centering L
declare document style and options. . \documentstyle L
declare the title. ..... \title L
position accents. default horizontal kern character to \defaultskewchar *
loaded. default hyphen when a font is ... \defaulthyphenchar *
operators. restore default limit placement on large math \displaylimits *
default Plain output routine. ..... \plainoutput
define a binary math operator. ..... \mathbin *
define a character as a delimiter. ..... \delcode *
define a cross reference label. ..... \label L
define a delimiter for math mode. ..... \delimiter *
replacement text. define a global macro with expanded ..... \xdef *
define a large math operator. ..... \mathop *
define a macro. ..... \def *
define a macro globally. ..... \gdef *
text. define a macro with expanded replacement . \edef *
define a math punctuation operator. ..... \mathpunct *
define a math relation operator. ..... \mathrel *
define a name for a character. ..... \chardef *
define a name for a count register. ..... \countdef *
define a name for a dimension register. .... \dimendef *
define a name for a math character. .... \mathchardef *
define a name for a math skip register. ... \muskipdef *
define a name for a skip register. ..... \skipdef *
define a name for a token list register. ..... \toksdef *
define a new box register. ..... \newsavebox L
define a new command. ..... \newcommand L

define a new counter variable. ..... \newcounter[L]
define a new environment. ..... \newenvironment[L]
define a new font family. ..... \newfam
define a new help message. ..... \newhelp
define a new \if command. ..... \newif
hyphenation. define a new language to be used for ... \newlanguage[3]
define a new length command. ..... \newlength[L]
define a new theorem environment. ..... \newtheorem[L]
define a set of hyphenation patterns. ..... \patterns*
text and script sizes. define a symbol that will work properly in \mathpalette
control sequence. define a synonym for the current meaning of a \let*
define a tab stop in tabbing environment. .. \=[L]
define an inner math subformula. ..... \mathinner*
define an ordinary math operator. ..... \mathord*
define an unusual paragraph shape. ..... \parshape*
define font magnification. ..... \magstep
define horizontal tabs. ..... \settabs
define kerning around math in text. ... \mathsurround*
internal Plain TEX operation to define math text symbols. ..... \mathhexbox
define paragraph indentation. ..... \parindent*
define space between paragraphs. ..... \parskip*
define the page output routine. ..... \output*
footnotes. define the rule separating a page and . \footnoterule
page is formatted. define where text will be inserted when the . \insert*
select smallest defined font. ..... \tiny[L]
defines a carriage return as \\. ..... \obeycr[L]
give a token list defining the semantics of a token. ..... \meaning*
end a \settabs definition. ..... \columns
the following macro definition or register setting is global. ..... \global*
math function: degree of a polynomial (deg). ..... \deg
2.5-line left math delimiter. ..... \Biggl
2-line left math delimiter. ..... \biggl
2.5-line middle math delimiter. ..... \Biggm
2-line middle math delimiter. ..... \biggm
2.5-line right math delimiter. ..... \Biggr
2-line right math delimiter. ..... \biggr
1.5-line left math delimiter. ..... \Bigl
1-line left math delimiter. ..... \bigl
1.5-line middle math delimiter. ..... \Bigm
1-line middle math delimiter. ..... \bigm
1.5-line right math delimiter. ..... \Bigr
1-line right math delimiter. ..... \bigr
generate a matrix with a left brace delimiter. ..... \cases
define a character as a delimiter. ..... \delcode*
begin a new math list with a left delimiter. ..... \left*
width of a null delimiter. ..... \nulldelimiterspace*
end a math list with a right delimiter. ..... \right*
math delimiter: backslash (\). ..... \backslash
word delimiter character. ..... \boundarychar[3]
math delimiter: double vertical bar (‖). ..... \Vert
define a delimiter for math mode. ..... \delimiter*
select math spacing of a closing delimiter for the next item. ..... \mathclose*
select math spacing of an opening delimiter for the next item. ..... \mathopen*

math delimiter: left angle bracket ($\langle$). ..... \langle
math delimiter: left bracket ([). ..... \lbrack
math delimiter: left ceiling bracket ($\lceil$). ..... \lceil
math delimiter: left curly brace ({). ..... \lbrace
math delimiter: left floor bracket ($\lfloor$). ..... \lfloor
math delimiter: left group ($\left($). ..... \lgroup
math delimiter: right angle bracket ($\rangle$). ..... \rangle
math delimiter: right bracket (]). ..... \rbrack
math delimiter: right ceiling bracket ($\rceil$). ..... \rceil
math delimiter: right curly brace (}). ..... \rbrace
math delimiter: right floor ($\rfloor$). ..... \rfloor
math delimiter: right group ($\right)$). ..... \rgroup
1.5-line math delimiter size. ..... \Big
1-line math delimiter size. ..... \big
2.5-line math delimiter size. ..... \Bigg
2-line math delimiter size. ..... \bigg
math delimiter: up-and-down arrow ($\updownarrow$). ..... \updownarrow
math delimiter: upward arrow ($\uparrow$). ..... \uparrow
math delimiter: vertical bar (|). ..... \vert
fraction with specified rule and delimiters. ..... \abovewithdelims*
fraction without rule with given delimiters. ..... \atopwithdelims*
generate a matrix without delimiters. ..... \matrix
fraction with rule and given delimiters. ..... \overwithdelims*
generate a matrix with parentheses delimiters. ..... \pmatrix
included material. amount by which delimiters can fail to span ..... \delimitershortfall*
ratio for variable delimiters times 1000. ..... \delimiterfactor*
math Greek letter: delta (δ). ..... \delta
math Greek letter: capital delta (Δ). ..... \Delta
broken line. demerits for a penultimate ... \finalhyphendemerits*
demerits for adjacent incompatible lines. \adjdemerits*
lines. demerits for consecutive broken \doublehyphendemerits*
mark denoting fifth-level items. ..... \labelitemv L
mark denoting first-level items. ..... \labelitemi L
mark denoting fourth-level items. ..... \labelitemiv L
mark denoting second-level items. ..... \labelitemii L
mark denoting sixth-level items. ..... \labelitemvi L
mark denoting third-level items. ..... \labelitemiii L
maximum boxed items shown at a given depth. ..... \showboxbreadth*
depth of a box. ..... \dp*
create a zero-width vbox the height and depth of a formula. ..... \vphantom
maximum depth of boxes in a split box. ..... \splitmaxdepth*
maximum depth of boxes on explicit pages. ..... \boxmaxdepth*
maximum depth of boxes on main pages. ..... \maxdepth*
math strut with height and depth of parentheses. ..... \mathstrut
depth of the current page. ..... \pagedepth*
depth of the last box on the vertical list. . \prevdepth*
maximum box depth shown. ..... \showboxdepth*
select old-style numerals with descenders. ..... \oldstyle
desired page height. ..... \pagegoal*
math function: det. ..... \det
select one of several entries determined by an integer. ..... \ifcase*
diæresis or umlaut accent (ẍ). ..... \"

show diagnostics on the terminal. ..... \tracingonline*
three diagonal dots in math mode (⋱). ..... \ddots
math operator: diamond (⋄). ..... \diamond
math symbol: diamond (◇). ..... \Diamond[L]
math symbol: left half diamond (◁). ..... \lhd[L]
math symbol: right half diamond (▷). ..... \rhd[L]
math symbol: diamond suit (♢). ..... \diamondsuit
math symbol: underlined left half diamond (⊴). ..... \unlhd[L]
math symbol: underlined right half diamond (⊵). ..... \unrhd[L]
insert words into hyphenation dictionary. ..... \hyphenation*
ligature digraph symbol ae (æ). ..... \ae
ligature digraph symbol capital AE (Æ). ..... \AE
ligature digraph symbol capital OE (Œ). ..... \OE
ligature digraph symbol oe (œ). ..... \oe
math function: dim. ..... \dim
largest permissible dimension. ..... \maxdimen
use a dimension register. ..... \dimen*
define a name for a dimension register. ..... \dimendef*
allocate a new dimension register. ..... \newdimen
test two dimensions. ..... \ifdim*
math operator: direct sum, circle plus (⊕). ..... \oplus
read a file unless disabled by \includeonly. ..... \include[L]
discard current line in tabbing environment. \kill[L]
discretionary hyphen. ..... \-*
penalty for line break after discretionary hyphen. ..... \hyphenpenalty*
append a discretionary item to the current list. \discretionary*
math operator: discretionary multiply sign. ..... *
penalty for creating a widow line before a display. ..... \displaywidowpenalty*
penalty for breaking between lines of a display. ..... \interdisplaylinepenalty
penalty for page break just after a display. ..... \postdisplaypenalty*
penalty for page break just before a display. ..... \predisplaypenalty*
length of text preceding a display. ..... \predisplaysize*
alignment. display a stack of formulas without ... \displaylines
display a sub-item. ..... \itemitem
display a symbol from a font. ..... \symbol[L]
display an item. ..... \item
indentation. display an item without hanging ..... \textindent
display counter as Arabic numerals. ..... \arabic[L]
display counter as footnote symbol. ..... \fnsymbol[L]
display counter as lower-case letter. ..... \alph[L]
display counter as lower-case Roman numerals. \roman[L]
display counter as upper-case letter. ..... \Alph[L]
numerals. display counter as upper-case Roman ..... \Roman[L]
indentation of display equations. ..... \mathindent[L]
help message to display if user asks for help. ..... \errhelp*
tokens to insert when display math begins. ..... \everydisplay*
enter display math mode. ..... $$*
begin display math mode. ..... \[[L]
end display math mode. ..... \][L]
set a formula flush left in display style. ..... \lefteqn[L]
display the contents of a register. ..... \showthe*
display today's date. ..... \today[L]
convert a numeric register to displayable form. ..... \the*

indentation of line for displayed equation. ..... \displayindent*
width of a displayed equation. ..... \displaywidth*
number of the current displayed equation. ..... \theequationL
suppress numbering of displayed equations. ..... \nonumberL
number of lines of context to be displayed in an error message. .. \errorcontextlines3
process input without displaying errors. ..... \batchmode*
extra space above displays. ..... \abovedisplayskip*
extra space just below displays. ..... \belowdisplayskip*
unit of measure for opening up displays. ..... \jot
extra space above displays following short lines. \abovedisplayshortskip*
extra space just below displays following short lines. \belowdisplayshortskip*
footnote separation distance. ..... \footnotesepL
kern a given distance. ..... \kern*
lower a box a given distance. ..... \lower*
raise a box a given distance. ..... \raise*
raise a box a distance. ..... \raiseboxL
distance between marginal note and text. \marginparsepL
unit of distance in picture environment. ..... \unitlengthL
tabbing fields. distance left by \' command between ... \tabbingsepL
fill a space with an evenly distributed box or rule. ..... \xleaders*
math operator: div. ..... \div
divide a register by a value. ..... \divide*
start a major division of a long document. ..... \partL
set the magnification for the document. ..... \magnification
start a major division of a long document. ..... \partL
declare document style and options. ..... \documentstyleL
dollar sign. ..... \$
redefinable scratch control sequence used by \dospecials. ..... \do
dot accent (ẋ). ..... \.
math operator: large circle with dot ($\bigodot$). ..... \bigodot
math operator: centered dot ($\cdot$). ..... \cdot
math accent: double dot ($\ddot{x}$). ..... \ddot
math accent: dot ($\dot{x}$). ..... \dot
lower dot math symbol with special spacing. ..... \ldotp
math operator: circle dot ($\odot$). ..... \odot
dot under accent ($\underset{\cdot}{x}$). ..... \d
centered dot with special spacing in math mode. .... \cdotp
math symbol: dotless i ($\imath$). ..... \imath
dotless i letter (ı). ..... \i
math symbol: dotless j ($\jmath$). ..... \jmath
dotless j letter (ȷ). ..... \j
fill a space with dots. ..... \dotfill
three centered dots in math mode ($\cdots$). ..... \cdots
three low dots in math mode ($\ldots$). ..... \ldots
three diagonal dots in math mode ($\ddots$). ..... \ddots
math symbol: vertical dots ($\vdots$). ..... \vdots
math relation: dotted equal ($\doteq$). ..... \doteq
math symbol: downward double arrow ($\Downarrow$). ..... \Downarrow
math symbol: left double arrow ($\Leftarrow$). ..... \Leftarrow
math symbol: left-right double arrow ($\Leftrightarrow$). ..... \Leftrightarrow
math symbol: long left double arrow ($\Longleftarrow$). ..... \Longleftarrow
math symbol: long left-right double arrow ($\Longleftrightarrow$). ..... \Longleftrightarrow
math symbol: long right double arrow ($\Longrightarrow$). ..... \Longrightarrow

math symbol: right double arrow ($\Rightarrow$). ..... \Rightarrow
math symbol: upward double arrow ($\Uparrow$). ..... \Uparrow
math symbol: up-and-down double arrow ($\Updownarrow$). ..... \Updownarrow
space between columns in double column text. ..... \columnsep[L]
width of rule separating double columns. ..... \columnseprule[L]
math operator: double dagger ($\ddagger$). ..... \ddagger
double dagger symbol ($\ddagger$). ..... \ddag
math accent: double dot ($\ddot{x}$). ..... \ddot
math symbol: double relation bar ($=$). ..... \Relbar
tabular environment. double rule separation in array or ... \doublerulesep[L]
math symbol: double vertical bar ($\left\|\right\|$). ..... \Arrowvert
math delimiter: double vertical bar ($\|$). ..... \Vert
space between double-column floats. ..... \dblfloatsep[L]
rule between double-column floats and text. ..... \dblfigrule[L]
space between double-column floats and text. .... \dbltextfloatsep[L]
start a new page in double-column format. ..... \twocolumn[L]
size of float on double-column page. ..... \dblfloatpagefraction[L]
math symbol: down arrow ($\downarrow$). ..... \downarrow
math symbol: left harpoon down ($\leftharpoondown$). ..... \leftharpoondown
math symbol: right harpoon down ($\rightharpoondown$). ..... \rightharpoondown
math operator: large down triangle ($\bigtriangledown$). ..... \bigtriangledown
fill a space with a downward brace. ..... \downbracefill
math symbol: downward double arrow ($\Downarrow$). ..... \Downarrow
draw a line over a formula. ..... \overline*
draw a line under a formula. ..... \underline*
text. macro to draw the rule separating footnotes from \footnoterule[L]
environment. cancel effect of one \+ command in tabbing ..... \<[L]
flush insertions and eject to a new page. ..... \dosupereject
flush all insertions and eject to a new page. ..... \supereject
an ellipsis, equivalent to \ldots in math mode. \dots
emphasis font. ..... \em[L]
test for an empty box. ..... \ifvoid*
an empty hbox. ..... \null
an empty list of tokens. ..... \empty
math symbol: empty set ($\emptyset$). ..... \emptyset
en entry in a file of index terms. ..... \indexentry[L]
enable BibTeX bibliography interface. . \bibliography[L]
enable glossary processing. ..... \makeglossary[L]
enable index creation. ..... \makeindex[L]
enable only specific \include commands. \includeonly[L]
punctuation. enable special spacing after ..... \nonfrenchspacing
mark text last encountered in a split box. ..... \splitbotmark*
mark text first encountered in a split box. ..... \splitfirstmark*
mark text last encountered on page just boxed. ..... \botmark*
mark text first encountered on page just boxed. ..... \firstmark*
encourage a line break. ..... \linebreak[L]
encourage a page break. ..... \pagebreak[L]
show unassignments when groups end. ..... \tracingrestores*
punctuation. create end-of-sentence space after following ..... \@[L]
ensure a \cr in \halign. ..... \crcr*
ensure footnote line separation. ..... \footstrut
enter display math mode. ..... $$*

enter math mode. ..... $ *
space between aligned tab entries. ..... \tabskip *
select one of several entries determined by an integer. ..... \ifcase *
amount of extra space between entries in an index. ..... \indexspace L
create a bibliography entry. ..... \bibitem L
write a glossary entry. ..... \glossary L
create an index entry. ..... \index L
the template in the alignment preamble for this entry. suppress ..... \omit *
en entry in a file of index terms. ..... \indexentry L
start an entry in a list environment. ..... \item L
create a multicolumn entry in an aligned table. ..... \span *
multicolumn entry in array or tabular environment. . \multicolumn L
permit an alignment entry to stick out of its column. ..... \hidewidth
adds an entry to the specified list or table. . \addcontentsline L
produce TEX accents in tabbing environment. ..... \a L
column separation in array environment. ..... \arraycolsep L
begin array environment. ..... \array L
space between rows of array or tabular environment. ..... \arraystretch L
beginning of an environment. ..... \begin L
begin centering environment. ..... \center L
circle in a picture environment. ..... \circle L
multicolumn line in array or tabular environment. ..... \cline L
double rule separation in array or tabular environment. ..... \doublerulesep L
end array environment. ..... \endarray L
end centering environment. ..... \endcenter L
end flush left environment. ..... \endflushleft L
end flush right environment. ..... \endflushright L
end of an environment. ..... \end L
end picture environment. ..... \endpicture L
end bibliography environment. ..... \endthebibliography L
extra space before a column in array or tabular environment. add ..... \extracolsep L
begin flush left environment. ..... \flushleft L
begin flush right environment. ..... \flushright L
indent before the label in a list environment. ..... \itemindent L
start an entry in a list environment. ..... \item L
space between successive items in a list environment. ..... \itemsep L
discard current line in tabbing environment. ..... \kill L
cancel effect of one \+ command in tabbing environment. ..... \< L
define a tab stop in tabbing environment. ..... \= L
move to next tab position in tabbing environment. ..... \> L
put text flush right in a column in tabbing environment. ..... \' L
unindents left margin one tab stop in tabbing environment. ..... \- L
label width in a list environment. ..... \labelwidth L
left margin of a list environment. ..... \leftmargin L
line in a picture environment. ..... \line L
set width of lines in picture environment. ..... \linethickness L
indent second and subsequent paragraphs in a list environment. ..... \listparindent L
create item label for a list environment. ..... \makelabel L
multicolumn entry in array or tabular environment. ..... \multicolumn L
define a new environment. ..... \newenvironment L
define a new theorem environment. ..... \newtheorem L
oval in a picture environment. ..... \oval L
space between paragraphs within an item in a list environment. ..... \parsep L

begin picture environment. ..... \picture[L]
restore tabs stops in tabbing environment. ..... \poptabs[L]
save current tab stops in tabbing environment. ..... \pushtabs[L]
redefine an environment. ..... \renewenvironment[L]
begin a tabbed line in an outer environment. ..... \+
indents left margin one tab stop in tabbing environment. ..... \+[L]
begin theorem with special format in math environment. ..... \proclaim
begin a tabbed line in an inner environment. ..... \tabalign
half the width separating columns in a tabular environment. ..... \tabcolsep[L]
unit of distance in picture environment. ..... \unitlength[L]
vector in a picture environment. ..... \vector[L]
extra vertical space when environment starts a paragraph. ..... \partopsep[L]
horizontal line in array and tabular environments. ..... \hline[L]
vertical line in array and tabular environments. ..... \vline[L]
math Greek letter: epsilon (ϵ). ..... \epsilon
math Greek letter: variant epsilon (ε). ..... \varepsilon
math relation: approximately equal ($\approx$). ..... \approx
math relation: dotted equal ($\doteq$). ..... \doteq
math relation: greater or equal ($\geq$). ..... \ge
math relation: greater or equal ($\geq$). ..... \geq
math relation: less or equal ($\leq$). ..... \le
math relation: less or equal ($\leq$). ..... \leq
math relation: not equal ($\neq$). ..... \ne
math relation: not equal ($\neq$). ..... \neq
math relation: not equal ($\neq$). ..... \not=
math relation: precedes or equal ($\preceq$). ..... \preceq
math relation: similar or equal ($\simeq$). ..... \simeq
math relation: square subset or equal ($\sqsubseteq$). ..... \sqsubseteq
math relation: square superset or equal ($\sqsupseteq$). ..... \sqsupseteq
math relation: subset or equal ($\subseteq$). ..... \subseteq
math relation: successor or equal ($\succeq$). ..... \succeq
math relation: superset or equal ($\supseteq$). ..... \supseteq
indentation of line for displayed equation. ..... \displayindent[*]
width of a displayed equation. ..... \displaywidth[*]
end an equation. ..... \endequation[L]
begin and cross reference an equation. ..... \equation[L]
number of the current displayed equation. ..... \theequation[L]
stack one equation above another. ..... \stackrel[L]
equation number. ..... \eqno[*]
left equation number. ..... \leqno[*]
align a stack of equations with equation numbers. ..... \eqalignno
align a stack of equations with left equation numbers. ..... \leqalignno
align a stack of equations. ..... \eqalign
indentation of display equations. ..... \mathindent[L]
suppress numbering of displayed equations. ..... \nonumber[L]
align a stack of equations with equation numbers. ..... \eqalignno
align a stack of equations with left equation numbers. ..... \leqalignno
math relation: equivalence ($\equiv$). ..... \equiv
superscript, equivalent to `^`. ..... \sp
equivalent to `\cr`, end of aligned text. ..... \endline
an ellipsis, equivalent to `\ldots` in math mode. ..... \dots
equivalent to `\par`. ..... \endgraf
subscript, equivalent to `_`. ..... \sb

maximum overrun before overfull vbox
number of lines of context to be displayed in an
write balanced
process input without displaying
limit for bad hbox
process input without stopping for
process TEX input without pausing for normal
limit for bad vbox
pause for normal
sequence tokens.
math Greek letter:
fill a space with an
height of text,
show commands before they are
math symbol:
math function:
tokens.
token.
non-space is found. read,
show macros as they are
define a macro with
define a global macro with
name. begin
suppress
penalty for line break after
maximum depth of boxes on
select bold
11 point bold
14 point bold
9 point bold
17 point bold
12 point bold
20 point bold
10 point math
gives the
following short lines.
tabular environment. add
amount of
turn off
isn't enough.
displays following short lines.
add
a paragraph.
set a character's space
set a character's spacing
amount by which delimiters can
test always

error. ..... \vfuzz*
error message. ..... \errorcontextlines3
error message to the terminal. ..... \errmessage*
errors. ..... \batchmode*
errors. ..... \hbadness*
errors. ..... \nonstopmode*
errors. ..... \scrollmode*
errors. ..... \vbadness*
errors while processing TEX input. ... \errorstopmode*
escape character in the output of control \escapechar*
eta (η). ..... \eta
evenly distributed box or rule. ..... \xleaders*
excluding head and foot. ..... \textheightL
execute a command from the terminal. ..... \typeinL
executed. ..... \tracingcommands*
exists quantifier ($\exists$). ..... \exists
exp. ..... \exp
expand a control sequence into character ... \string*
expand the token following the next ... \expandafter*
expand, then ignore tokens until a .... \ignorespaces*
expanded. ..... \tracingmacros*
expanded replacement text. ..... \edef*
expanded replacement text. ..... \xdef*
expanding tokens to construct a command . \csname*
expansion of a character. ..... \noexpand*
explicit hyphen. ..... \exhyphenpenalty*
explicit pages. ..... \boxmaxdepth*
extended font. ..... \bf
extended font. ..... \elvbfL
extended font. ..... \frtnbfL
extended font. ..... \ninbfL
extended font. ..... \svtnbfL
extended font. ..... \twlbfL
extended font. ..... \twtybfL
extension symbol font. ..... \tenex
external file name for the given font. ..... \fontname*
extra space above displays. ..... \abovedisplayskip*
extra space above displays . \abovedisplayshortskip*
extra space added to top of page. ..... \topmarginL
extra space after subscript or superscript. \scriptspace*
extra space before a column in array or \extracolsepL
extra space between entries in an index. . \indexspaceL
extra space between lines. ..... \offinterlineskip
extra space between lines if \baselineskip \lineskip*
extra space in badly-stretched lines. \emergencystretch3
extra space just below displays. .. \belowdisplayskip*
extra space just below ..... \belowdisplayshortskip*
extra vertical space. ..... \addvspaceL
extra vertical space when environment starts \partopsepL
factor. ..... \sfcode*
factor. ..... \spacefactor*
fail to span included material. . \delimitershortfall*
false. ..... \iffalse*

bold font family. ..... \bffam
italic font family. ..... \itfam
define a new font family. ..... \newfam
slanted font family. ..... \slfam
typewriter font family. ..... \ttfam
current family number. ..... \fam*
space between a box and its contents in \fbox and \framebox. ..... \fboxsepL
fetch last box off the current list. ..... \lastbox*
fetch last kern off the current list. ..... \lastkern*
fetch last penalty off the current list. ... \lastpenalty*
fetch last skip off the current list. ..... \lastskip*
place an accent over the next math field. ..... \mathaccent*
distance left by \' command between tabbing fields. ..... \tabbingsepL
current value of the fifth-level item counter. ..... \theenumvL
mark denoting fifth-level items. ..... \labelitemvL
width of left margin in fifth-level list. ..... \leftmarginvL
end a floating figure. ..... \endfigureL
begin a floating figure. ..... \figureL
current value of the figure counter. ..... \thefigureL
generate a list of figures. ..... \listoffiguresL
flush figures and start a new page. ..... \clearpageL
right-hand page. flush figures and tables and start a new . \cleardoublepageL
add text to table contents, figures, or tables. ..... \addtocontentsL
amount of fil space in current page. ..... \pagefilstretch*
break a page unless there is a better \filbreak below. ..... \filbreak
close an input file. ..... \closein*
close an output file. ..... \closeout*
test for end of file. ..... \ifeof*
read a file. ..... \input*
name of the principal input file. ..... \jobname*
pause after each line is read from a file. ..... \pausing*
read a line from a file. ..... \read*
allocate a new input file. ..... \newread
allocate a new output file. ..... \newwrite
write a token list to a file. ..... \write*
stop reading current input file at the end of the current line. ..... \endinput*
open a file for input. ..... \openin*
open a file for output. ..... \openout*
terminate TEX and write a format file: INITEX only. ..... \dump*
gives the external file name for the given font. ..... \fontname*
en entry in a file of index terms. ..... \indexentryL
write to the log file only. ..... \wlog
read a file unless disabled by \includeonly. ..... \includeL
suppress writing all auxiliary files. ..... \nofilesL
fill a space with a downward brace. .. \downbracefill
fill a space with a left arrow. ..... \leftarrowfill
fill a space with a repeated box or rule. .... \leaders*
fill a space with a right arrow. ..... \rightarrowfill
fill a space with a rule. ..... \hrulefill
rule. fill a space with an evenly distributed box or \xleaders*
fill a space with an upward brace. ..... \upbracefill
fill a space with dots. ..... \dotfill
amount of fill space in current page. ..... \pagefillstretch*

amount of filll space in current page. ..... \pagefilllstretch*
terminate LaTeX and flush the final page. ..... \stopL
finish processing input. ..... \bye
current value of the first-level item counter. ..... \theenumiL
mark denoting first-level items. ..... \labelitemiL
width of left margin in first-level list. ..... \leftmarginiL
math symbol: flat (♭). ..... \flat
vertical space around a float in the middle of a page. ..... \intextsepL
size of float on double-column page. \dblfloatpagefractionL
end a floating figure. ..... \endfigureL
begin a floating figure. ..... \figureL
place rule between text and bottom floats. ..... \botfigruleL
fraction of column for bottom floats. ..... \bottomfractionL
space between double-column floats. ..... \dblfloatsepL
fraction of two-column page for top floats. ..... \dbltopfractionL
portion of page that may be occupied by floats. ..... \floatpagefractionL
space between floats. ..... \floatsepL
fraction of column for top floats. ..... \topfractionL
rule between double-column floats and text. ..... \dblfigruleL
space between double-column floats and text. ..... \dbltextfloatsepL
place rule between top floats and text. ..... \topfigruleL
space between floats and the text. ..... \textfloatsepL
math delimiter: left floor bracket (⌊). ..... \lfloor
math delimiter: right floor (⌋). ..... \rfloor
flush all insertions and eject to a new page. \supereject
flush figures and start a new page. ..... \clearpageL
new right-hand page. flush figures and tables and start a \cleardoublepageL
flush insertions and eject to a new page. \dosupereject
end flush left environment. ..... \endflushleftL
begin flush left environment. ..... \flushleftL
set a formula flush left in display style. ..... \lefteqnL
flush lines left. ..... \raggedrightL
flush lines right. ..... \raggedleftL
end flush right environment. ..... \endflushrightL
begin flush right environment. ..... \flushrightL
environment. put text flush right in a column in tabbing ..... \'L
flush right text on a line. ..... \rightline
flush text left on a line. ..... \leftline
terminate LaTeX and flush the final page. ..... \stopL
global. the following macro definition or register setting is \global*
as parameters. the following macro may have multiple paragraphs \long*
another macro. the following macro must not be called from ... \outer*
create end-of-sentence space after following punctuation. ..... \@L
extra space above displays following short lines. ..... \abovedisplayshortskip*
extra space just below displays following short lines. ..... \belowdisplayshortskip*
expand the token following the next token. ..... \expandafter*
select bold extended font. ..... \bf
math mode calligraphic letters font. ..... \cal
8 point italic font. ..... \egtitL
8 point LaTeX symbol font. ..... \egtlyL
8 point math italic font. ..... \egtmiL
8 point Roman font. ..... \egtrmL
8 point math symbol font. ..... \egtsyL

11 point bold extended font. ..... \elvbf L
11 point italic font. ..... \elvit L
11 point LaTeX symbol font. ..... \elvly L
11 point math italic font. ..... \elvmi L
11 point Roman font. ..... \elvrm L
11 point sans serif font. ..... \elvsf L
11 point slanted font. ..... \elvsl L
11 point math symbol font. ..... \elvsy L
11 point typewriter font. ..... \elvtt L
emphasis font. ..... \em L
5 point boldface Roman font. ..... \fivebf
5 point math italic font. ..... \fivei
5 point Roman font. ..... \fiverm
5 point math symbol font. ..... \fivesy
5 point LaTeX symbol font. ..... \fivly L
5 point math italic font. ..... \fivmi L
5 point Roman font. ..... \fivrm L
5 point math symbol font. ..... \fivsy L
load a font. ..... \font *
gives the external file name for the given font. ..... \fontname *
14 point bold extended font. ..... \frtnbf L
14 point LaTeX symbol font. ..... \frtnly L
14 point math italic font. ..... \frtnmi L
14 point Roman font. ..... \frtnrm L
14 point math symbol font. ..... \frtnsy L
select largest available font. ..... \Huge L
hyphenation character for this font. ..... \hyphenchar *
select italic font. ..... \it
load a font. ..... \load L
math mode italic font. ..... \mit
select a font. ..... \newfont L
9 point bold extended font. ..... \ninbf L
9 point italic font. ..... \ninit L
9 point LaTeX symbol font. ..... \ninly L
9 point math italic font. ..... \ninmi L
9 point Roman font. ..... \ninrm L
9 point math symbol font. ..... \ninsy L
9 point typewriter font. ..... \nintt L
select Roman font. ..... \rm
select small caps font. ..... \sc L
7 point bold Roman font. ..... \sevenbf
7 point math italic font. ..... \seveni
7 point Roman font. ..... \sevenrm
7 point math symbol font. ..... \sevensy
7 point italic font. ..... \sevit L
7 point LaTeX symbol font. ..... \sevly L
7 point math italic font. ..... \sevmi L
7 point Roman font. ..... \sevrm L
7 point math symbol font. ..... \sevsy L
select sans serif font. ..... \sf L
6 point LaTeX symbol font. ..... \sixly L
6 point math italic font. ..... \sixmi L
6 point Roman font. ..... \sixrm L

6 point math symbol font. ..... \sixsy[L]
select slanted font. ..... \sl
17 point bold extended font. ..... \svtnbf[L]
17 point LaTeX symbol font. ..... \svtnly[L]
17 point math italic font. ..... \svtnmi[L]
17 point Roman font. ..... \svtnrm[L]
17 point math symbol font. ..... \svtnsy[L]
display a symbol from a font. ..... \symbol[L]
10 point bold font. ..... \tenbf
10 point circle font. ..... \tencirc[L]
10 point wide circle font. ..... \tencircw[L]
10 point math extension symbol font. ..... \tenex
10 point math italic font. ..... \teni
10 point text italic font. ..... \tenit
10 point line font. ..... \tenln[L]
10 point wide line font. ..... \tenlnw[L]
10 point LaTeX symbol font. ..... \tenly[L]
10 point math italic font. ..... \tenmi[L]
10 point Roman font. ..... \tenrm
10 point sans serif font. ..... \tensf[L]
10 point slanted font. ..... \tensl
10 point math symbol font. ..... \tensy
10 point typewriter font. ..... \tentt
select smallest defined font. ..... \tiny[L]
show characters not in the font. ..... \tracinglostchars[*]
select typewriter font. ..... \tt
12 point bold extended font. ..... \twlbf[L]
12 point italic font. ..... \twlit[L]
12 point LaTeX symbol font. ..... \twlly[L]
12 point math italic font. ..... \twlmi[L]
12 point Roman font. ..... \twlrm[L]
12 point sans serif font. ..... \twlsf[L]
12 point slanted font. ..... \twlsl[L]
12 point math symbol font. ..... \twlsy[L]
12 point typewriter font. ..... \twltt[L]
20 point bold extended font. ..... \twtybf[L]
20 point LaTeX symbol font. ..... \twtyly[L]
20 point math italic font. ..... \twtymi[L]
20 point Roman font. ..... \twtyrm[L]
20 point math symbol font. ..... \twtysy[L]
bold font family. ..... \bffam
italic font family. ..... \itfam
define a new font family. ..... \newfam
slanted font family. ..... \slfam
typewriter font family. ..... \ttfam
select font for non-math text. ..... \textfont[*]
select font for small math scripts. ..... \scriptfont[*]
select font for very small math scripts. . \scriptscriptfont[*]
select font four steps larger than normal size. ..... \huge[L]
default hyphen when a font is loaded. ..... \defaulthyphenchar[*]
suppress right justification of typewriter font lines. ..... \ttraggedright
define font magnification. ..... \magstep
select font one step larger than normal size. ..... \large[L]

big font size. ..... \big[L]
bigger font size. ..... \Big[L]
biggest font size. ..... \BIG[L]
select footnote font size. ..... \footnotesize[L]
select normal font size. ..... \normalsize[L]
select sub-subscript font size. ..... \scriptscriptsize[L]
select subscript or superscript font size. ..... \scriptsize[L]
select small font size. ..... \small[L]
bold font style. ..... \bf[L]
select font three steps larger than normal size. .... \LARGE[L]
select font two steps larger than normal size. ..... \Large[L]
a font with no characters. ..... \nullfont[*]
set a font-related parameter. ..... \fontdimen[*]
select bold math italic and symbol fonts. ..... \boldmath[L]
scratch control sequence used in preloading fonts. ..... \preloaded
unselect bold math italic and symbol fonts. ..... \unboldmath[L]
constructs a box with the page foot. ..... \makefootline
height of text, excluding head and foot. ..... \textheight[L]
page foot line. ..... \footline
height of page footer. ..... \footheight[L]
space between text and page footer. ..... \footskip[L]
create a footnote. ..... \footnote
penalty for breaking between lines of a footnote. ..... \interfootnotelinepenalty
select footnote font size. ..... \footnotesize[L]
place a footnote in a caption or other vertical list. \vfootnote
insertion class for footnote inserts. ..... \footins
ensure footnote line separation. ..... \footstrut
insert a footnote mark without text. ..... \footnotemark[L]
produces the footnote number. ..... \thefootnote[L]
footnote separation distance. ..... \footnotesep[L]
display counter as footnote symbol. ..... \fnsymbol[L]
produce footnote text without a mark. ..... \footnotetext[L]
add footnote to title page. ..... \thanks[L]
space between main text and footnotes. ..... \footins[L]
define the rule separating a page and footnotes. ..... \footnoterule
interline penalty for footnotes. ..... \interfootnotelinepenalty[L]
macro to draw the rule separating footnotes from text. ..... \footnoterule[L]
math symbol: for-all quantifier ($\forall$). ..... \forall
convert a numeric register to displayable form. ..... \the[*]
start a new page in single-column format. ..... \onecolumn[L]
start a new page in double-column format. ..... \twocolumn[L]
terminate TEX and write a format file: INITEX only. ..... \dump[*]
begin theorem with special format in math environment. ..... \proclaim
name of current TEX format package. ..... \fmtname
version of current TEX format package. ..... \fmtversion
where text will be inserted when the page is formatted. define ..... \insert[*]
colon in a math formula. ..... \colon
create a zero-height hbox with the width of a formula. ..... \hphantom
horizontal brace over a math formula. ..... \overbrace
left arrow over a math formula. ..... \overleftarrow
draw a line over a formula. ..... \overline[*]
right arrow over a math formula. ..... \overrightarrow
use the space taken by a formula. ..... \phantom

specified root of a formula. ..... \root
square root of a formula. ..... \sqrt
horizontal brace under a math formula. ..... \underbrace
draw a line under a formula. ..... \underline*
a zero-width vbox the height and depth of a formula. create ..... \vphantom
choose a math formula based on the current style. ..... \mathchoice*
set a formula flush left in display style. ..... \lefteqn[L]
create a formula with zero height. ..... \smash
medium space in math formulas. ..... \medmuskip*
thick space in math formulas. ..... \thickmuskip*
thin space in math formulas. ..... \thinmuskip*
display a stack of formulas without alignment. ..... \displaylines
expand, then ignore tokens until a non-space is found. read, ... \ignorespaces*
select font four steps larger than normal size. ..... \huge[L]
current value of the fourth-level item counter. ..... \theenumiv[L]
mark denoting fourth-level items. ..... \labelitemiv[L]
width of left margin in fourth-level list. ..... \leftmarginiv[L]
generate a fraction. ..... \frac[L]
fraction of column for bottom floats. \bottomfraction[L]
fraction of column for top floats. ..... \topfraction[L]
floats. fraction of two-column page for top \dbltopfraction[L]
fraction with a rule. ..... \over*
fraction with rule and given delimiters. \overwithdelims*
fraction with rule thickness. ..... \above*
delimiters. fraction with specified rule and .... \abovewithdelims*
fraction without a rule with braces. ..... \brace
fraction without a rule with brackets. ..... \brack
fraction without a rule with parentheses. ... \choose
fraction without rule. ..... \atop*
delimiters. fraction without rule with given .... \atopwithdelims*
protect fragile commands and moving arguments. .. \protect[L]
math symbol: imaginary, Fraktur I ($\Im$). ..... \Im
math symbol: real, Fraktur R ($\Re$). ..... \Re
create and frame a box. ..... \fbox[L]
create and frame a box, with positioning. ..... \framebox[L]
put a frame around some text. ..... \frame[L]
between a box and its contents in \fbox and \framebox. space ..... \fboxsep[L]
thickness of rule surrounding framed box. ..... \fboxrule[L]
math relation: frown ($\frown$). ..... \frown
math function: arc cosine. ..... \arccos
math function: arc sine. ..... \arcsin
math function: arc tangent. ..... \arctan
math function: arg. ..... \arg
math function: cosecant. ..... \csc
math function: cosine. ..... \cos
math function: cotangent. ..... \cot
math function: degree of a polynomial (deg). ..... \deg
math function: det. ..... \det
math function: dim. ..... \dim
math function: exp. ..... \exp
math function: gcd. ..... \gcd
math function: hom. ..... \hom
math function: hyperbolic cosine. ..... \cosh

math function: hyperbolic cotangent. ..... \coth
math function: hyperbolic sine. ..... \sinh
math function: hyperbolic tangent. ..... \tanh
math function: inf. ..... \inf
math function: ker. ..... \ker
math function: lg. ..... \lg
math function: lim. ..... \lim
math function: limit infimum (*liminf*). ..... \liminf
math function: limit supremum (*limsup*). ..... \limsup
math function: ln. ..... \ln
math function: log. ..... \log
math function: max. ..... \max
math function: min. ..... \min
math function: mod within parentheses ((mod)). \pmod
math function: probability (Pr). ..... \Pr
math function: secant. ..... \sec
math function: sine. ..... \sin
math function: sup. ..... \sup
math function: tangent. ..... \tan
math Greek letter: gamma (γ). ..... \gamma
math Greek letter: capital gamma (Γ). ..... \Gamma
math function: gcd. ..... \gcd
generate a fraction. ..... \frac L
generate a list of figures. ..... \listoffigures L
generate a list of tables. ..... \listoftables L
columns. generate a matrix labeled on rows and \bordermatrix
generate a matrix with a left brace delimiter. \cases
generate a matrix with parentheses delimiters. \pmatrix
generate a matrix without delimiters. ..... \matrix
generate a short amount of verbatim text. .. \verb L
generate a table of contents. ..... \tableofcontents L
generate an in-text citation of a reference. .. \cite L
German letter: sharp s (ß). ..... \ss
math relation: gets ($\leftarrow$). ..... \gets
token. give a token list defining the semantics of a . \meaning *
following macro definition or register setting is global. the ..... \global *
define a global macro with expanded replacement text. \xdef *
set global page style. ..... \pagestyle L
override \global specifications. ..... \globaldefs *
define a macro globally. ..... \gdef *
write a glossary entry. ..... \glossary L
enable glossary processing. ..... \makeglossary L
amount of glue shrinkage in current page. ..... \pageshrink *
amount of glue stretch in current page. ..... \pagestretch *
grave accent (è). ..... \`
math accent: grave ($\grave{x}$). ..... \grave
math relation: much greater ($\gg$). ..... \gg
math relation: greater or equal ($\geq$). ..... \ge
math relation: greater or equal ($\geq$). ..... \geq
math Greek letter: alpha (α). ..... \alpha
math Greek letter: beta (β). ..... \beta
math Greek letter: capital delta (Δ). ..... \Delta
math Greek letter: capital gamma (Γ). ..... \Gamma

math Greek letter: capital lambda (Λ). ..... \Lambda
math Greek letter: capital omega (Ω). ..... \Omega
math Greek letter: capital phi (Φ). ..... \Phi
math Greek letter: capital pi (Π). ..... \Pi
math Greek letter: capital psi (Ψ). ..... \Psi
math Greek letter: capital sigma (Σ). ..... \Sigma
math Greek letter: capital theta (Θ). ..... \Theta
math Greek letter: capital upsilon (Υ). ..... \Upsilon
math Greek letter: capital xi (Ξ). ..... \Xi
math Greek letter: chi (χ). ..... \chi
math Greek letter: delta (δ). ..... \delta
math Greek letter: epsilon (ϵ). ..... \epsilon
math Greek letter: eta (η). ..... \eta
math Greek letter: gamma (γ). ..... \gamma
math Greek letter: kappa (κ). ..... \kappa
math Greek letter: lambda (λ). ..... \lambda
math Greek letter: mu (μ). ..... \mu
math Greek letter: nu (ν). ..... \nu
math Greek letter: omega (ω). ..... \omega
math Greek letter: phi (ϕ). ..... \phi
math Greek letter: pi (π). ..... \pi
math Greek letter: psi (ψ). ..... \psi
math Greek letter: rho (ρ). ..... \rho
math Greek letter: sigma (σ). ..... \sigma
math Greek letter: tau (τ). ..... \tau
math Greek letter: theta (θ). ..... \theta
math Greek letter: upsilon (υ). ..... \upsilon
math Greek letter: variant epsilon (ε). ..... \varepsilon
math Greek letter: variant phi (φ). ..... \varphi
math Greek letter: variant pi (ϖ). ..... \varpi
math Greek letter: variant rho (ϱ). ..... \varrho
math Greek letter: variant sigma (ς). ..... \varsigma
math Greek letter: variant theta (ϑ). ..... \vartheta
math Greek letter: xi (ξ). ..... \xi
math Greek letter: zeta (ζ). ..... \zeta
begin a group. ..... \begingroup*
begin a group. ..... \bgroup
end a group. ..... \egroup
end a group. ..... \endgroup*
show unassignments when groups end. ..... \tracingrestores*
ensure a \cr in \halign. ..... \crcr*
end a line in \halign aligned text. ..... \cr*
field separator in \halign or \valign. ..... &*
insert unaligned material in \halign or \valign. ..... \noalign*
start an \halign with \tabskip initialized to zero. . \ialign
hanging indent of a paragraph. ..... \@hangfrom[L]
set hanging indentation. ..... \hangindent*
display an item without hanging indentation. ..... \textindent
number of lines. hanging indentation changes after specified \hangafter*
math symbol: left harpoon down ($\leftharpoondown$). ..... \leftharpoondown
math symbol: right harpoon down ($\rightharpoondown$). ..... \rightharpoondown
math symbol: right left harpoon ($\rightleftharpoons$). ..... \rightleftharpoons
math symbol: left harpoon up ($\leftharpoonup$). ..... \leftharpoonup

math symbol: right harpoon up ($\rightharpoonup$). ..... \rightharpoonup
math accent: hat ($\hat{x}$). ..... \hat
math accent: wide hat ($\widehat{x}$). ..... \widehat
pound, hatch mark, sharp sign, octothorpe (#). .... \#
math symbol: Planck's constant or h-bar ($\hbar$). ..... \hbar
width of a paragraph or \hbox. ..... \hsize*
an empty hbox. ..... \null
un-box an hbox and add it to the horizontal list. ..... \unhbox*
un-box a copy of an hbox and add it to the horizontal list. ..... \unhcopy*
tokens to insert when an hbox begins. ..... \everyhbox*
limit for bad hbox errors. ..... \hbadness*
maximum overrun before overfull hbox messages occur. ..... \hfuzz*
store an hbox or vbox in a box register. ..... \setbox*
create a zero-height hbox with the width of a formula. ..... \hphantom
height of page header. ..... \headheight L
constructs a box with the page header. ..... \makeheadline
space between page header and text. ..... \headsep L
produces current left page heading. ..... \leftmark L
produces current right page heading. ..... \rightmark L
set heading for right pages. ..... \markright L
set headings for left and right pages. ..... \markboth L
math symbol: heart suit ($\heartsuit$). ..... \heartsuit
justify page bottoms to the same height. ..... \flushbottom L
justify page bottoms to the same height. ..... \normalbottom
put page contents in a box of the proper height. ..... \pagebody
desired page height. ..... \pagegoal*
justify page bottoms to their natural height. ..... \raggedbottom L
create a formula with zero height. ..... \smash
create a zero-width vbox the height and depth of a formula. ..... \vphantom
math strut with height and depth of parentheses. ..... \mathstrut
height of a box. ..... \ht*
height of page footer. ..... \footheight L
height of page header. ..... \headheight L
natural height of page so far. ..... \pagetotal*
height of text, excluding head and foot. . \textheight L
height of text on a page or \vbox. ..... \vsize*
help message to display if user asks for help. ..... \errhelp*
set @ non-alphabetic to hide internal commands. ..... \makeatother L
math function: hom. ..... \hom
math symbol: hook left arrow ($\hookleftarrow$). ..... \hookleftarrow
math symbol: left hook ($\lhook$). ..... \lhook
math operator: logical not, hook ($\neg$). ..... \lnot
math symbol: right hook ($\rhook$). ..... \rhook
math symbol: hook right arrow ($\hookrightarrow$). ..... \hookrightarrow
test for a horizontal box. ..... \ifhbox*
lower left piece of a horizontal brace. ..... \braceld
upper left piece of a horizontal brace. ..... \bracelu
lower right piece of a horizontal brace. ..... \bracerd
upper right piece of a horizontal brace. ..... \braceru
horizontal brace over a math formula. .... \overbrace
horizontal brace under a math formula. . \underbrace
default horizontal kern character to position accents. \defaultskewchar*
horizontal kern to position accents. ..... \skewchar*

environments.
un-box an hbox and add it to the
un-box a copy of an hbox and add it to the
test for
switch to
create a box with
produce a
breakable small
large breakable
breakable medium
unbreakable small
infinitely stretchable
more infinitely stretchable
cancel infinitely stretchable
create some
add
skip
infinitely stretchable and shrinkable
unbreakable tiny negative math mode
unbreakable small
insert
define
long
math function:
math function:
math function:
math function:
discretionary
penalty for line break after explicit
penalty for line break after discretionary
default
penalty if page break after
letters. positive if
current language used for
define a new language to be used for
specify language to be used for
badness tolerance after
word. minimum number of characters after
word. minimum number of characters before
insert words into
badness tolerance before
define a set of
show
alternative to an
end of an
define a new
separate cases in an
read, expand, then
math symbol:
perform a \read or \write
post-processing.

horizontal line in array and tabular ..... \hline[L]
horizontal list. ..... \unhbox*
horizontal list. ..... \unhcopy*
horizontal mode. ..... \ifhmode*
horizontal mode from vertical mode. .... \leavevmode
horizontal mode material. ..... \hbox*
horizontal offset of a page. ..... \hoffset*
horizontal rule. ..... \hrule*
horizontal skip. ..... \enskip
horizontal skip. ..... \qquad
horizontal skip. ..... \quad
horizontal space. ..... \enspace
horizontal space. ..... \hfil*
horizontal space. ..... \hfill*
horizontal space. ..... \hfilneg*
horizontal space. ..... \hglue
horizontal space. ..... \hskip*
horizontal space. ..... \hspace[L]
horizontal space. ..... \hss*
horizontal space. ..... \negthinspace
horizontal space. ..... \thinspace
horizontal space in math mode. ..... \mskip*
horizontal tabs. ..... \settabs
Hungarian umlaut accent (ő). ..... \H
hyperbolic cosine. ..... \cosh
hyperbolic cotangent. ..... \coth
hyperbolic sine. ..... \sinh
hyperbolic tangent. ..... \tanh
hyphen. ..... \-*
hyphen. ..... \exhyphenpenalty*
hyphen. ..... \hyphenpenalty*
hyphen when a font is loaded. .. \defaulthyphenchar*
hyphenated line. ..... \brokenpenalty*
hyphenating words beginning with capital .. \uchyph*
hyphenation. ..... \language[3]
hyphenation. ..... \newlanguage[3]
hyphenation. ..... \setlanguage[3]
hyphenation. ..... \tolerance*
hyphenation at the end of a .. \righthyphenposition[3]
hyphenation at the start of a .. \lefthyphenposition[3]
hyphenation character for this font. ..... \hyphenchar*
hyphenation dictionary. ..... \hyphenation*
hyphenation is attempted. ..... \pretolerance*
hyphenation patterns. ..... \patterns*
hyphenations of given words. ..... \showhyphens
\if. ..... \else*
\if clause. ..... \fi*
\if command. ..... \newif
\ifcase. ..... \or*
ignore tokens until a non-space is found. \ignorespaces*
imaginary, Fraktur I (ℑ). ..... \Im
immediately. ..... \immediate*
include balanced text in DVI file for ..... \special*

enable only specific
amount by which delimiters can fail to span
read a file unless disabled by
\contentsline command.
demerits for adjacent
\parindent.

environment.
hanging
paragraph by \parindent.
paragraphs in a list environment.
set hanging
start a paragraph without
define paragraph
display an item without hanging
of lines. hanging

equation.
start a paragraph
environment.
amount of extra space between entries in an
second-level item in an
third-level item in an
enable
create an
en entry in a file of
math function:
math function: limit
space.
space.

more
cancel

more
cancel
math symbol:

terminate TEX and write a format file:
start an \halign with \tabskip
begin a tabbed line in an
define an
finish processing
pause for normal errors while processing TEX
open a file for
close an
name of the principal
allocate a new

\include commands. ..... \includeonly L
included material. ..... \delimitershortfall *
\includeonly. ..... \include L
includes the section number in a ..... \numberline L
incompatible lines. ..... \adjdemerits *
increase left and right margins by ..... \narrower
increase line separation in math mode. ..... \openup
increment a counter. ..... \addtocounter L
increment a counter. ..... \stepcounter L
increment and reference a counter. . \refstepcounter L
increment the value of a length command. \addtolength L
indent before the label in a list ..... \itemindent L
indent of a paragraph. ..... \@hangfrom L
indent second and subsequent lines in a .... \hang
indent second and subsequent ..... \listparindent L
indentation. ..... \hangindent *
indentation. ..... \noindent *
indentation. ..... \parindent *
indentation. ..... \textindent
indentation changes after specified number \hangafter *
indentation of display equations. ..... \mathindent L
indentation of line for displayed ..... \displayindent *
indented \parindent. ..... \indent *
indents left margin one tab stop in tabbing . \+ L
index. ..... \indexspace L
index. ..... \subitem L
index. ..... \subsubitem L
index creation. ..... \makeindex L
index entry. ..... \index L
index terms. ..... \indexentry L
inf. ..... \inf
infimum ($liminf$). ..... \liminf
infinitely stretchable and shrinkable horizontal \hss *
infinitely stretchable and shrinkable vertical \vss *
infinitely stretchable horizontal space. ..... \hfil *
infinitely stretchable horizontal space. ..... \hfill *
infinitely stretchable horizontal space. ..... \hfilneg *
infinitely stretchable space. ..... \stretch L
infinitely stretchable vertical space. ..... \vfil *
infinitely stretchable vertical space. ..... \vfill *
infinitely stretchable vertical space. ..... \vfilneg *
infinity (∞). ..... \infty
inhibit a page break over a region. ..... \samepage L
INITEX only. ..... \dump *
initialized to zero. ..... \ialign
inner environment. ..... \tabalign
inner math subformula. ..... \mathinner *
input. ..... \bye
input. ..... \errorstopmode *
input. ..... \openin *
input file. ..... \closein *
input file. ..... \jobname *
input file. ..... \newread

stop reading current input file at the end of the current line. .... \endinput*
character placed at the right end of an input line. ..... \endlinechar*
verbatim line breaks in input text. ..... \obeylines
verbatim spaces in input text. ..... \obeyspaces
process input without displaying errors. ..... \batchmode*
process TEX input without pausing for normal errors. \scrollmode*
process input without stopping for errors. ..... \nonstopmode*
end of an insert. ..... \endinsert
insert a footnote mark without text. .. \footnotemarkL
completed. insert a token after the current group is . \aftergroup*
assignment command. insert a token after the next ..... \afterassignment*
insert a whole page. ..... \pageinsert
tokens to insert after every \cr or nonredundant \crcr. \everycr*
insert at current position in page. ..... \midinsert
insert horizontal space in math mode. ..... \mskip*
allocate a new insert register. ..... \newinsert
insert text at the top of the page. ..... \topinsert
\valign. insert unaligned material in \halign or .... \noalign*
insert vertical material into a paragraph. ... \vadjust*
tokens to insert when a paragraph begins. ..... \everypar*
tokens to insert when a vbox begins. ..... \everyvbox*
tokens to insert when an hbox begins. ..... \everyhbox*
tokens to insert when display math begins. ..... \everydisplay*
tokens to insert when math in text begins. ..... \everymath*
tokens to insert when the job begins. ..... \everyjob*
insert words into hyphenation dictionary. \hyphenation*
define where text will be inserted when the page is formatted. ..... \insert*
insertion class for footnote inserts. ..... \footins
insertion class for inserts at the top of a page. \topins
flush insertions and eject to a new page. .... \dosupereject
flush all insertions and eject to a new page. ..... \supereject
sum of penalties for split insertions on the page. ..... \insertpenalties*
penalty for insertions that are split. ..... \floatingpenalty*
insertion class for footnote inserts. ..... \footins
insertion class for inserts at the top of a page. ..... \topins
select one of several entries determined by an integer. ..... \ifcase*
test for odd integer. ..... \ifodd*
test two integers. ..... \ifnum*
math operator: integral ($\int$). ..... \int
math operator: contour integral ($\oint$). ..... \oint
math operator: small integral ($\int$). ..... \smallint
enable BIBTEX bibliography interface. ..... \bibliographyL
footnotes. interline penalty for .... \interfootnotelinepenaltyL
box. suppress interline space before next vertical \nointerlineskip
set @ alphabetic to access internal commands. ..... \makeatletterL
set @ non-alphabetic to hide internal commands. ..... \makeatotherL
test for an internal mode. ..... \ifinner*
long arrows. internal Plain TEX command to piece together \joinrel
math text symbols. internal Plain TEX operation to define .. \mathhexbox
internal Plain TEX space used for centering. \centering
math operator: intersection or cap ($\cap$). ..... \cap
generate an in-text citation of a reference. ..... \citeL
use in-text style for math. ..... \textstyle*

math symbol: iota (ι). ..... \iota
select bold math italic and symbol fonts. ..... \boldmath L
unselect bold math italic and symbol fonts. ..... \unboldmath L
italic correction. ..... \/ *
8 point italic font. ..... \egtit L
8 point math italic font. ..... \egtmi L
11 point italic font. ..... \elvit L
11 point math italic font. ..... \elvmi L
5 point math italic font. ..... \fivei
5 point math italic font. ..... \fivmi L
14 point math italic font. ..... \frtnmi L
select italic font. ..... \it
math mode italic font. ..... \mit
9 point italic font. ..... \ninit L
9 point math italic font. ..... \ninmi L
7 point math italic font. ..... \seveni
7 point italic font. ..... \sevit L
7 point math italic font. ..... \sevmi L
6 point math italic font. ..... \sixmi L
17 point math italic font. ..... \svtnmi L
10 point math italic font. ..... \teni
10 point text italic font. ..... \tenit
10 point math italic font. ..... \tenmi L
12 point italic font. ..... \twlit L
12 point math italic font. ..... \twlmi L
20 point math italic font. ..... \twtymi L
italic font family. ..... \itfam
display an item. ..... \item
space between a label and text of a list item. ..... \labelsep L
math spacing of a closing delimiter for the next item. select ..... \mathclose *
math spacing of an opening delimiter for the next item. select ..... \mathopen *
space between first list item and preceding paragraph. ..... \topsep L
current value of the third-level item counter. ..... \theenumiii L
current value of the second-level item counter. ..... \theenumii L
current value of the first-level item counter. ..... \theenumi L
current value of the fourth-level item counter. ..... \theenumiv L
current value of the sixth-level item counter. ..... \theenumvi L
current value of the fifth-level item counter. ..... \theenumv L
space between paragraphs within an item in a list environment. ..... \parsep L
second-level item in an index. ..... \subitem L
third-level item in an index. ..... \subsubitem L
create item label for a list environment. ..... \makelabel L
place balanced text into a mark item on the current list. ..... \mark *
append a discretionary item to the current list. ..... \discretionary *
reference a BibTeX item without citation. ..... \nocite L
display an item without hanging indentation. ..... \textindent
penalty between list items. ..... \@itempenalty L
mark denoting third-level items. ..... \labelitemiii L
mark denoting second-level items. ..... \labelitemii L
mark denoting first-level items. ..... \labelitemi L
mark denoting fourth-level items. ..... \labelitemiv L
mark denoting sixth-level items. ..... \labelitemvi L
mark denoting fifth-level items. ..... \labelitemv L

create a box with a single column of items. ..... \shortstack[L]
space between successive items in a list environment. ..... \itemsep[L]
maximum boxed items shown at a given depth. ..... \showboxbreadth*
associate a counter with an item-type command. ..... \usecounter[L]
math symbol: dotless j ($\jmath$). ..... \jmath
dotless j letter (ȷ). ..... \j
math symbol: join ($\bowtie$). ..... \Join[L]
math join operator: large V ($\bigvee$). ..... \bigvee
math binary operator: join or V ($\vee$). ..... \vee
suppress bottom justification of page text. ..... \raggedbottom
suppress right justification of paragraph lines. ..... \raggedright
suppress right justification of typewriter font lines. . \ttraggedright
justify page bottoms to the same height. \flushbottom[L]
justify page bottoms to the same height. \normalbottom
height. justify page bottoms to their natural . \raggedbottom[L]
math Greek letter: kappa (κ). ..... \kappa
math function: ker. ..... \ker
kern a given distance. ..... \kern*
default horizontal kern character to position accents. \defaultskewchar*
kern in math mode. ..... \mkern*
remove a kern just added to the current list. ..... \unkern*
fetch last kern off the current list. ..... \lastkern*
horizontal kern to position accents. ..... \skewchar*
define kerning around math in text. ..... \mathsurround*
math symbol: small script L (ℓ). ..... \ell
Polish letter: slashed L (ł). ..... \l
Polish letter: upper-case slashed L (Ł). ..... \L
define a cross reference label. ..... \label[L]
page number of a cross reference label. ..... \pageref[L]
refer to a cross reference label. ..... \ref[L]
space between a label and text of a list item. ..... \labelsep[L]
create item label for a list environment. ..... \makelabel[L]
indent before the label in a list environment. ..... \itemindent[L]
label width in a list environment. ..... \labelwidth[L]
generate a matrix labeled on rows and columns. ..... \bordermatrix
start a labeled paragraph. ..... \paragraph[L]
start a labeled sub-level paragraph. ..... \subparagraph[L]
math Greek letter: lambda (λ). ..... \lambda
math Greek letter: capital lambda (Λ). ..... \Lambda
define a new language to be used for hyphenation. .. \newlanguage[3]
specify language to be used for hyphenation. .. \setlanguage[3]
current language used for hyphenation. ..... \language[3]
vertical skip a large amount. ..... \bigskip[L]
large breakable horizontal skip. ..... \qquad
math operator: large cap ($\bigcap$). ..... \bigcap
math operator: large circle ($\bigcirc$). ..... \bigcirc
math operator: large circle with dot ($\bigodot$). ..... \bigodot
math operator: large circle with plus ($\bigoplus$). ..... \bigoplus
math operator: large circle with times ($\bigotimes$). ..... \bigotimes
math operator: large co-product ($\coprod$). ..... \coprod
math operator: large cup ($\bigcup$). ..... \bigcup
math operator: large down triangle ($\bigtriangledown$). ..... \bigtriangledown
define a large math operator. ..... \mathop*

restore default limit placement on large math operators. ..... \displaylimits*
math operator: large product ($\prod$). ..... \prod
math operator: large square cup ($\bigsqcup$). ..... \bigsqcup
math operator: large sum ($\sum$). ..... \sum
math operator: large U plus ($\biguplus$). ..... \biguplus
math operator: large up triangle ($\bigtriangleup$). ..... \bigtriangleup
math join operator: large V ($\bigvee$). ..... \bigvee
large vertical break. ..... \bigskip
large vertical space or a good page break. .. \bigbreak
math meet operator: large wedge ($\bigwedge$). ..... \bigwedge
select font four steps larger than normal size. ..... \huge L
select font one step larger than normal size. ..... \large L
select font three steps larger than normal size. ..... \LARGE L
select font two steps larger than normal size. ..... \Large L
select largest available font. ..... \Huge L
largest permissible dimension. ..... \maxdimen
fetch last box off the current list. ..... \lastbox*
depth of the last box on the vertical list. ..... \prevdepth*
mark text last encountered in a split box. ..... \splitbotmark*
mark text last encountered on page just boxed. ..... \botmark*
fetch last kern off the current list. ..... \lastkern*
space at the end of the last line of a paragraph. ..... \parfillskip*
number of lines in the last paragraph. ..... \prevgraf*
fetch last penalty off the current list. ..... \lastpenalty*
number of output routine calls since last \shipout. ..... \deadcycles*
fetch last skip off the current list. ..... \lastskip*
remove last skip on the list. ..... \removelastskip
terminate LaTeX and flush the final page. ..... \stop L
LaTeX logo. ..... \LaTeX L
8 point LaTeX symbol font. ..... \egtly L
11 point LaTeX symbol font. ..... \elvly L
5 point LaTeX symbol font. ..... \fivly L
14 point LaTeX symbol font. ..... \frtnly L
9 point LaTeX symbol font. ..... \ninly L
7 point LaTeX symbol font. ..... \sevly L
6 point LaTeX symbol font. ..... \sixly L
17 point LaTeX symbol font. ..... \svtnly L
10 point LaTeX symbol font. ..... \tenly L
12 point LaTeX symbol font. ..... \twlly L
20 point LaTeX symbol font. ..... \twtyly L
an ellipsis, equivalent to \ldots in math mode. ..... \dots
math symbol: leads to ($\leadsto$). ..... \leadsto L
create a zero-width box with text to the left. ..... \llap
add a box to the vertical list shifted left. ..... \moveleft*
flush lines left. ..... \raggedright L
math symbol: long left and right arrow ($\longleftrightarrow$). .... \longleftrightarrow
increase left and right margins by \parindent. ..... \narrower
set headings for left and right pages. ..... \markboth L
math delimiter: left angle bracket ($\langle$). ..... \langle
fill a space with a left arrow. ..... \leftarrowfill
math symbol: hook left arrow ($\hookleftarrow$). ..... \hookleftarrow
math symbol: left arrow ($\leftarrow$). ..... \leftarrow
math symbol: long left arrow ($\longleftarrow$). ..... \longleftarrow

left arrow over a math formula. ..... \overleftarrow
generate a matrix with a left brace delimiter. ..... \cases
math delimiter: left bracket ([). ..... \lbrack
distance left by \' command between tabbing fields. \tabbingsep L
math delimiter: left ceiling bracket (⌈). ..... \lceil
math delimiter: left curly brace ({). ..... \lbrace
begin a new math list with a left delimiter. ..... \left *
math symbol: left double arrow (⇐). ..... \Leftarrow
math symbol: long left double arrow (⟸). ..... \Longleftarrow
end flush left environment. ..... \endflushleft L
begin flush left environment. ..... \flushleft L
left equation number. ..... \leqno *
align a stack of equations with left equation numbers. ..... \leqalignno
math delimiter: left floor bracket (⌊). ..... \lfloor
math delimiter: left group (⎧). ..... \lgroup
math symbol: left half diamond (◁). ..... \lhd L
math symbol: underlined left half diamond (⊴). ..... \unlhd L
left hand margin on even pages. .... \evensidemargin L
left hand margin on odd pages. ..... \oddsidemargin L
math symbol: left harpoon down (↽). ..... \leftharpoondown
math symbol: right left harpoon (⇌). ..... \rightleftharpoons
math symbol: left harpoon up (↼). ..... \leftharpoonup
math symbol: left hook (◦). ..... \lhook
set a formula flush left in display style. ..... \lefteqn L
width of left margin in fifth-level list. ..... \leftmarginv L
width of left margin in first-level list. ..... \leftmargini L
width of left margin in fourth-level list. ..... \leftmarginiv L
width of left margin in second-level list. ..... \leftmarginii L
width of left margin in sixth-level list. ..... \leftmarginvi L
width of left margin in third-level list. ..... \leftmarginiii L
left margin of a list environment. ..... \leftmargin L
environment. unindents left margin one tab stop in tabbing ..... \- L
environment. indents left margin one tab stop in tabbing ..... \+ L
2.5-line left math delimiter. ..... \Biggl
2-line left math delimiter. ..... \biggl
1.5-line left math delimiter. ..... \Bigl
1-line left math delimiter. ..... \bigl
math symbol: left moustache (⎰). ..... \lmoustache
space to the left of a paragraph. ..... \leftskip *
flush text left on a line. ..... \leftline
produces current left page heading. ..... \leftmark L
lower left piece of a horizontal brace. ..... \braceld
upper left piece of a horizontal brace. ..... \bracelu
math symbol: left quote (‘). ..... \lq
math operator: left triangle (◁). ..... \triangleleft
math symbol: left-right arrow (↔). ..... \leftrightarrow
math symbol: left-right double arrow (⇔). ..... \Leftrightarrow
math symbol: long left-right double arrow (⟺). . \Longleftrightarrow
increment the value of a length command. ..... \addtolength L
define a new length command. ..... \newlength L
set a length command. ..... \setlength L
set a length command to width of text. ..... \settowidth L

	length of text preceding a display.	\predisplaysize*
math relation: much	less ($\ll$).	\ll
math relation:	less or equal ($\leq$).	\le
math relation:	less or equal ($\leq$).	\leq
display counter as lower-case	letter.	\alphL
display counter as upper-case	letter.	\AlphL
Scandinavian	letter: a with circle (å).	\aa
math Greek	letter: alpha (α).	\alpha
math Greek	letter: beta (β).	\beta
Scandinavian	letter: capital A with circle (Å).	\AA
math Greek	letter: capital delta (Δ).	\Delta
math Greek	letter: capital gamma (Γ).	\Gamma
math Greek	letter: capital lambda (Λ).	\Lambda
Norwegian	letter: capital O with slash (Ø).	\O
math Greek	letter: capital omega (Ω).	\Omega
math Greek	letter: capital phi (Φ).	\Phi
math Greek	letter: capital pi (Π).	\Pi
math Greek	letter: capital psi (Ψ).	\Psi
math Greek	letter: capital sigma (Σ).	\Sigma
math Greek	letter: capital theta (Θ).	\Theta
math Greek	letter: capital upsilon (Υ).	\Upsilon
math Greek	letter: capital xi (Ξ).	\Xi
math Greek	letter: chi (χ).	\chi
math Greek	letter: delta (δ).	\delta
math Greek	letter: epsilon (ϵ).	\epsilon
math Greek	letter: eta (η).	\eta
math Greek	letter: gamma (γ).	\gamma
dotless i	letter (ı).	\i
dotless j	letter (ȷ).	\j
math Greek	letter: kappa (κ).	\kappa
math Greek	letter: lambda (λ).	\lambda
math Greek	letter: mu (μ).	\mu
math Greek	letter: nu (ν).	\nu
Norwegian	letter: o with slash (ø).	\o
math Greek	letter: omega (ω).	\omega
math Greek	letter: phi (ϕ).	\phi
math Greek	letter: pi (π).	\pi
math Greek	letter: psi (ψ).	\psi
math Greek	letter: rho (ρ).	\rho
German	letter: sharp s (ß).	\ss
math Greek	letter: sigma (σ).	\sigma
Polish	letter: slashed L (ł).	\l
math Greek	letter: tau (τ).	\tau
math Greek	letter: theta (θ).	\theta
Polish	letter: upper-case slashed L (Ł).	\L
math Greek	letter: upsilon (υ).	\upsilon
math Greek	letter: variant epsilon (ε).	\varepsilon
math Greek	letter: variant phi (φ).	\varphi
math Greek	letter: variant pi (ϖ).	\varpi
math Greek	letter: variant rho (ϱ).	\varrho
math Greek	letter: variant sigma (ς).	\varsigma
math Greek	letter: variant theta (ϑ).	\vartheta
math Greek	letter: xi (ξ).	\xi

math Greek letter: zeta (ζ). ..... \zeta
if hyphenating words beginning with capital letters. positive ..... \uchyph*
math mode calligraphic letters font. ..... \cal
math function: lg. ..... \lg
ligature digraph symbol ae (æ). ..... \ae
ligature digraph symbol capital AE (Æ). ... \AE
ligature digraph symbol capital OE (Œ). ... \OE
ligature digraph symbol oe (œ). ..... \oe
math function: lim. ..... \lim
limit for bad hbox errors. ..... \hbadness*
limit for bad vbox errors. ..... \vbadness*
math function: limit infimum ($liminf$). ..... \liminf
operators. restore default limit placement on large math ..... \displaylimits*
math function: limit supremum ($limsup$). ..... \limsup
place math limits above and below math operators. .... \limits*
penalty if page break after hyphenated line. ..... \brokenpenalty*
center text in a line. ..... \centerline
current input file at the end of the current line. stop reading ..... \endinput*
character placed at the right end of an input line. ..... \endlinechar*
demerits for a penultimate broken line. ..... \finalhyphendemerits*
page foot line. ..... \footline
page head line. ..... \headline
flush text left on a line. ..... \leftline
width of the current line. ..... \linewidth[L]
flush right text on a line. ..... \rightline
create a rule or line. ..... \rule[L]
require strict line and page breaks. ..... \fussy[L]
accept looser line and page breaks. ..... \sloppy[L]
penalty for creating a widow line at top of page. ..... \widowpenalty*
penalty for creating a widow line before a display. ..... \displaywidowpenalty*
allow a line break. ..... \allowbreak
force a line break. ..... \break
encourage a line break. ..... \linebreak[L]
suppress a line break. ..... \nolinebreak[L]
permit a line break after a slash. ..... \slash
penalty for line break after binary operation. ..... \binoppenalty*
penalty for line break after discretionary hyphen. \hyphenpenalty*
penalty for line break after explicit hyphen. ... \exhyphenpenalty*
penalty for line break after math relation. ..... \relpenalty*
force a line break in a paragraph. ..... \\[L]
force a line break in a paragraph. ..... \newline[L]
verbatim line breaks in input text. ..... \obeylines
10 point line font. ..... \tenln[L]
10 point wide line font. ..... \tenlnw[L]
indentation of line for displayed equation. ..... \displayindent*
read a line from a file. ..... \read*
amount added to badness of every line in a paragraph. ..... \linepenalty*
line in a picture environment. ..... \line[L]
character that starts a new output line in a write statement. ..... \newlinechar*
begin a tabbed line in an inner environment. ..... \tabalign
begin a tabbed line in an outer environment. ..... \+
horizontal line in array and tabular environments. .... \hline[L]
vertical line in array and tabular environments. .... \vline[L]

multicolumn line in array or tabular environment. ..... \cline[L]
end a line in \halign aligned text. ..... \cr[*]
discard current line in tabbing environment. ..... \kill[L]
pause after each line is read from a file. ..... \pausing[*]
space at the end of the last line of a paragraph. ..... \parfillskip[*]
penalty if page break after first line of paragraph. ..... \clubpenalty[*]
prohibit a line or page break. ..... \nobreak
specify penalty for a line or page break. ..... \penalty[*]
draw a line over a formula. ..... \overline[*]
ensure footnote line separation. ..... \footstrut
increase line separation in math mode. ..... \openup
vertical strut to preserve line spacing. ..... \strut
set line spacing to normal values. ..... \normalbaselines
draw a line under a formula. ..... \underline[*]
create a box of current line width. ..... \line
show line-break calculations. ..... \tracingparagraphs[*]
extra space above displays following short lines. ..... \abovedisplayshortskip[*]
demerits for adjacent incompatible lines. ..... \adjdemerits[*]
normal space between lines. ..... \baselineskip[*]
extra space just below displays following short lines. ..... \belowdisplayshortskip[*]
declaration to center lines. ..... \centering[L]
demerits for consecutive broken lines. ..... \doublehyphendemerits[*]
extra space in badly-stretched lines. ..... \emergencystretch[3]
indentation changes after specified number of hanging lines. ..... \hangafter[*]
additional penalty for page break between lines. ..... \interlinepenalty[*]
turn off extra space between lines. ..... \offinterlineskip
suppress right justification of paragraph lines. ..... \raggedright
suppress right justification of typewriter font lines. ..... \ttraggedright
thick lines for lines and circles. ..... \thicklines[L]
thin lines for lines and circles. ..... \thinlines[L]
thick lines for lines and circles. ..... \thicklines[L]
thin lines for lines and circles. ..... \thinlines[L]
extra space between lines if \baselineskip isn't enough. ..... \lineskip[*]
force a change to the number of lines in a paragraph. ..... \looseness[*]
indent second and subsequent lines in a paragraph by \parindent. ..... \hang
minimum space between lines in a vertical list. ..... \lineskiplimit[*]
set width of lines in picture environment. ..... \linethickness[L]
number of lines in the last paragraph. ..... \prevgraf[*]
flush lines left. ..... \raggedright[L]
penalty for breaking between lines of a display. ..... \interdisplaylinepenalty
penalty for breaking between lines of a footnote. ..... \interfootnotelinepenalty
number of lines of context to be displayed in an error message. \errorcontextlines[3]
flush lines right. ..... \raggedleft[L]
value of normal \lineskip. ..... \normallineskip
value of normal \lineskiplimit. ..... \normallineskiplimit
penalty at the beginning of a list. ..... \@beginparpenalty[L]
append a discretionary item to the current list. ..... \discretionary[*]
terminate a \csname token list. ..... \endcsname[*]
penalty at the end of a list. ..... \@endparpenalty[L]
fetch last box off the current list. ..... \lastbox[*]
fetch last kern off the current list. ..... \lastkern[*]
fetch last penalty off the current list. ..... \lastpenalty[*]
fetch last skip off the current list. ..... \lastskip[*]

width of left margin in third-level list. ..... \leftmarginiii L
width of left margin in second-level list. ..... \leftmarginii L
width of left margin in first-level list. ..... \leftmargini L
width of left margin in fourth-level list. ..... \leftmarginiv L
width of left margin in sixth-level list. ..... \leftmarginvi L
width of left margin in fifth-level list. ..... \leftmarginv L
minimum space between lines in a vertical list. ..... \lineskiplimit *
balanced text into a mark item on the current list. place ..... \mark *
depth of the last box on the vertical list. ..... \prevdepth *
remove last skip on the list. ..... \removelastskip
right margin in a list. ..... \rightmargin L
un-box an hbox and add it to the horizontal list. ..... \unhbox *
a copy of an hbox and add it to the horizontal list. un-box ..... \unhcopy *
remove a kern just added to the current list. ..... \unkern *
remove a penalty just added to the current list. ..... \unpenalty *
remove a skip just added to the current list. ..... \unskip *
un-box a vbox and add it to the vertical list. ..... \unvbox *
a copy of a vbox and add it to the vertical list. un-box ..... \unvcopy *
create a centered vbox in a math list. ..... \vcenter *
place a footnote in a caption or other vertical list. ..... \vfootnote
give a token list defining the semantics of a token. ..... \meaning *
indent before the label in a list environment. ..... \itemindent L
start an entry in a list environment. ..... \item L
space between successive items in a list environment. ..... \itemsep L
label width in a list environment. ..... \labelwidth L
left margin of a list environment. ..... \leftmargin L
indent second and subsequent paragraphs in a list environment. ..... \listparindent L
create item label for a list environment. ..... \makelabel L
space between paragraphs within an item in a list environment. ..... \parsep L
space between a label and text of a list item. ..... \labelsep L
space between first list item and preceding paragraph. ..... \topsep L
penalty between list items. ..... \@itempenalty L
generate a list of figures. ..... \listoffigures L
generate a list of tables. ..... \listoftables L
produce a vertical list of the body of a page. ..... \pagecontents
an empty list of tokens. ..... \empty
adds an entry to the specified list or table. ..... \addcontentsline L
use a token list register. ..... \toks *
define a name for a token list register. ..... \toksdef *
add a box to the vertical list shifted left. ..... \moveleft *
add a box to the vertical list shifted right. ..... \moveright *
write a token list to a file. ..... \write *
begin a new math list with a left delimiter. ..... \left *
end a math list with a right delimiter. ..... \right *
show the current lists. ..... \showlists *
math function: ln. ..... \ln
load a font. ..... \font *
load a font. ..... \load L
default hyphen when a font is loaded. ..... \defaulthyphenchar *
math function: log. ..... \log
write to the log file only. ..... \wlog
math operator: logical and ($\wedge$). ..... \land
math operator: logical not, hook ($\neg$). ..... \lnot

math symbol: logical or (∨). ..... \lor
LaTeX logo. ..... \LaTeX L
"TeX" logo. ..... \TeX
begin a loop. ..... \loop
end of a \loop body. ..... \repeat
accept looser line and page breaks. ..... \sloppy L
current year of our Lord. ..... \year *
three low dots in math mode (...). ..... \ldots
lower a box a given distance. ..... \lower *
lower dot math symbol with special spacing. \ldotp
lower left piece of a horizontal brace. ..... \braceld
lower right piece of a horizontal brace. ..... \bracerd
translate balanced text to lower-case. ..... \lowercase *
lower-case code for a character. ..... \lccode *
display counter as lower-case letter. ..... \alph L
display counter as lower-case Roman numerals. ..... \roman L
convert a number to lower-case Roman numerals. ..... \romannumeral *
define a macro. ..... \def *
following macro must not be called from another macro. the ..... \outer *
the following macro definition or register setting is global. \global *
define a macro globally. ..... \gdef *
parameters. the following macro may have multiple paragraphs as .... \long *
the following macro must not be called from another macro. \outer *
footnotes from text. macro to draw the rule separating .... \footnoterule L
define a macro with expanded replacement text. .... \edef *
define a global macro with expanded replacement text. .... \xdef *
macron or bar accent (ō). ..... \=
show macros as they are expanded. ..... \tracingmacros *
define font magnification. ..... \magstep
use 11 point magnification. ..... \magstephalf
set the magnification for the document. ..... \magnification
magnification ratio times 1000. ..... \mag *
maximum depth of boxes on main pages. ..... \maxdepth *
space between main text and footnotes. ..... \footins L
math symbol: maps to char (ı). ..... \mapstochar
math symbol: long maps to (⟼). ..... \longmapsto
math symbol: maps to (↦). ..... \mapsto
right margin in a list. ..... \rightmargin L
width of left margin in fifth-level list. ..... \leftmarginv L
width of left margin in first-level list. ..... \leftmargini L
width of left margin in fourth-level list. ..... \leftmarginiv L
width of left margin in second-level list. ..... \leftmarginii L
width of left margin in sixth-level list. ..... \leftmarginvi L
width of left margin in third-level list. ..... \leftmarginiii L
left margin of a list environment. ..... \leftmargin L
left hand margin on even pages. ..... \evensidemargin L
left hand margin on odd pages. ..... \oddsidemargin L
unindents left margin one tab stop in tabbing environment. \- L
indents left margin one tab stop in tabbing environment. \+ L
produce a marginal note. ..... \marginpar L
distance between marginal note and text. ..... \marginparsep L
vertical space between marginal notes. ..... \marginparpush L
width of marginal notes. ..... \marginparwidth L

page. put marginal notes on normal side of .. \normalmarginpar[L]
page. put marginal notes on opposite side of \reversemarginpar[L]
increase left and right margins by \parindent. ..... \narrower
produce footnote text without a mark. ..... \footnotetext[L]
mark denoting fifth-level items. ..... \labelitemv[L]
mark denoting first-level items. ..... \labelitemi[L]
mark denoting fourth-level items. ..... \labelitemiv[L]
mark denoting second-level items. ..... \labelitemii[L]
mark denoting sixth-level items. ..... \labelitemvi[L]
mark denoting third-level items. ..... \labelitemiii[L]
place balanced text into a mark item on the current list. ..... \mark*
pound, hatch mark, sharp sign, octothorpe (#). ..... \#
box. mark text first encountered in a split \splitfirstmark*
boxed. mark text first encountered on page just .. \firstmark*
mark text last encountered in a split box. \splitbotmark*
boxed. mark text last encountered on page just .... \botmark*
subdivision. mark the beginning of a major ..... \beginsection
insert a footnote mark without text. ..... \footnotemark[L]
by which delimiters can fail to span included material. amount ..... \delimitershortfall*
create a box with horizontal mode material. ..... \hbox*
create a box with vertical mode material. ..... \vbox*
use in-text style for math. ..... \textstyle*
math accent: acute ($\acute{x}$). ..... \acute
math accent: bar ($\bar{x}$). ..... \bar
math accent: bar under ($\underline{x}$). ..... \b
math accent: breve ($\breve{x}$). ..... \breve
math accent: check ($\check{x}$). ..... \check
math accent: dot ($\dot{x}$). ..... \dot
math accent: double dot ($\ddot{x}$). ..... \ddot
math accent: grave ($\grave{x}$). ..... \grave
math accent: hat ($\hat{x}$). ..... \hat
math accent: tilde ($\tilde{x}$). ..... \tilde
math accent: vector ($\vec{x}$). ..... \vec
math accent: wide hat ($\widehat{x}$). ..... \widehat
math accent: wide tilde ($\widetilde{x}$). ..... \widetilde
tokens to insert when display math begins. ..... \everydisplay*
math binary operator: join or V ($\vee$). ..... \vee
math binary operator: meet or wedge ($\wedge$). . \wedge
math binary operator: wreath product ($\wr$). . \wr
define a name for a math character. ..... \mathchardef*
specify a math character code. ..... \mathchar*
set a math character's processing category type. \mathcode*
2.5-line left math delimiter. ..... \Biggl
2-line left math delimiter. ..... \biggl
2.5-line middle math delimiter. ..... \Biggm
2-line middle math delimiter. ..... \biggm
2.5-line right math delimiter. ..... \Biggr
2-line right math delimiter. ..... \biggr
1.5-line left math delimiter. ..... \Bigl
1-line left math delimiter. ..... \bigl
1.5-line middle math delimiter. ..... \Bigm
1-line middle math delimiter. ..... \bigm
1.5-line right math delimiter. ..... \Bigr

1-line right — math delimiter. ..... \bigr
math delimiter: backslash (\). ..... \backslash
math delimiter: double vertical bar (‖). .... \Vert
math delimiter: left angle bracket (⟨). ..... \langle
math delimiter: left bracket ([). ..... \lbrack
math delimiter: left ceiling bracket (⌈). ..... \lceil
math delimiter: left curly brace ({). ..... \lbrace
math delimiter: left floor bracket (⌊). ..... \lfloor
math delimiter: left group (⎧). ..... \lgroup
math delimiter: right angle bracket (⟩). .... \rangle
math delimiter: right bracket (]). ..... \rbrack
math delimiter: right ceiling bracket (⌉). ... \rceil
math delimiter: right curly brace (}). ..... \rbrace
math delimiter: right floor (⌋). ..... \rfloor
math delimiter: right group (⎫). ..... \rgroup
1.5-line — math delimiter size. ..... \Big
1-line — math delimiter size. ..... \big
2.5-line — math delimiter size. ..... \Bigg
2-line — math delimiter size. ..... \bigg
math delimiter: up-and-down arrow (↕). \updownarrow
math delimiter: upward arrow (↑). ..... \uparrow
math delimiter: vertical bar (|). ..... \vert
begin theorem with special format in — math environment. ..... \proclaim
10 point — math extension symbol font. ..... \tenex
place an accent over the next — math field. ..... \mathaccent*
put a — math field under a radical. ..... \radical*
colon in a — math formula. ..... \colon
horizontal brace over a — math formula. ..... \overbrace
left arrow over a — math formula. ..... \overleftarrow
right arrow over a — math formula. ..... \overrightarrow
horizontal brace under a — math formula. ..... \underbrace
choose a — math formula based on the current style. \mathchoice*
medium space in — math formulas. ..... \medmuskip*
thick space in — math formulas. ..... \thickmuskip*
thin space in — math formulas. ..... \thinmuskip*
math function: arc cosine. ..... \arccos
math function: arc sine. ..... \arcsin
math function: arc tangent. ..... \arctan
math function: arg. ..... \arg
math function: cosecant. ..... \csc
math function: cosine. ..... \cos
math function: cotangent. ..... \cot
math function: degree of a polynomial (deg). \deg
math function: det. ..... \det
math function: dim. ..... \dim
math function: exp. ..... \exp
math function: gcd. ..... \gcd
math function: hom. ..... \hom
math function: hyperbolic cosine. ..... \cosh
math function: hyperbolic cotangent. ..... \coth
math function: hyperbolic sine. ..... \sinh
math function: hyperbolic tangent. ..... \tanh

((mod)).

math function: inf. ..... \inf
math function: ker. ..... \ker
math function: lg. ..... \lg
math function: lim. ..... \lim
math function: limit infimum ($liminf$). .... \liminf
math function: limit supremum ($limsup$). .. \limsup
math function: ln. ..... \ln
math function: log. ..... \log
math function: max. ..... \max
math function: min. ..... \min
math function: mod within parentheses .... \pmod
math function: probability (Pr). ..... \Pr
math function: secant. ..... \sec
math function: sine. ..... \sin
math function: sup. ..... \sup
math function: tangent. ..... \tan
math Greek letter: alpha (α). ..... \alpha
math Greek letter: beta (β). ..... \beta
math Greek letter: capital delta (Δ). ..... \Delta
math Greek letter: capital gamma (Γ). ..... \Gamma
math Greek letter: capital lambda (Λ). ..... \Lambda
math Greek letter: capital omega (Ω). ..... \Omega
math Greek letter: capital phi (Φ). ..... \Phi
math Greek letter: capital pi (Π). ..... \Pi
math Greek letter: capital psi (Ψ). ..... \Psi
math Greek letter: capital sigma (Σ). ..... \Sigma
math Greek letter: capital theta (Θ). ..... \Theta
math Greek letter: capital upsilon (Υ). ..... \Upsilon
math Greek letter: capital xi (Ξ). ..... \Xi
math Greek letter: chi (χ). ..... \chi
math Greek letter: delta (δ). ..... \delta
math Greek letter: epsilon (ϵ). ..... \epsilon
math Greek letter: eta (η). ..... \eta
math Greek letter: gamma (γ). ..... \gamma
math Greek letter: kappa (κ). ..... \kappa
math Greek letter: lambda (λ). ..... \lambda
math Greek letter: mu (μ). ..... \mu
math Greek letter: nu (ν). ..... \nu
math Greek letter: omega (ω). ..... \omega
math Greek letter: phi (ϕ). ..... \phi
math Greek letter: pi (π). ..... \pi
math Greek letter: psi (ψ). ..... \psi
math Greek letter: rho (ρ). ..... \rho
math Greek letter: sigma (σ). ..... \sigma
math Greek letter: tau (τ). ..... \tau
math Greek letter: theta (θ). ..... \theta
math Greek letter: upsilon (υ). ..... \upsilon
math Greek letter: variant epsilon (ε). .. \varepsilon
math Greek letter: variant phi (φ). ..... \varphi
math Greek letter: variant pi (ϖ). ..... \varpi
math Greek letter: variant rho (ϱ). ..... \varrho
math Greek letter: variant sigma (ς). ..... \varsigma
math Greek letter: variant theta (ϑ). ..... \vartheta

	math Greek letter: xi (ξ).	\xi
	math Greek letter: zeta (ζ).	\zeta
define kerning around	math in text.	\mathsurround*
tokens to insert when	math in text begins.	\everymath*
select bold	math italic and symbol fonts.	\boldmathL
unselect bold	math italic and symbol fonts.	\unboldmathL
8 point	math italic font.	\egtmiL
11 point	math italic font.	\elvmiL
5 point	math italic font.	\fivei
5 point	math italic font.	\fivmiL
14 point	math italic font.	\frtnmiL
9 point	math italic font.	\ninmiL
7 point	math italic font.	\seveni
7 point	math italic font.	\sevmiL
6 point	math italic font.	\sixmiL
17 point	math italic font.	\svtnmiL
10 point	math italic font.	\teni
10 point	math italic font.	\tenmiL
12 point	math italic font.	\twlmiL
20 point	math italic font.	\twtymiL
	math join operator: large V ($\bigvee$).	\bigvee
place	math limits above and below math operators.	\limits*
create a centered vbox in a	math list.	\vcenter*
begin a new	math list with a left delimiter.	\left*
end a	math list with a right delimiter.	\right*
	math meet operator: large wedge ($\bigwedge$).	\bigwedge
medium space in	math mode.	\>
centered dot with special spacing in	math mode.	\cdotp
define a delimiter for	math mode.	\delimiter*
enter	math mode.	$*
enter display	math mode.	$$*
an ellipsis, equivalent to \ldots in	math mode.	\dots
test for	math mode.	\ifmmode*
begin	math mode.	\(L
begin display	math mode.	\[L
end	math mode.	\)L
end display	math mode.	\]L
medium space in	math mode.	\:L
kern in	math mode.	\mkern*
insert horizontal space in	math mode.	\mskip*
increase line separation in	math mode.	\openup
	math mode calligraphic letters font.	\cal
three centered dots in	math mode ($\cdots$).	\cdots
unbreakable tiny negative	math mode horizontal space.	\negthinspace
	math mode italic font.	\mit
three low dots in	math mode ($\ldots$).	\ldots
	math mode negative thin space.	\!
three diagonal dots in	math mode ($\ddots$).	\ddots
define a binary	math operator.	\mathbin*
define a large	math operator.	\mathop*
define an ordinary	math operator.	\mathord*
(II).	math operator: amalgamated sum, co-product	\amalg
	math operator: asterisk ($*$).	\ast

math operator: binary modulo (mod). ..... \bmod
math operator: bullet (•). ..... \bullet
math operator: centered dot (·). ..... \cdot
math operator: circle (∘). ..... \circ
math operator: circle dot (⊙). ..... \odot
math operator: circle minus (⊖). ..... \ominus
math operator: circle slash (⊘). ..... \oslash
math operator: contour integral (∮). ..... \oint
math operator: dagger (†). ..... \dagger
math operator: diamond (⋄). ..... \diamond
math operator: direct sum, circle plus (⊕). . \oplus
math operator: discretionary multiply sign. *
math operator: div. ..... \div
math operator: double dagger (‡). ..... \ddagger
math operator: integral (∫). ..... \int
math operator: intersection or cap (∩). ..... \cap
math operator: large cap (⋂). ..... \bigcap
math operator: large circle (◯). ..... \bigcirc
math operator: large circle with dot (⨀). .. \bigodot
math operator: large circle with plus (⨁). . \bigoplus
math operator: large circle with times (⨂). \bigotimes
math operator: large co-product (∐). ..... \coprod
math operator: large cup (⋃). ..... \bigcup
(▽). math operator: large down triangle \bigtriangledown
math operator: large product (∏). ..... \prod
math operator: large square cup (⨆). ..... \bigsqcup
math operator: large sum (∑). ..... \sum
math operator: large U plus (⨄). ..... \biguplus
math operator: large up triangle (△). \bigtriangleup
math operator: left triangle (◁). ..... \triangleleft
math operator: logical and (∧). ..... \land
math operator: logical not, hook (¬). ..... \lnot
math operator: minus plus (∓). ..... \mp
math operator: negate (¬). ..... \neg
math operator: not in (∉). ..... \notin
math operator: not (/). ..... \not
math operator: plus or minus (±). ..... \pm
math operator: right triangle (▷). .... \triangleright
math operator: set minus (\). ..... \setminus
math operator: small integral (∫). ..... \smallint
math operator: square cap (⊓). ..... \sqcap
math operator: square cup (⊔). ..... \sqcup
math operator: star (⋆). ..... \star
(⊗). math operator: tensor product, circle times \otimes
math operator: times (×). ..... \times
math operator: U plus (⊎). ..... \uplus
math operator: union or cup (∪). ..... \cup
restore default limit placement on large math operators. ..... \displaylimits*
place math limits above and below math operators. ..... \limits*
place superscripts and subscripts after math operators. ..... \nolimits*
define a math punctuation operator. ..... \mathpunct*
penalty for line break after math relation. ..... \relpenalty*
math relation: approximately equal (≈). ... \approx

math relation: asymptote ($\asymp$). ..... \asymp
math relation: bowtie ($\bowtie$). ..... \bowtie
math relation: congruent ($\cong$). ..... \cong
math relation: contains ($\ni$). ..... \ni
math relation: dash V ($\dashv$). ..... \dashv
math relation: dash ($\vdash$). ..... \vdash
math relation: dotted equal ($\doteq$). ..... \doteq
math relation: equivalence ($\equiv$). ..... \equiv
math relation: frown ($\frown$). ..... \frown
math relation: gets ($\gets$). ..... \gets
math relation: greater or equal ($\geq$). ..... \ge
math relation: greater or equal ($\geq$). ..... \geq
math relation: if and only if ($\iff$). ..... \iff
math relation: in ($\in$). ..... \in
math relation: less or equal ($\leq$). ..... \le
math relation: less or equal ($\leq$). ..... \leq
math relation: mid ($\mid$). ..... \mid
math relation: models ($\models$). ..... \models
math relation: much greater ($\gg$). ..... \gg
math relation: much less ($\ll$). ..... \ll
math relation: not equal ($\neq$). ..... \ne
math relation: not equal ($\neq$). ..... \neq
math relation: not equal ($\neq$). ..... \not=
define a math relation operator. ..... \mathrel*
math relation: owns ($\ni$). ..... \owns
math relation: parallel ($\parallel$). ..... \parallel
math relation: perpendicular ($\perp$). ..... \perp
math relation: precedes or equal ($\preceq$). ..... \preceq
math relation: precedes ($\prec$). ..... \prec
math relation: proportional to ($\propto$). ..... \propto
math relation: similar or equal ($\simeq$). ..... \simeq
math relation: similar ($\sim$). ..... \sim
math relation: smile ($\smile$). ..... \smile
math relation: square subset or equal ($\sqsubseteq$). \sqsubseteq
($\sqsupseteq$). math relation: square superset or equal . \sqsupseteq
math relation: subset or equal ($\subseteq$). ..... \subseteq
math relation: subset ($\subset$). ..... \subset
math relation: successor or equal ($\succeq$). ..... \succeq
math relation: successor ($\succ$). ..... \succ
math relation: superset or equal ($\supseteq$). ..... \supseteq
math relation: superset ($\supset$). ..... \supset
math relation: to ($\to$). ..... \to
put symbols over math relations. ..... \buildrel
use normal math script style. ..... \displaystyle*
use very small math script style. ..... \scriptscriptstyle*
use small math script style. ..... \scriptstyle*
select font for small math scripts. ..... \scriptfont*
select font for very small math scripts. ..... \scriptscriptfont*
math skip register. ..... \muskip*
define a name for a math skip register. ..... \muskipdef*
allocate a new math skip register. ..... \newmuskip
next item. select math spacing of a closing delimiter for the \mathclose*
next item. select math spacing of an opening delimiter for the \mathopen*

parentheses. math strut with height and depth of ..... \mathstrut
define an inner math subformula. ..... \mathinner*
math symbol: aleph (ℵ). ..... \aleph
math symbol: bottom (⊥). ..... \bot
math symbol: box (□). ..... \BoxL
math symbol: club suit (♣). ..... \clubsuit
math symbol: diamond (◇). ..... \DiamondL
math symbol: diamond suit (♢). ..... \diamondsuit
math symbol: dotless i (ı). ..... \imath
math symbol: dotless j (ȷ). ..... \jmath
math symbol: double relation bar (=). ..... \Relbar
math symbol: double vertical bar (‖). .... \Arrowvert
math symbol: down arrow (↓). ..... \downarrow
math symbol: downward double arrow (⇓). \Downarrow
math symbol: empty set (∅). ..... \emptyset
math symbol: exists quantifier (∃). ..... \exists
math symbol: flat (♭). ..... \flat
8 point math symbol font. ..... \egtsyL
11 point math symbol font. ..... \elvsyL
5 point math symbol font. ..... \fivesy
5 point math symbol font. ..... \fivsyL
14 point math symbol font. ..... \frtnsyL
9 point math symbol font. ..... \ninsyL
7 point math symbol font. ..... \sevensy
7 point math symbol font. ..... \sevsyL
6 point math symbol font. ..... \sixsyL
17 point math symbol font. ..... \svtnsyL
10 point math symbol font. ..... \tensy
12 point math symbol font. ..... \twlsyL
20 point math symbol font. ..... \twtysyL
math symbol: for-all quantifier (∀). ..... \forall
math symbol: heart suit (♡). ..... \heartsuit
math symbol: hook left arrow (↩). .. \hookleftarrow
math symbol: hook right arrow (↪). \hookrightarrow
math symbol: imaginary, Fraktur I (ℑ). .... \Im
math symbol: infinity (∞). ..... \infty
math symbol: iota (ι). ..... \iota
math symbol: join (⋈). ..... \JoinL
math symbol: leads to (⇝). ..... \leadstoL
math symbol: left arrow (←). ..... \leftarrow
math symbol: left double arrow (⇐). ..... \Leftarrow
math symbol: left half diamond (◁). ..... \lhdL
(↽). math symbol: left harpoon down .. \leftharpoondown
math symbol: left harpoon up (↼). . \leftharpoonup
math symbol: left hook (ʿ). ..... \lhook
math symbol: left moustache (∫). ..... \lmoustache
math symbol: left quote (‘). ..... \lq
math symbol: left-right arrow (↔). . \leftrightarrow
(⇔). math symbol: left-right double arrow \Leftrightarrow
math symbol: logical or (∨). ..... \lor
arrow (⟷). math symbol: long left and right \longleftrightarrow
math symbol: long left arrow (⟵). . \longleftarrow

(⟸).
double arrow (⟺).

(⟹).

(⇀).

(⇌).

(⊴).
(⊵).
(⇳).

lower dot
internal Plain TEX operation to define
generate a
generate a
generate a
generate a
math function:

math symbol: long left double arrow . \Longleftarrow
math symbol: long left-right ... \Longleftrightarrow
math symbol: long maps to (⟼). ..... \longmapsto
math symbol: long right arrow (⟶). \longrightarrow
math symbol: long right double arrow \Longrightarrow
math symbol: maps to char (ǀ). ..... \mapstochar
math symbol: maps to (↦). ..... \mapsto
math symbol: mho (℧). ..... \mho L
math symbol: nabla (∇). ..... \nabla
math symbol: natural (♮). ..... \natural
math symbol: northeast arrow (↗). ..... \nearrow
math symbol: northwest arrow (↖). ..... \nwarrow
math symbol: paragraph (¶). ..... \P
math symbol: partial (∂). ..... \partial
math symbol: Planck's constant or h-bar (ℏ). \hbar
math symbol: prime (x'). ..... \prime
math symbol: real, Fraktur R (ℜ). ..... \Re
math symbol: relation bar (−). ..... \relbar
math symbol: right arrow (→). ..... \rightarrow
math symbol: right double arrow (⇒). .. \Rightarrow
math symbol: right half diamond (▷). ..... \rhd L
math symbol: right harpoon down \rightharpoondown
math symbol: right harpoon up (⇀). \rightharpoonup
math symbol: right hook (↪). ..... \rhook
math symbol: right left harpoon \rightleftharpoons
math symbol: right moustache (⎱). ..... \rmoustache
math symbol: section (§). ..... \S
math symbol: sharp (♯). ..... \sharp
math symbol: small script L (ℓ). ..... \ell
math symbol: southeast arrow (↘). ..... \searrow
math symbol: southwest arrow (↙). ..... \swarrow
math symbol: spade suit (♠). ..... \spadesuit
math symbol: square subset (⊏). ..... \sqsubset L
math symbol: square superset (⊐). ..... \sqsupset L
math symbol: surd (√). ..... \surd
math symbol: top (⊤). ..... \top
math symbol: triangle (△). ..... \triangle
math symbol: underlined left half diamond . \unlhd L
math symbol: underlined right half diamond \unrhd L
math symbol: up-and-down double arrow \Updownarrow
math symbol: upward double arrow (⇑). ... \Uparrow
math symbol: vertical bar (⏐). ..... \arrowvert
math symbol: vertical bar (‖). ..... \|
math symbol: vertical dots (⋮). ..... \vdots
math symbol: Weierstrass p (℘). ..... \wp
math symbol with special spacing. ..... \ldotp
math text symbols. ..... \mathhexbox
matrix labeled on rows and columns. . \bordermatrix
matrix with a left brace delimiter. ..... \cases
matrix with parentheses delimiters. ..... \pmatrix
matrix without delimiters. ..... \matrix
max. ..... \max

given depth. maximum box depth shown. ..... \showboxdepth*
maximum boxed items shown at a .. \showboxbreadth*
pages. maximum depth of boxes in a split box. \splitmaxdepth*
maximum depth of boxes on explicit ... \boxmaxdepth*
messages occur. maximum depth of boxes on main pages. .. \maxdepth*
maximum overrun before overfull hbox ..... \hfuzz*
maximum overrun before overfull vbox error. \vfuzz*
restores a carriage return to its usual meaning. ..... \restorecr L
vertical skip a medium amount. ..... \medskip L
breakable medium horizontal skip. ..... \quad
medium space in math formulas. ..... \medmuskip*
medium space in math mode. ..... \>
medium space in math mode. ..... \: L
medium vertical space. ..... \medskip
medium vertical space or a good page break. \medbreak
\medskip space. ..... \medskipamount
math meet operator: large wedge ($\bigwedge$). ..... \bigwedge
math binary operator: meet or wedge ($\wedge$). ..... \wedge
show statistics about memory usage. ..... \tracingstats*
of lines of context to be displayed in an error message. number ..... \errorcontextlines 3
define a new help message. ..... \newhelp
write a message on the terminal. ..... \typeout L
help message to display if user asks for help. .... \errhelp*
write balanced error message to the terminal. ..... \errmessage*
maximum overrun before overfull hbox messages occur. ..... \hfuzz*
math symbol: mho ($\mho$). ..... \mho L
math relation: mid ($\mid$). ..... \mid
2.5-line middle math delimiter. ..... \Biggm
2-line middle math delimiter. ..... \biggm
1.5-line middle math delimiter. ..... \Bigm
1-line middle math delimiter. ..... \bigm
vertical space around a float in the middle of a page. ..... \intextsep L
math function: min. ..... \min
after hyphenation at the end of a word. minimum number of characters \righthyphenposition 3
before hyphenation at the start of a word. minimum number of characters \lefthyphenposition 3
vertical list. minimum space between lines in a ... \lineskiplimit*
math operator: circle minus ($\ominus$). ..... \ominus
math operator: minus plus ($\mp$). ..... \mp
math operator: plus or minus ($\pm$). ..... \pm
math operator: set minus ($\setminus$). ..... \setminus
math function: mod within parentheses ((mod)). ..... \pmod
medium space in math mode. ..... \>
thick space (math mode). ..... \;
thin space (math mode). ..... \,
centered dot with special spacing in math mode. ..... \cdotp
define a delimiter for math mode. ..... \delimiter*
enter math mode. ..... $*
enter display math mode. ..... $$*
an ellipsis, equivalent to \ldots in math mode. ..... \dots
test for horizontal mode. ..... \ifhmode*
test for an internal mode. ..... \ifinner*
test for math mode. ..... \ifmmode*
test for vertical mode. ..... \ifvmode*

begin display math mode. ..... \[L
begin math mode. ..... \(L
end display math mode. ..... \] L
end math mode. ..... \) L
medium space in math mode. ..... \: L
switch to horizontal mode from vertical mode. ..... \leavevmode
kern in math mode. ..... \mkern *
insert horizontal space in math mode. ..... \mskip *
increase line separation in math mode. ..... \openup
math mode calligraphic letters font. ..... \cal
three centered dots in math mode (⋯). ..... \cdots
switch to horizontal mode from vertical mode. ..... \leavevmode
unbreakable tiny negative math mode horizontal space. ..... \negthinspace
math mode italic font. ..... \mit
three low dots in math mode (…). ..... \ldots
create a box with horizontal mode material. ..... \hbox *
create a box with vertical mode material. ..... \vbox *
create a box with vertical mode material with the baseline at the top. \vtop *
math mode negative thin space. ..... \!
three diagonal dots in math mode (⋱). ..... \ddots
math relation: models (⊨). ..... \models
math operator: binary modulo (mod). ..... \bmod
current day of the month. ..... \day *
current month of the year. ..... \month *
math symbol: left moustache (⎰). ..... \lmoustache
math symbol: right moustache (⎱). ..... \rmoustache
environment. move to next tab position in tabbing ..... \> L
protect fragile commands and moving arguments. ..... \protect L
math Greek letter: mu (μ). ..... \mu
math relation: much greater (≫). ..... \gg
math relation: much less (≪). ..... \ll
create a multicolumn entry in an aligned table. ..... \span *
environment. multicolumn entry in array or tabular .. \multicolumn L
environment. multicolumn line in array or tabular ..... \cline L
multiple of normal \baselineskip. \baselinestretch L
the following macro may have multiple paragraphs as parameters. ..... \long *
multiply a register by a value. ..... \multiply *
math operator: discretionary multiply sign. ..... *
math symbol: nabla (∇). ..... \nabla
begin expanding tokens to construct a command name. ..... \csname *
use a named box. ..... \usebox L
justify page bottoms to their natural height. ..... \raggedbottom L
natural height of page so far. ..... \pagetotal *
math symbol: natural (♮). ..... \natural
math operator: negate (¬). ..... \neg
unbreakable tiny negative math mode horizontal space. . \negthinspace
math mode negative thin space. ..... \!
insert a token after the next assignment command. ..... \afterassignment *
put an accent over the next character. ..... \accent *
test the next character. ..... \@ifnextchar L
select math spacing of a closing delimiter for the next item. ..... \mathclose *
math spacing of an opening delimiter for the next item. select ..... \mathopen *

place an accent over the next math field. ..... \mathaccent*
move to next tab position in tabbing environment. .. \>L
expand the token following the next token. ..... \expandafter*
suppress interline space before next vertical box. ..... \nointerlineskip
commands. set @ non-alphabetic to hide internal ..... \makeatotherL
select font for non-math text. ..... \textfont*
tokens to insert after every \cr or nonredundant \crcr. ..... \everycr*
read, expand, then ignore tokens until a non-space is found. ..... \ignorespaces*
multiple of normal \baselineskip. ..... \baselinestretchL
normal \baselineskip. ..... \normalbaselineskip
process TEX input without pausing for normal errors. ..... \scrollmode*
input. pause for normal errors while processing TEX .. \errorstopmode*
select normal font size. ..... \normalsizeL
value of normal \lineskip. ..... \normallineskip
value of normal \lineskiplimit. ..... \normallineskiplimit
use normal math script style. ..... \displaystyle*
put marginal notes on normal side of page. ..... \normalmarginparL
select font four steps larger than normal size. ..... \hugeL
select font one step larger than normal size. ..... \largeL
select font three steps larger than normal size. ..... \LARGEL
select font two steps larger than normal size. ..... \LargeL
normal space between lines. ..... \baselineskip*
set line spacing to normal values. ..... \normalbaselines
math symbol: northeast arrow (↗). ..... \nearrow
math symbol: northwest arrow (↖). ..... \nwarrow
Norwegian letter: capital O with slash (Ø). . \O
Norwegian letter: o with slash (ø). ..... \o
the following macro must not be called from another macro. ..... \outer*
math relation: not equal (≠). ..... \ne
math relation: not equal (≠). ..... \neq
math relation: not equal (≠). ..... \not=
math operator: logical not, hook (¬). ..... \lnot
math operator: not in (∉). ..... \notin
show characters not in the font. ..... \tracinglostchars*
math operator: not (/). ..... \not
produce a marginal note. ..... \marginparL
distance between marginal note and text. ..... \marginparsepL
vertical space between marginal notes. ..... \marginparpushL
width of marginal notes. ..... \marginparwidthL
put marginal notes on normal side of page. ..... \normalmarginparL
put marginal notes on opposite side of page. ... \reversemarginparL
do nothing. ..... \relax*
math Greek letter: nu (ν). ..... \nu
width of a null delimiter. ..... \nulldelimiterspace*
most recently allocated register number. ..... \allocationnumber
equation number. ..... \eqno*
current family number. ..... \fam*
typeset page number. ..... \folio
left equation number. ..... \leqno*
current page number. ..... \pageno
produces the footnote number. ..... \thefootnoteL
current page number. ..... \thepageL
produce a numbered caption. ..... \captionL

suppress numbering of displayed equations. ..... \nonumber L
specify page numbering style. ..... \pagenumbering L
align a stack of equations with equation numbers. ..... \eqalignno
align a stack of equations with left equation numbers. ..... \leqalignno
suppress page numbers. ..... \nopagenumbers
display counter as Arabic numerals. ..... \arabic L
display counter as lower-case Roman numerals. ..... \roman L
display counter as upper-case Roman numerals. ..... \Roman L
convert a number to lower-case Roman numerals. ..... \romannumeral *
select old-style numerals with descenders. ..... \oldstyle
specify a character by its numeric code. ..... \char *
convert a numeric register to displayable form. ..... \the *
Norwegian letter: o with slash (ø). ..... \o
Norwegian letter: capital O with slash (Ø). ..... \O
place several copies of a picture object. ..... \multiput L
place a picture object. ..... \put L
portion of page that may be occupied by floats. ..... \floatpagefraction L
maximum overrun before overfull hbox messages occur. ..... \hfuzz *
pound, hatch mark, sharp sign, octothorpe (#). ..... \#
test for odd integer. ..... \ifodd *
left hand margin on odd pages. ..... \oddsidemargin L
ligature digraph symbol oe (œ). ..... \oe
ligature digraph symbol capital OE (Œ). ..... \OE
horizontal offset of a page. ..... \hoffset *
vertical offset of a page. ..... \voffset *
select old-style numerals with descenders. ..... \oldstyle
math Greek letter: omega (ω). ..... \omega
math Greek letter: capital omega (Ω). ..... \Omega
advance \pageno by one. ..... \advancepageno
terminate TEX and write a format file: INITEX only. ..... \dump *
write to the log file only. ..... \wlog
select math spacing of an opening delimiter for the next item. ..... \mathopen *
unit of measure for opening up displays. ..... \jot
penalty for line break after binary operation. ..... \binoppenalty *
internal Plain TEX operation to define math text symbols. .. \mathhexbox
define a binary math operator. ..... \mathbin *
define a large math operator. ..... \mathop *
define an ordinary math operator. ..... \mathord *
define a math punctuation operator. ..... \mathpunct *
define a math relation operator. ..... \mathrel *
math operator: amalgamated sum, co-product (∐). \amalg
math operator: asterisk (∗). ..... \ast
math operator: binary modulo (mod). ..... \bmod
math operator: bullet (•). ..... \bullet
math operator: centered dot (·). ..... \cdot
math operator: circle (∘). ..... \circ
math operator: circle dot (⊙). ..... \odot
math operator: circle minus (⊖). ..... \ominus
math operator: circle slash (⊘). ..... \oslash
math operator: contour integral (∮). ..... \oint
math operator: dagger (†). ..... \dagger
math operator: diamond (⋄). ..... \diamond
math operator: direct sum, circle plus (⊕). ..... \oplus

math operator: discretionary multiply sign. ..... *
math operator: div. ..... \div
math operator: double dagger (‡). ..... \ddagger
math operator: integral (∫). ..... \int
math operator: intersection or cap (∩). ..... \cap
math binary operator: join or V (∨). ..... \vee
math operator: large cap (⋂). ..... \bigcap
math operator: large circle (◯). ..... \bigcirc
math operator: large circle with dot (⨀). ..... \bigodot
math operator: large circle with plus (⨁). ..... \bigoplus
math operator: large circle with times (⨂). .... \bigotimes
math operator: large co-product (∐). ..... \coprod
math operator: large cup (⋃). ..... \bigcup
math operator: large down triangle (▽). \bigtriangledown
math operator: large product (∏). ..... \prod
math operator: large square cup (⨆). ..... \bigsqcup
math operator: large sum (∑). ..... \sum
math operator: large U plus (⨄). ..... \biguplus
math operator: large up triangle (△). ..... \bigtriangleup
math join operator: large V (⋁). ..... \bigvee
math meet operator: large wedge (⋀). ..... \bigwedge
math operator: left triangle (◁). ..... \triangleleft
math operator: logical and (∧). ..... \land
math operator: logical not, hook (¬). ..... \lnot
math binary operator: meet or wedge (∧). ..... \wedge
math operator: minus plus (∓). ..... \mp
math operator: negate (¬). ..... \neg
math operator: not in (∉). ..... \notin
math operator: not (/). ..... \not
math operator: plus or minus (±). ..... \pm
math operator: right triangle (▷). ..... \triangleright
math operator: set minus (\). ..... \setminus
math operator: small integral (∫). ..... \smallint
math operator: square cap (⊓). ..... \sqcap
math operator: square cup (⊔). ..... \sqcup
math operator: star (⋆). ..... \star
math operator: tensor product, circle times (⊗). . \otimes
math operator: times (×). ..... \times
math operator: U plus (⊎). ..... \uplus
math operator: union or cup (∪). ..... \cup
math binary operator: wreath product (≀). ..... \wr
restore default limit placement on large math operators. ..... \displaylimits*
place math limits above and below math operators. ..... \limits*
place superscripts and subscripts after math operators. ..... \nolimits*
put marginal notes on opposite side of page. ..... \reversemarginpar L
declare document style and options. ..... \documentstyle L
define an ordinary math operator. ..... \mathord*
begin a tabbed line in an outer environment. ..... \+
open a file for output. ..... \openout*
close an output file. ..... \closeout*
allocate a new output file. ..... \newwrite
character that starts a new output line in a write statement. ..... \newlinechar*
escape character in the output of control sequence tokens. ..... \escapechar*

trace output processing. ..... \showoutput L
define the page output routine. ..... \output *
default Plain output routine. ..... \plainoutput
upper bound on output routine calls. ..... \maxdeadcycles *
number of output routine calls since last \shipout. \deadcycles *
oval in a picture environment. ..... \oval L
draw a line over a formula. ..... \overline *
horizontal brace over a math formula. ..... \overbrace
left arrow over a math formula. ..... \overleftarrow
right arrow over a math formula. ..... \overrightarrow
inhibit a page break over a region. ..... \samepage L
put symbols over math relations. ..... \buildrel
put an accent over the next character. ..... \accent *
place an accent over the next math field. ..... \mathaccent *
width of rules appended to overfull boxes. ..... \overfullrule *
maximum overrun before overfull hbox messages occur. ..... \hfuzz *
maximum overrun before overfull vbox error. ..... \vfuzz *
override \global specifications. ..... \globaldefs *
maximum overrun before overfull hbox messages occur. \hfuzz *
maximum overrun before overfull vbox error. ..... \vfuzz *
math relation: owns (∋). ..... \owns
math symbol: Weierstrass p (℘). ..... \wp
name of current TEX format package. ..... \fmtname
version of current TEX format package. ..... \fmtversion
additional authors on title page. ..... \and L
figures and tables and start a new right-hand page. flush ..... \cleardoublepage L
flush figures and start a new page. ..... \clearpage L
date on title page. ..... \date L
size of float on double-column page. ..... \dblfloatpagefraction L
flush insertions and eject to a new page. ..... \dosupereject
horizontal offset of a page. ..... \hoffset *
sum of penalties for split insertions on the page. ..... \insertpenalties *
vertical space around a float in the middle of a page. ..... \intextsep L
insert at current position in page. ..... \midinsert
create a small sample page. ..... \minipage L
start a new page. ..... \newpage L
produce a vertical list of the body of a page. ..... \pagecontents
depth of the current page. ..... \pagedepth *
amount of filll space in current page. ..... \pagefilllstretch *
amount of fill space in current page. ..... \pagefillstretch *
amount of fil space in current page. ..... \pagefilstretch *
insert a whole page. ..... \pageinsert
amount of glue shrinkage in current page. ..... \pageshrink *
amount of glue stretch in current page. ..... \pagestretch *
put marginal notes on normal side of page. ..... \normalmarginpar L
put marginal notes on opposite side of page. ..... \reversemarginpar L
terminate LATEX and flush the final page. ..... \stop L
flush all insertions and eject to a new page. ..... \superject
width of printing on page. ..... \textwidth L
add footnote to title page. ..... \thanks L
insertion class for inserts at the top of a page. ..... \topins
insert text at the top of the page. ..... \topinsert
extra space added to top of page. ..... \topmargin L

space at the top of a page. ..... \topskip*
vertical offset of a page. ..... \voffset*
penalty for creating a widow line at top of page. ..... \widowpenalty*
define the rule separating a page and footnotes. ..... \footnoterule
title page author. ..... \author L
justify page bottoms to the same height. ..... \flushbottom L
justify page bottoms to the same height. ..... \normalbottom
justify page bottoms to their natural height. ..... \raggedbottom L
large vertical space or a good page break. ..... \bigbreak
force a page break. ..... \eject
good page break. ..... \goodbreak
medium vertical space or a good page break. ..... \medbreak
prohibit a line or page break. ..... \nobreak
suppress a page break. ..... \nopagebreak L
penalty at the current page break. ..... \outputpenalty*
encourage a page break. ..... \pagebreak L
specify penalty for a line or page break. ..... \penalty*
small vertical space and a good page break. ..... \smallbreak
penalty if page break after first line of paragraph. \clubpenalty*
penalty if page break after hyphenated line. ..... \brokenpenalty*
additional penalty for page break between lines. ..... \interlinepenalty*
penalty for page break just after a display. \postdisplaypenalty*
penalty for page break just before a display. \predisplaypenalty*
inhibit a page break over a region. ..... \samepage L
require strict line and page breaks. ..... \fussy L
accept looser line and page breaks. ..... \sloppy L
put page contents in a box of the proper height. \pagebody
constructs a box with the page foot. ..... \makefootline
page foot line. ..... \footline
height of page footer. ..... \footheight L
space between text and page footer. ..... \footskip L
fraction of two-column page for top floats. ..... \dbltopfraction L
page head line. ..... \headline
height of page header. ..... \headheight L
constructs a box with the page header. ..... \makeheadline
space between page header and text. ..... \headsep L
produces current left page heading. ..... \leftmark L
produces current right page heading. ..... \rightmark L
desired page height. ..... \pagegoal*
start a new page in double-column format. ..... \twocolumn L
start a new page in single-column format. ..... \onecolumn L
define where text will be inserted when the page is formatted. ..... \insert*
mark text last encountered on page just boxed. ..... \botmark*
mark text first encountered on page just boxed. ..... \firstmark*
typeset page number. ..... \folio
current page number. ..... \pageno
current page number. ..... \thepage L
page number of a cross reference label. ..... \pageref L
specify page numbering style. ..... \pagenumbering L
suppress page numbers. ..... \nopagenumbers
height of text on a page or \vbox. ..... \vsize*
define the page output routine. ..... \output*
natural height of page so far. ..... \pagetotal*

set global
set current
suppress bottom justification of
floats. portion of
below. break a
value of \botmark just before current
show
advance
maximum depth of boxes on explicit
left hand margin on even
set headings for left and right
set heading for right
maximum depth of boxes on main
left hand margin on odd
penalty if page break after first line of
hanging indent of a
force a line break in a
space to the left of a
amount added to badness of every line in a
force a change to the number of lines in a
force a line break in a
start a labeled
space at the end of the last line of a
extra vertical space when environment starts a
number of lines in the last
space to the right of a
end a
start a labeled sub-level
space between first list item and preceding
insert vertical material into a
tokens to insert when a
indent second and subsequent lines in a
put a
define
start a
suppress right justification of
width of a
math symbol:
define an unusual
start a
define space between
the following macro may have multiple
indent second and subsequent
environment. space between
math relation:
set a font-related
following macro may have multiple paragraphs as
fraction without a rule with
math strut with height and depth of
generate a matrix with
math function: mod within
second and subsequent lines in a paragraph by
start a paragraph indented

page style. ..... \pagestyle[L]
page style. ..... \thispagestyle[L]
page text. ..... \raggedbottom
page that may be occupied by .. \floatpagefraction[L]
page unless there is a better \filbreak ... \filbreak
page was boxed. ..... \topmark*
page-break calculations. ..... \tracingpages*
\pageno by one. ..... \advancepageno
pages. ..... \boxmaxdepth*
pages. ..... \evensidemargin[L]
pages. ..... \markboth[L]
pages. ..... \markright[L]
pages. ..... \maxdepth*
pages. ..... \oddsidemargin[L]
paragraph. ..... \clubpenalty*
paragraph. ..... \@hangfrom[L]
paragraph. ..... \\[L]
paragraph. ..... \leftskip*
paragraph. ..... \linepenalty*
paragraph. ..... \looseness*
paragraph. ..... \newline[L]
paragraph. ..... \paragraph[L]
paragraph. ..... \parfillskip*
paragraph. ..... \partopsep[L]
paragraph. ..... \prevgraf*
paragraph. ..... \rightskip*
paragraph. ..... \par*
paragraph. ..... \subparagraph[L]
paragraph. ..... \topsep[L]
paragraph. ..... \vadjust*
paragraph begins. ..... \everypar*
paragraph by \parindent. ..... \hang
paragraph in a box. ..... \parbox[L]
paragraph indentation. ..... \parindent*
paragraph indented \parindent. ..... \indent*
paragraph lines. ..... \raggedright
paragraph or \hbox. ..... \hsize*
paragraph (¶). ..... \P
paragraph shape. ..... \parshape*
paragraph without indentation. ..... \noindent*
paragraphs. ..... \parskip*
paragraphs as parameters. ..... \long*
paragraphs in a list environment. .... \listparindent[L]
paragraphs within an item in a list ..... \parsep[L]
parallel (||). ..... \parallel
parameter. ..... \fontdimen*
parameters. the ..... \long*
parentheses. ..... \choose
parentheses. ..... \mathstrut
parentheses delimiters. ..... \pmatrix
parentheses ((mod)). ..... \pmod
\parindent. indent ..... \hang
\parindent. ..... \indent*

increase left and right margins by \parindent. ..... \narrower
math symbol: partial (∂). ..... \partial
define a set of hyphenation patterns. ..... \patterns*
pause after each line is read from a file. .... \pausing*
processing TEX input. pause for normal errors while ..... \errorstopmode*
process TEX input without pausing for normal errors. ..... \scrollmode*
page. sum of penalties for split insertions on the \insertpenalties*
penalty at the beginning of a list. \@beginparpenalty L
penalty at the current page break. ... \outputpenalty*
penalty at the end of a list. ..... \@endparpenalty L
penalty between list items. ..... \@itempenalty L
specify penalty for a line or page break. ..... \penalty*
between lines of a display. penalty for breaking ..... \interdisplaylinepenalty
between lines of a footnote. penalty for breaking .... \interfootnotelinepenalty
of page. penalty for creating a widow line at top \widowpenalty*
before a display. penalty for creating a widow line \displaywidowpenalty*
interline penalty for footnotes. .. \interfootnotelinepenalty L
penalty for insertions that are split. \floatingpenalty*
operation. penalty for line break after binary .... \binoppenalty*
discretionary hyphen. penalty for line break after ..... \hyphenpenalty*
hyphen. penalty for line break after explicit \exhyphenpenalty*
penalty for line break after math relation. \relpenalty*
lines. additional penalty for page break between .. \interlinepenalty*
a display. penalty for page break just after \postdisplaypenalty*
a display. penalty for page break just before \predisplaypenalty*
paragraph. penalty if page break after first line of . \clubpenalty*
line. penalty if page break after hyphenated \brokenpenalty*
remove a penalty just added to the current list. .... \unpenalty*
fetch last penalty off the current list. ..... \lastpenalty*
demerits for a penultimate broken line. ..... \finalhyphendemerits*
percent sign (%). ..... \%
perform a \read or \write immediately. . \immediate*
perform arithmetic on a register. ..... \advance*
largest permissible dimension. ..... \maxdimen
permit a line break after a slash. ..... \slash
column. permit an alignment entry to stick out of its \hidewidth
math relation: perpendicular ($\perp$). ..... \perp
math Greek letter: phi (ϕ). ..... \phi
math Greek letter: capital phi (Φ). ..... \Phi
math Greek letter: variant phi (φ). ..... \varphi
math Greek letter: pi (π). ..... \pi
math Greek letter: capital pi (Π). ..... \Pi
math Greek letter: variant pi (ϖ). ..... \varpi
circle in a picture environment. ..... \circle L
end picture environment. ..... \endpicture L
line in a picture environment. ..... \line L
set width of lines in picture environment. ..... \linethickness L
oval in a picture environment. ..... \oval L
begin picture environment. ..... \picture L
unit of distance in picture environment. ..... \unitlength L
vector in a picture environment. ..... \vector L
place several copies of a picture object. ..... \multiput L
place a picture object. ..... \put L

lower left piece of a horizontal brace. ..... \braceld
upper left piece of a horizontal brace. ..... \bracelu
lower right piece of a horizontal brace. ..... \bracerd
upper right piece of a horizontal brace. ..... \braceru
piece of a vertical brace (⎪). ..... \bracevert
internal Plain TEX command to piece together long arrows. ..... \joinrel
character placed at the right end of an input line. \endlinechar*
restore default limit placement on large math operators. .. \displaylimits*
default Plain output routine. ..... \plainoutput
arrows. internal Plain TEX command to piece together long . \joinrel
symbols. internal Plain TEX operation to define math text \mathhexbox
internal Plain TEX space used for centering. ..... \centering
special Plain TEX space used in alignment. ..... \hideskip
math symbol: Planck's constant or h-bar ($\hbar$). ..... \hbar
math operator: large circle with plus ($\bigoplus$). ..... \bigoplus
math operator: large U plus ($\biguplus$). ..... \biguplus
math operator: minus plus ($\mp$). ..... \mp
math operator: direct sum, circle plus ($\oplus$). ..... \oplus
math operator: plus or minus ($\pm$). ..... \pm
math operator: U plus ($\uplus$). ..... \uplus
Polish letter: slashed L (ł). ..... \l
Polish letter: upper-case slashed L (Ł). ..... \L
math function: degree of a polynomial (deg). ..... \deg
occupied by floats. portion of page that may be .... \floatpagefraction L
create a box in dashes, with positioning. ..... \dashbox L
create and frame a box, with positioning. ..... \framebox L
create a box, with positioning. ..... \makebox L
create and name a box, with positioning. ..... \savebox L
capital letters. positive if hyphenating words beginning with \uchyph*
(#). pound, hatch mark, sharp sign, octothorpe . \#
British pound symbol (£). ..... \pounds L
suppress the template in the alignment preamble for this entry. ..... \omit*
math relation: precedes or equal ($\preceq$). ..... \preceq
math relation: precedes ($\prec$). ..... \prec
length of text preceding a display. ..... \predisplaysize*
space between first list item and preceding paragraph. ..... \topsep L
scratch control sequence used in preloading fonts. ..... \preloaded
vertical strut to preserve line spacing. ..... \strut
math symbol: prime (x'). ..... \prime
TEX primitive \par. ..... \@@par L
name of the principal input file. ..... \jobname*
width of printing on page. ..... \textwidth L
math function: probability (Pr). ..... \Pr
process input without displaying errors. .. \batchmode*
process input without stopping for errors. \nonstopmode*
normal errors. process TEX input without pausing for .. \scrollmode*
enable glossary processing. ..... \makeglossary L
trace output processing. ..... \showoutput L
set a character's processing category type. ..... \catcode*
set a math character's processing category type. ..... \mathcode*
finish processing input. ..... \bye
pause for normal errors while processing TEX input. ..... \errorstopmode*

produce a horizontal rule. ..... \hrule*
produce a marginal note. ..... \marginpar L
produce a numbered caption. ..... \caption L
page. produce a vertical list of the body of a \pagecontents
produce a vertical rule. ..... \vrule*
produce footnote text without a mark. \footnotetext L
produce TEX accents in tabbing environment. \a L
produce the title. ..... \maketitle L
produce the value of a counter. ..... \value L
produces current left page heading. ..... \leftmark L
produces current right page heading. ..... \rightmark L
produces the footnote number. ..... \thefootnote L
math operator: tensor product, circle times (⊗). ..... \otimes
math operator: large product (∏). ..... \prod
math binary operator: wreath product (≀). ..... \wr
prohibit a line or page break. ..... \nobreak
put page contents in a box of the proper height. ..... \pagebody
define a symbol that will work properly in text and script sizes. ..... \mathpalette
math relation: proportional to (∝). ..... \propto
arguments. protect fragile commands and moving ..... \protect L
math Greek letter: psi (ψ). ..... \psi
math Greek letter: capital psi (Ψ). ..... \Psi
suppress special spacing after punctuation. ..... \frenchspacing
create end-of-sentence space after following punctuation. ..... \@ L
enable special spacing after punctuation. ..... \nonfrenchspacing
define a math punctuation operator. ..... \mathpunct*
math symbol: exists quantifier (∃). ..... \exists
math symbol: for-all quantifier (∀). ..... \forall
math symbol: left quote (‘). ..... \lq
right quote (’). ..... \rq
math symbol: real, Fraktur R (ℜ). ..... \Re
put a math field under a radical. ..... \radical*
raise a box a distance. ..... \raisebox L
raise a box a given distance. ..... \raise*
1000. ratio for variable delimiters times . \delimiterfactor*
magnification ratio times 1000. ..... \mag*
read a file. ..... \input*
read a file unless disabled by \includeonly. \include L
read a line from a file. ..... \read*
non-space is found. read, expand, then ignore tokens until a \ignorespaces*
pause after each line is read from a file. ..... \pausing*
processing. read in the .AUX files and disable alpha @ \document L
perform a \read or \write immediately. ..... \immediate*
current line. stop reading current input file at the end of the \endinput*
math symbol: real, Fraktur R (ℜ). ..... \Re
most recently allocated register number. \allocationnumber
\dospecials. redefinable scratch control sequence used by \do
redefine a command. ..... \renewcommand L
redefine an environment. ..... \renewenvironment L
refer to a cross reference label. ..... \ref L
generate an in-text citation of a reference. ..... \cite L
reference a BIBTEX item without citation. .. \nocite L
increment and reference a counter. ..... \refstepcounter L

begin and cross reference an equation. ..... \equation[L]
define a cross reference label. ..... \label[L]
page number of a cross reference label. ..... \pageref[L]
refer to a cross reference label. ..... \ref[L]
inhibit a page break over a region. ..... \samepage[L]
perform arithmetic on a register. ..... \advance*
use a count register. ..... \count*
define a name for a count register. ..... \countdef*
use a dimension register. ..... \dimen*
define a name for a dimension register. ..... \dimendef*
math skip register. ..... \muskip*
define a name for a math skip register. ..... \muskipdef*
allocate a new box register. ..... \newbox
allocate a new count register. ..... \newcount
allocate a new dimension register. ..... \newdimen
define a new box register. ..... \newsavebox[L]
store an hbox or vbox in a box register. ..... \setbox*
display the contents of a register. ..... \showthe*
use a skip register. ..... \skip*
define a name for a skip register. ..... \skipdef*
allocate a new insert register. ..... \newinsert
allocate a new math skip register. ..... \newmuskip
allocate a new skip register. ..... \newskip
allocate a new token register. ..... \newtoks
use a token list register. ..... \toks*
define a name for a token list register. ..... \toksdef*
divide a register by a value. ..... \divide*
multiply a register by a value. ..... \multiply*
most recently allocated register number. ..... \allocationnumber
the following macro definition or register setting is global. ..... \global*
convert a numeric register to displayable form. ..... \the*
penalty for line break after math relation. ..... \relpenalty*
math relation: approximately equal ($\approx$). ..... \approx
math relation: asymptote ($\asymp$). ..... \asymp
math symbol: relation bar ($-$). ..... \relbar
math symbol: double relation bar ($=$). ..... \Relbar
math relation: bowtie ($\bowtie$). ..... \bowtie
math relation: congruent ($\cong$). ..... \cong
math relation: contains ($\ni$). ..... \ni
math relation: dash V ($\dashv$). ..... \dashv
math relation: dash ($\vdash$). ..... \vdash
math relation: dotted equal ($\doteq$). ..... \doteq
math relation: equivalence ($\equiv$). ..... \equiv
math relation: frown ($\frown$). ..... \frown
math relation: gets ($\gets$). ..... \gets
math relation: greater or equal ($\geq$). ..... \ge
math relation: greater or equal ($\geq$). ..... \geq
math relation: if and only if ($\iff$). ..... \iff
math relation: in ($\in$). ..... \in
math relation: less or equal ($\leq$). ..... \le
math relation: less or equal ($\leq$). ..... \leq
math relation: mid ($\mid$). ..... \mid
math relation: models ($\models$). ..... \models

math relation: much greater ($\gg$). ..... \gg
math relation: much less ($\ll$). ..... \ll
math relation: not equal ($\neq$). ..... \ne
math relation: not equal ($\neq$). ..... \neq
math relation: not equal ($\neq$). ..... \not=
define a math relation operator. ..... \mathrel*
math relation: owns ($\ni$). ..... \owns
math relation: parallel ($\parallel$). ..... \parallel
math relation: perpendicular ($\perp$). ..... \perp
math relation: precedes or equal ($\preceq$). ..... \preceq
math relation: precedes ($\prec$). ..... \prec
math relation: proportional to ($\propto$). ..... \propto
math relation: similar or equal ($\simeq$). ..... \simeq
math relation: similar ($\sim$). ..... \sim
math relation: smile ($\smile$). ..... \smile
math relation: square subset or equal ($\sqsubseteq$). .... \sqsubseteq
math relation: square superset or equal ($\sqsupseteq$). .. \sqsupseteq
math relation: subset or equal ($\subseteq$). ..... \subseteq
math relation: subset ($\subset$). ..... \subset
math relation: successor or equal ($\succeq$). ..... \succeq
math relation: successor ($\succ$). ..... \succ
math relation: superset or equal ($\supseteq$). ..... \supseteq
math relation: superset ($\supset$). ..... \supset
math relation: to ($\to$). ..... \to
put symbols over math relations. ..... \buildrel
remove a kern just added to the current list. \unkern*
remove a penalty just added to the current list. \unpenalty*
remove a skip just added to the current list. \unskip*
remove last skip on the list. ..... \removelastskip
surround a space with a repeated box or rule. ..... \cleaders*
fill a space with a repeated box or rule. ..... \leaders*
define a macro with expanded replacement text. ..... \edef*
define a global macro with expanded replacement text. ..... \xdef*
require strict line and page breaks. ..... \fussy L
reset tabs. ..... \cleartabs
restore default limit placement on large math operators. \displaylimits*
restore tabs stops in tabbing environment. . \poptabs L
restores a carriage return to its usual meaning. ..... \restorecr L
defines a carriage return as \\. ..... \obeycr L
restores a carriage return to its usual meaning. ..... \restorecr L
math Greek letter: rho (ρ). ..... \rho
math Greek letter: variant rho (ϱ). ..... \varrho
add a box to the vertical list shifted right. ..... \moveright*
flush lines right. ..... \raggedleft L
create a zero-width box with text to the right. ..... \rlap
math delimiter: right angle bracket ($\rangle$). ..... \rangle
fill a space with a right arrow. ..... \rightarrowfill
math symbol: hook right arrow ($\hookrightarrow$). ..... \hookrightarrow
math symbol: long left and right arrow ($\longleftrightarrow$). ..... \longleftrightarrow
math symbol: long right arrow ($\longrightarrow$). ..... \longrightarrow
right arrow over a math formula. ... \overrightarrow
math symbol: right arrow ($\rightarrow$). ..... \rightarrow
math delimiter: right bracket ($\rbrack$). ..... \rbrack

math delimiter: right ceiling bracket (⌉). ..... \rceil
math delimiter: right curly brace (}). ..... \rbrace
end a math list with a right delimiter. ..... \right*
math symbol: long right double arrow (⟹). ..... \Longrightarrow
math symbol: right double arrow (⇒). ..... \Rightarrow
character placed at the right end of an input line. ..... \endlinechar*
end flush right environment. ..... \endflushright L
begin flush right environment. ..... \flushright L
math delimiter: right floor (⌋). ..... \rfloor
math delimiter: right group (⟯). ..... \rgroup
math symbol: right half diamond (▷). ..... \rhd L
math symbol: underlined right half diamond (⊵). ..... \unrhd L
math symbol: right harpoon down (⇁). ..... \rightharpoondown
math symbol: right harpoon up (⇀). ..... \rightharpoonup
math symbol: right hook (↪). ..... \rhook
put text flush right in a column in tabbing environment. .. \' L
suppress right justification of paragraph lines. ... \raggedright
lines. suppress right justification of typewriter font . \ttraggedright
math symbol: right left harpoon (⇌). ..... \rightleftharpoons
right margin in a list. ..... \rightmargin L
increase left and right margins by \parindent. ..... \narrower
2.5-line right math delimiter. ..... \Biggr
2-line right math delimiter. ..... \biggr
1.5-line right math delimiter. ..... \Bigr
1-line right math delimiter. ..... \bigr
math symbol: right moustache (⟭). ..... \rmoustache
space to the right of a paragraph. ..... \rightskip*
produces current right page heading. ..... \rightmark L
set headings for left and right pages. ..... \markboth L
set heading for right pages. ..... \markright L
lower right piece of a horizontal brace. ..... \bracerd
upper right piece of a horizontal brace. ..... \braceru
right quote (’). ..... \rq
flush right text on a line. ..... \rightline
math operator: right triangle (▹). ..... \triangleright
flush figures and tables and start a new right-hand page. ..... \cleardoublepage L
8 point Roman font. ..... \egtrm L
11 point Roman font. ..... \elvrm L
5 point boldface Roman font. ..... \fivebf
5 point Roman font. ..... \fiverm
5 point Roman font. ..... \fivrm L
14 point Roman font. ..... \frtnrm L
9 point Roman font. ..... \ninrm L
select Roman font. ..... \rm
7 point bold Roman font. ..... \sevenbf
7 point Roman font. ..... \sevenrm
7 point Roman font. ..... \sevrm L
6 point Roman font. ..... \sixrm L
17 point Roman font. ..... \svtnrm L
10 point Roman font. ..... \tenrm
12 point Roman font. ..... \twlrm L
20 point Roman font. ..... \twtyrm L

display counter as lower-case Roman numerals. ..... \roman L
display counter as upper-case Roman numerals. ..... \Roman L
convert a number to lower-case Roman numerals. ..... \romannumeral *
specified root of a formula. ..... \root
square root of a formula. ..... \sqrt
define the page output routine. ..... \output *
default Plain output routine. ..... \plainoutput
upper bound on output routine calls. ..... \maxdeadcycles *
number of output routine calls since last \shipout. ..... \deadcycles *
generate a matrix labeled on rows and columns. ..... \bordermatrix
space between rows of array or tabular environment. . \arraystretch L
fraction without rule. ..... \atop *
surround a space with a repeated box or rule. ..... \cleaders *
produce a horizontal rule. ..... \hrule *
fill a space with a rule. ..... \hrulefill
fill a space with a repeated box or rule. ..... \leaders *
fraction with a rule. ..... \over *
produce a vertical rule. ..... \vrule *
fill a space with an evenly distributed box or rule. ..... \xleaders *
fraction with specified rule and delimiters. ..... \abovewithdelims *
fraction with rule and given delimiters. ..... \overwithdelims *
rule between double-column floats and text. \dblfigrule L
place rule between text and bottom floats. .... \botfigrule L
place rule between top floats and text. ..... \topfigrule L
create a rule or line. ..... \rule L
define the rule separating a page and footnotes. . \footnoterule
width of rule separating double columns. ..... \columnseprule L
macro to draw the rule separating footnotes from text. ... \footnoterule L
environment. double rule separation in array or tabular ... \doublerulesep L
thickness of rule surrounding framed box. ..... \fboxrule L
fraction with rule thickness. ..... \above *
fraction without a rule with braces. ..... \brace
fraction without a rule with brackets. ..... \brack
fraction without rule with given delimiters. ..... \atopwithdelims *
fraction without a rule with parentheses. ..... \choose
set width of array rules. ..... \arrayrulewidth L
width of rules appended to overfull boxes. ..... \overfullrule *
German letter: sharp s (ß). ..... \ss
create a small sample page. ..... \minipage L
11 point sans serif font. ..... \elvsf L
select sans serif font. ..... \sf L
10 point sans serif font. ..... \tensf L
12 point sans serif font. ..... \twlsf L
environment. save current tab stops in tabbing ..... \pushtabs L
Scandinavian letter: a with circle (å). ..... \aa
Scandinavian letter: capital A with circle (Å). \AA
\dospecials. redefinable scratch control sequence used by ..... \do
fonts. scratch control sequence used in preloading \preloaded
suppress space in script and small script styles. ..... \nonscript *
math symbol: small script L (ℓ). ..... \ell
a symbol that will work properly in text and script sizes. define ..... \mathpalette
use normal math script style. ..... \displaystyle *
use very small math script style. ..... \scriptscriptstyle *

use small math
suppress space in script and small
select font for small math
select font for very small math
math function:
current value of the

mark denoting
width of left margin in
start a
command. includes the
math symbol:
set

scripts.

the next item.
for the next item.

integer.

give a token list defining the

space between

define the rule
environment. half the width
width of rule
macro to draw the rule
ensure footnote line
footnote
column
environment. double rule
increase line

script style. ..... \scriptstyle*
script styles. ..... \nonscript*
scripts. ..... \scriptfont*
scripts. ..... \scriptscriptfont*
secant. ..... \sec
second-level item counter. ..... \theenumii L
second-level item in an index. ..... \subitem L
second-level items. ..... \labelitemii L
second-level list. ..... \leftmarginii L
section. ..... \section L
section number in a \contentsline ..... \numberline L
section (§). ..... \S
sectional units to appendix style. ..... \appendix L
select a font. ..... \newfont L
select bold extended font. ..... \bf
select bold math italic and symbol fonts. .. \boldmath L
select font for non-math text. ..... \textfont*
select font for small math scripts. ..... \scriptfont*
select font for very small math ... \scriptscriptfont*
select font four steps larger than normal size. \huge L
select font one step larger than normal size. \large L
select font three steps larger than normal size. \LARGE L
select font two steps larger than normal size. \Large L
select footnote font size. ..... \footnotesize L
select italic font. ..... \it
select largest available font. ..... \Huge L
select math spacing of a closing delimiter for \mathclose*
select math spacing of an opening delimiter \mathopen*
select normal font size. ..... \normalsize L
select old-style numerals with descenders. .. \oldstyle
select one of several entries determined by an \ifcase*
select Roman font. ..... \rm
select sans serif font. ..... \sf L
select slanted font. ..... \sl
select small caps font. ..... \sc L
select small font size. ..... \small L
select smallest defined font. ..... \tiny L
select subscript or superscript font size. . \scriptsize L
select sub-subscript font size. .... \scriptscriptsize L
select typewriter font. ..... \tt
semantics of a token. ..... \meaning*
send a box to the DVI file. ..... \shipout*
sentences. ..... \xspaceskip*
separate cases in an \ifcase. ..... \or*
separating a page and footnotes. ..... \footnoterule
separating columns in a tabular ..... \tabcolsep L
separating double columns. ..... \columnseprule L
separating footnotes from text. ..... \footnoterule L
separation. ..... \footstrut
separation distance. ..... \footnotesep L
separation in array environment. ..... \arraycolsep L
separation in array or tabular ..... \doublerulesep L
separation in math mode. ..... \openup

field separator in \halign or \valign. ..... & *
a synonym for the current meaning of a control sequence. define ..... \let *
an undefined control sequence. ..... \undefined
assigns the second token to a control sequence and continues. ..... \futurelet *
expand a control sequence into character tokens. ..... \string *
escape character in the output of control sequence tokens. ..... \escapechar *
redefinable scratch control sequence used by \dospecials. ..... \do
scratch control sequence used in preloading fonts. ..... \preloaded
11 point sans serif font. ..... \elvsf L
select sans serif font. ..... \sf L
10 point sans serif font. ..... \tensf L
12 point sans serif font. ..... \twlsf L
end a \settabs definition. ..... \columns
the following macro definition or register setting is global. ..... \global *
define an unusual paragraph shape. ..... \parshape *
German letter: sharp s (ß). ..... \ss
math symbol: sharp (♯). ..... \sharp
pound, hatch mark, sharp sign, octothorpe (#). ..... \#
shift super accents. ..... \skew
add a box to the vertical list shifted left. ..... \moveleft *
add a box to the vertical list shifted right. ..... \moveright *
number of output routine calls since last \shipout. ..... \deadcycles *
show boxes that are shipped out. ..... \tracingoutput *
generate a short amount of verbatim text. ..... \verb L
extra space above displays following short lines. ..... \abovedisplayshortskip *
extra space just below displays following short lines. ..... \belowdisplayshortskip *
show a box. ..... \showbox *
show a token. ..... \show *
show boxes that are shipped out. .... \tracingoutput *
show characters not in the font. .. \tracinglostchars *
executed. show commands before they are ... \tracingcommands *
show diagnostics on the terminal. .... \tracingonline *
show hyphenations of given words. ..... \showhyphens
show line-break calculations. .... \tracingparagraphs *
show macros as they are expanded. .. \tracingmacros *
show page-break calculations. ..... \tracingpages *
show statistics about memory usage. .. \tracingstats *
show the current lists. ..... \showlists *
end. show unassignments when groups . \tracingrestores *
maximum box depth shown. ..... \showboxdepth *
maximum boxed items shown at a given depth. ..... \showboxbreadth *
infinitely stretchable and shrinkable horizontal space. ..... \hss *
infinitely stretchable and shrinkable vertical space. ..... \vss *
amount of glue shrinkage in current page. ..... \pageshrink *
put marginal notes on normal side of page. ..... \normalmarginpar L
put marginal notes on opposite side of page. ..... \reversemarginpar L
math Greek letter: sigma (σ). ..... \sigma
math Greek letter: capital sigma (Σ). ..... \Sigma
math Greek letter: variant sigma (ς). ..... \varsigma
dollar sign. ..... \$
math operator: discretionary multiply sign. ..... *
percent sign (%). ..... \%
pound, hatch mark, sharp sign, octothorpe (#). ..... \#

math relation: similar or equal ($\simeq$). ..... \simeq
math relation: similar ($\sim$). ..... \sim
math function: arc sine. ..... \arcsin
math function: sine. ..... \sin
math function: hyperbolic sine. ..... \sinh
create a box with a single column of items. ..... \shortstack[L]
start a new page in single-column format. ..... \onecolumn[L]
current value of the sixth-level item counter. ..... \theenumvi[L]
mark denoting sixth-level items. ..... \labelitemvi[L]
width of left margin in sixth-level list. ..... \leftmarginvi[L]
1.5-line math delimiter size. ..... \Big
1-line math delimiter size. ..... \big
2.5-line math delimiter size. ..... \Bigg
2-line math delimiter size. ..... \bigg
big font size. ..... \big[L]
bigger font size. ..... \Big[L]
biggest font size. ..... \BIG[L]
select footnote font size. ..... \footnotesize[L]
select font four steps larger than normal size. ..... \huge[L]
select font one step larger than normal size. ..... \large[L]
select font three steps larger than normal size. ..... \LARGE[L]
select font two steps larger than normal size. ..... \Large[L]
select normal font size. ..... \normalsize[L]
select sub-subscript font size. ..... \scriptscriptsize[L]
select subscript or superscript font size. ..... \scriptsize[L]
select small font size. ..... \small[L]
size of column that must contain text. \textfraction[L]
page. size of float on double-column \dblfloatpagefraction[L]
symbol that will work properly in text and script sizes. define a ..... \mathpalette
breakable small horizontal skip. ..... \enskip
large breakable horizontal skip. ..... \qquad
breakable medium horizontal skip. ..... \quad
vertical skip a large amount. ..... \bigskip[L]
vertical skip a medium amount. ..... \medskip[L]
vertical skip a small amount. ..... \smallskip[L]
an unoriented skip amount with stretch of 1fill. ..... \fill[L]
skip horizontal space. ..... \hspace[L]
remove a skip just added to the current list. ..... \unskip*
fetch last skip off the current list. ..... \lastskip*
remove last skip on the list. ..... \removelastskip
math skip register. ..... \muskip*
define a name for a math skip register. ..... \muskipdef*
use a skip register. ..... \skip*
define a name for a skip register. ..... \skipdef*
allocate a new math skip register. ..... \newmuskip
allocate a new skip register. ..... \newskip
skip vertical space. ..... \vspace[L]
11 point slanted font. ..... \elvsl[L]
select slanted font. ..... \sl
10 point slanted font. ..... \tensl
12 point slanted font. ..... \twlsl[L]
slanted font family. ..... \slfam
permit a line break after a slash. ..... \slash

Norwegian letter: capital O with slash (Ø). ..... \O
Norwegian letter: o with slash (ø). ..... \o
math operator: circle slash (⊘). ..... \oslash
Polish letter: slashed L (ł). ..... \l
Polish letter: upper-case slashed L (Ł). ..... \L
vertical skip a small amount. ..... \smallskip L
select small caps font. ..... \sc L
select small font size. ..... \small L
breakable small horizontal skip. ..... \enskip
unbreakable small horizontal space. ..... \enspace
unbreakable small horizontal space. ..... \thinspace
math operator: small integral (∫). ..... \smallint
use very small math script style. ..... \scriptscriptstyle *
use small math script style. ..... \scriptstyle *
select font for small math scripts. ..... \scriptfont *
select font for very small math scripts. ..... \scriptscriptfont *
create a small sample page. ..... \minipage L
math symbol: small script L (ℓ). ..... \ell
suppress space in script and small script styles. ..... \nonscript *
small vertical space. ..... \smallskip
small vertical space and a good page break. \smallbreak
select smallest defined font. ..... \tiny L
\smallskip space. ..... \smallskipamount
math relation: smile (⌣). ..... \smile
create some horizontal space. ..... \hglue
put a frame around some text. ..... \frame L
create some vertical space. ..... \vglue
math symbol: southeast arrow (↘). ..... \searrow
math symbol: southwest arrow (↙). ..... \swarrow
math mode negative thin space. ..... \!
unbreakable space. ..... ~
add extra vertical space. ..... \addvspace L
\bigskip space. ..... \bigskipamount
unbreakable small horizontal space. ..... \enspace
infinitely stretchable horizontal space. ..... \hfil *
more infinitely stretchable horizontal space. ..... \hfill *
cancel infinitely stretchable horizontal space. ..... \hfilneg *
create some horizontal space. ..... \hglue
add horizontal space. ..... \hskip *
skip horizontal space. ..... \hspace L
infinitely stretchable and shrinkable horizontal space. ..... \hss *
medium vertical space. ..... \medskip
\medskip space. ..... \medskipamount
unbreakable tiny negative math mode horizontal space. ..... \negthinspace
control space. ..... \␣ *
small vertical space. ..... \smallskip
\smallskip space. ..... \smallskipamount
a blank space. ..... \space
infinitely stretchable space. ..... \stretch L
unbreakable small horizontal space. ..... \thinspace
infinitely stretchable vertical space. ..... \vfil *
more infinitely stretchable vertical space. ..... \vfill *
cancel infinitely stretchable vertical space. ..... \vfilneg *

create some vertical space. ..... \vglue
add vertical space. ..... \vskip*
skip vertical space. ..... \vspace[L]
infinitely stretchable and shrinkable vertical space. ..... \vss*
extra space above displays. ..... \abovedisplayskip*
short lines. extra space above displays following \abovedisplayshortskip*
extra space added to top of page. ..... \topmargin[L]
create end-of-sentence space after following punctuation. ..... \@[L]
extra space after subscript or superscript. .... \scriptspace*
small vertical space and a good page break. ..... \smallbreak
vertical space around a float in the middle of a page. \intextsep[L]
paragraph. space at the end of the last line of a ... \parfillskip*
space at the top of a page. ..... \topskip*
space at top of a split box. ..... \splittopskip*
environment. add extra space before a column in array or tabular \extracolsep[L]
suppress interline space before next vertical box. .... \nointerlineskip
and \framebox. space between a box and its contents in \fbox \fboxsep[L]
space between a label and text of a list item. \labelsep[L]
space between aligned tab entries. ..... \tabskip*
text. space between columns in double column . \columnsep[L]
space between double-column floats. ... \dblfloatsep[L]
and text. space between double-column floats \dbltextfloatsep[L]
amount of extra space between entries in an index. ..... \indexspace[L]
paragraph. space between first list item and preceding . \topsep[L]
space between floats. ..... \floatsep[L]
space between floats and the text. .... \textfloatsep[L]
normal space between lines. ..... \baselineskip*
turn off extra space between lines. ..... \offinterlineskip
enough. extra space between lines if \baselineskip isn't \lineskip*
minimum space between lines in a vertical list. . \lineskiplimit*
space between main text and footnotes. .... \footins[L]
vertical space between marginal notes. ..... \marginparpush[L]
space between page header and text. ..... \headsep[L]
define space between paragraphs. ..... \parskip*
list environment. space between paragraphs within an item in a \parsep[L]
environment. space between rows of array or tabular \arraystretch[L]
space between sentences. ..... \xspaceskip*
environment. space between successive items in a list ..... \itemsep[L]
space between text and page footer. ..... \footskip[L]
space between words. ..... \spaceskip*
space character. ..... ␣*
set a character's space factor. ..... \sfcode*
extra space in badly-stretched lines. .... \emergencystretch[3]
amount of filll space in current page. ..... \pagefilllstretch*
amount of fill space in current page. ..... \pagefillstretch*
amount of fil space in current page. ..... \pagefilstretch*
medium space in math formulas. ..... \medmuskip*
thick space in math formulas. ..... \thickmuskip*
thin space in math formulas. ..... \thinmuskip*
medium space in math mode. ..... \>
medium space in math mode. ..... \:[L]
insert horizontal space in math mode. ..... \mskip*
suppress space in script and small script styles. .... \nonscript*

extra space just below displays. ..... \belowdisplayskip*

following short lines. extra space just below displays ... \belowdisplayshortskip*

thick space (math mode). ..... \;

thin space (math mode). ..... \,

large vertical space or a good page break. ..... \bigbreak

medium vertical space or a good page break. ..... \medbreak

use the space taken by a formula. ..... \phantom

space to the left of a paragraph. ..... \leftskip*

space to the right of a paragraph. ..... \rightskip*

internal Plain TEX space used for centering. ..... \centering

special Plain TEX space used in alignment. ..... \hideskip

extra vertical space when environment starts a paragraph. \partopsepL

fill a space with a downward brace. ..... \downbracefill

fill a space with a left arrow. ..... \leftarrowfill

surround a space with a repeated box or rule. ..... \cleaders*

fill a space with a repeated box or rule. ..... \leaders*

fill a space with a right arrow. ..... \rightarrowfill

fill a space with a rule. ..... \hrulefill

fill a space with an evenly distributed box or rule. \xleaders*

fill a space with an upward brace. ..... \upbracefill

fill a space with dots. ..... \dotfill

verbatim spaces in input text. ..... \obeyspaces

lower dot math symbol with special spacing. ..... \ldotp

vertical strut to preserve line spacing. ..... \strut

suppress special spacing after punctuation. ..... \frenchspacing

enable special spacing after punctuation. ..... \nonfrenchspacing

set a character's spacing factor. ..... \spacefactor*

centered dot with special spacing in math mode. ..... \cdotp

item. select math spacing of a closing delimiter for the next \mathclose*

item. select math spacing of an opening delimiter for the next \mathopen*

set line spacing to normal values. ..... \normalbaselines

math symbol: spade suit (♠). ..... \spadesuit

amount by which delimiters can fail to span included material. ..... \delimitershortfall*

span several columns in an alignment. .... \multispan

enable only specific \include commands. ..... \includeonlyL

override \global specifications. ..... \globaldefs*

specify a character by its numeric code. .... \char*

specify a math character code. ..... \mathchar*

BIBTEX. specify bibliographic style for ... \bibliographystyleL

hyphenation. specify language to be used for ..... \setlanguage3

specify page numbering style. ..... \pagenumberingL

specify penalty for a line or page break. .... \penalty*

penalty for insertions that are split. ..... \floatingpenalty*

mark text last encountered in a split box. ..... \splitbotmark*

mark text first encountered in a split box. ..... \splitfirstmark*

maximum depth of boxes in a split box. ..... \splitmaxdepth*

space at top of a split box. ..... \splittopskip*

sum of penalties for split insertions on the page. ..... \insertpenalties*

split off a specified amount from a vbox. ... \vsplit*

math operator: square cap (⊓). ..... \sqcap

math operator: large square cup (⨆). ..... \bigsqcup

math operator: square cup (⊔). ..... \sqcup

square root of a formula. ..... \sqrt

math relation: square subset or equal (⊑). ..... \sqsubseteq
math symbol: square subset (⊏). ..... \sqsubset[L]
math relation: square superset or equal (⊒). ..... \sqsupseteq
math symbol: square superset (⊐). ..... \sqsupset[L]
align a stack of equations. ..... \eqalign
align a stack of equations with equation numbers. \eqalignno
numbers. align a stack of equations with left equation .... \leqalignno
display a stack of formulas without alignment. .. \displaylines
stack one equation above another. ..... \stackrel[L]
math operator: star (⋆). ..... \star
start a chapter. ..... \chapter[L]
start a labeled paragraph. ..... \paragraph[L]
start a labeled sub-level paragraph. ... \subparagraph[L]
start a major division of a long document. . \part[L]
flush figures and start a new page. ..... \clearpage[L]
start a new page. ..... \newpage[L]
start a new page in double-column format. \twocolumn[L]
start a new page in single-column format. \onecolumn[L]
flush figures and tables and start a new right-hand page. ..... \cleardoublepage[L]
start a paragraph indented \parindent. .... \indent[*]
start a paragraph without indentation. .... \noindent[*]
start a section. ..... \section[L]
start a subsection. ..... \subsection[L]
start a subsubsection. ..... \subsubsection[L]
start an entry in a list environment. ..... \item[L]
zero. start an \halign with \tabskip initialized to \ialign
number of characters before hyphenation at the start of a word. minimum .. \lefthyphenposition[3]
statement. character that starts a new output line in a write ..... \newlinechar[*]
extra vertical space when environment starts a paragraph. ..... \partopsep[L]
character that starts a new output line in a write statement. ..... \newlinechar[*]
show statistics about memory usage. ..... \tracingstats[*]
select font one step larger than normal size. ..... \large[L]
select font four steps larger than normal size. ..... \huge[L]
select font three steps larger than normal size. ..... \LARGE[L]
select font two steps larger than normal size. ..... \Large[L]
permit an alignment entry to stick out of its column. ..... \hidewidth
define a tab stop in tabbing environment. ..... \=[L]
unindents left margin one tab stop in tabbing environment. ..... \-[L]
indents left margin one tab stop in tabbing environment. ..... \+[L]
the current line. stop reading current input file at the end of \endinput[*]
process input without stopping for errors. ..... \nonstopmode[*]
restore tabs stops in tabbing environment. ..... \poptabs[L]
save current tab stops in tabbing environment. ..... \pushtabs[L]
store an hbox or vbox in a box register. .... \setbox[*]
amount of glue stretch in current page. ..... \pagestretch[*]
an unoriented skip amount with stretch of 1fill. ..... \fill[L]
infinitely stretchable and shrinkable horizontal space. \hss[*]
infinitely stretchable and shrinkable vertical space. ... \vss[*]
infinitely stretchable horizontal space. ..... \hfil[*]
more infinitely stretchable horizontal space. ..... \hfill[*]
cancel infinitely stretchable horizontal space. ..... \hfilneg[*]
infinitely stretchable space. ..... \stretch[L]
infinitely stretchable vertical space. ..... \vfil[*]

more infinitely stretchable vertical space. ..... \vfill*
cancel infinitely stretchable vertical space. ..... \vfilneg*
require strict line and page breaks. ..... \fussy L
convert a number to a token string. ..... \number*
box containing a strut. ..... \strutbox
vertical strut to preserve line spacing. ..... \strut
math strut with height and depth of parentheses. \mathstrut
set sectional units to appendix style. ..... \appendix L
bold font style. ..... \bf L
use normal math script style. ..... \displaystyle*
set a formula flush left in display style. ..... \lefteqn L
choose a math formula based on the current style. ..... \mathchoice*
specify page numbering style. ..... \pagenumbering L
set global page style. ..... \pagestyle L
use very small math script style. ..... \scriptscriptstyle*
use small math script style. ..... \scriptstyle*
set current page style. ..... \thispagestyle L
declare document style and options. ..... \documentstyle L
specify bibliographic style for BibTeX. ..... \bibliographystyle L
use in-text style for math. ..... \textstyle*
suppress space in script and small script styles. ..... \nonscript*
mark the beginning of a major subdivision. ..... \beginsection
define an inner math subformula. ..... \mathinner*
display a sub-item. ..... \itemitem
start a labeled sub-level paragraph. ..... \subparagraph L
subscript, equivalent to _. ..... \sb
extra space after subscript or superscript. ..... \scriptspace*
select subscript or superscript font size. ..... \scriptsize L
place superscripts and subscripts after math operators. ..... \nolimits*
start a subsection. ..... \subsection L
\parindent. indent second and subsequent lines in a paragraph by ..... \hang
environment. indent second and subsequent paragraphs in a list ..... \listparindent L
math relation: square subset or equal (⊑). ..... \sqsubseteq
math relation: subset or equal (⊆). ..... \subseteq
math symbol: square subset (⊏). ..... \sqsubset L
math relation: subset (⊂). ..... \subset
select sub-subscript font size. ..... \scriptscriptsize L
start a subsubsection. ..... \subsubsection L
test always succeeds. ..... \iftrue*
space between successive items in a list environment. ..... \itemsep L
math relation: successor or equal (≽). ..... \succeq
math relation: successor (≻). ..... \succ
math symbol: club suit (♣). ..... \clubsuit
math symbol: diamond suit (♢). ..... \diamondsuit
math symbol: heart suit (♡). ..... \heartsuit
math symbol: spade suit (♠). ..... \spadesuit
math operator: direct sum, circle plus (⊕). ..... \oplus
math operator: amalgamated sum, co-product (∐). ..... \amalg
on the page. sum of penalties for split insertions \insertpenalties*
math operator: large sum (∑). ..... \sum
math function: sup. ..... \sup
shift super accents. ..... \skew
extra space after subscript or superscript. ..... \scriptspace*

superscript, equivalent to ^. ..... \sp
select subscript or superscript font size. ..... \scriptsize[L]
operators. place superscripts and subscripts after math ..... \nolimits[*]
math relation: square superset or equal (⊒). ..... \sqsupseteq
math relation: superset or equal (⊇). ..... \supseteq
math symbol: square superset (⊐). ..... \sqsupset[L]
math relation: superset (⊃). ..... \supset
suppress a line break. ..... \nolinebreak[L]
suppress a page break. ..... \nopagebreak[L]
text. suppress bottom justification of page . \raggedbottom
suppress expansion of a character. ..... \noexpand[*]
vertical box. suppress interline space before next \nointerlineskip
suppress numbering of displayed equations. \nonumber[L]
suppress page numbers. ..... \nopagenumbers
lines. suppress right justification of paragraph \raggedright
font lines. suppress right justification of typewriter \ttraggedright
styles. suppress space in script and small script .. \nonscript[*]
punctuation. suppress special spacing after ..... \frenchspacing
preamble for this entry. suppress the template in the alignment ..... \omit[*]
suppress writing all auxiliary files. ..... \nofiles[L]
math function: limit supremum (*limsup*). ..... \limsup
math symbol: surd (√). ..... \surd
surround a space with a repeated box or rule. \cleaders[*]
thickness of rule surrounding framed box. ..... \fboxrule[L]
mode. switch to horizontal mode from vertical . \leavevmode
underscore symbol. ..... _
display counter as footnote symbol. ..... \fnsymbol[L]
close brace symbol. ..... \}
open brace symbol. ..... \{
ligature digraph symbol ae (æ). ..... \ae
math symbol: aleph (ℵ). ..... \aleph
angle symbol (∠). ..... \angle
math symbol: bottom (⊥). ..... \bot
math symbol: box (□). ..... \Box[L]
ligature digraph symbol capital AE (Æ). ..... \AE
ligature digraph symbol capital OE (Œ). ..... \OE
math symbol: club suit (♣). ..... \clubsuit
copyright symbol (©). ..... \copyright
dagger symbol (†). ..... \dag
double dagger symbol (‡). ..... \ddag
math symbol: diamond (◇). ..... \Diamond[L]
math symbol: diamond suit (♢). ..... \diamondsuit
math symbol: dotless i (ı). ..... \imath
math symbol: dotless j (ȷ). ..... \jmath
math symbol: double relation bar (=). ..... \Relbar
math symbol: double vertical bar (‖). ..... \Arrowvert
math symbol: down arrow (↓). ..... \downarrow
math symbol: downward double arrow (⇓). ..... \Downarrow
math symbol: empty set (∅). ..... \emptyset
math symbol: exists quantifier (∃). ..... \exists
math symbol: flat (♭). ..... \flat
8 point LaTeX symbol font. ..... \egtly[L]

8 point math symbol font. ..... \egtsy L
11 point LaTeX symbol font. ..... \elvly L
11 point math symbol font. ..... \elvsy L
5 point math symbol font. ..... \fivesy
5 point LaTeX symbol font. ..... \fivly L
5 point math symbol font. ..... \fivsy L
14 point LaTeX symbol font. ..... \frtnly L
14 point math symbol font. ..... \frtnsy L
9 point LaTeX symbol font. ..... \ninly L
9 point math symbol font. ..... \ninsy L
7 point math symbol font. ..... \sevensy
7 point LaTeX symbol font. ..... \sevly L
7 point math symbol font. ..... \sevsy L
6 point LaTeX symbol font. ..... \sixly L
6 point math symbol font. ..... \sixsy L
17 point LaTeX symbol font. ..... \svtnly L
17 point math symbol font. ..... \svtnsy L
10 point math extension symbol font. ..... \tenex
10 point LaTeX symbol font. ..... \tenly L
10 point math symbol font. ..... \tensy
12 point LaTeX symbol font. ..... \twlly L
12 point math symbol font. ..... \twlsy L
20 point LaTeX symbol font. ..... \twtyly L
20 point math symbol font. ..... \twtysy L
select bold math italic and symbol fonts. ..... \boldmath L
unselect bold math italic and symbol fonts. ..... \unboldmath L
math symbol: for-all quantifier ($\forall$). ..... \forall
display a symbol from a font. ..... \symbol L
math symbol: heart suit ($\heartsuit$). ..... \heartsuit
math symbol: hook left arrow ($\hookleftarrow$). ..... \hookleftarrow
math symbol: hook right arrow ($\hookrightarrow$). ..... \hookrightarrow
math symbol: imaginary, Fraktur I ($\Im$). ..... \Im
math symbol: infinity (∞). ..... \infty
math symbol: iota (ι). ..... \iota
math symbol: join ($\bowtie$). ..... \Join L
math symbol: leads to ($\leadsto$). ..... \leadsto L
math symbol: left arrow ($\leftarrow$). ..... \leftarrow
math symbol: left double arrow ($\Leftarrow$). ..... \Leftarrow
math symbol: left half diamond ($\lhd$). ..... \lhd L
math symbol: left harpoon down ($\leftharpoondown$). .. \leftharpoondown
math symbol: left harpoon up ($\leftharpoonup$). ..... \leftharpoonup
math symbol: left hook ($\hookleftarrow$). ..... \lhook
math symbol: left moustache ($\lmoustache$). ..... \lmoustache
math symbol: left quote (‘). ..... \lq
math symbol: left-right arrow ($\leftrightarrow$). ..... \leftrightarrow
math symbol: left-right double arrow ($\Leftrightarrow$). \Leftrightarrow
math symbol: logical or ($\vee$). ..... \lor
($\longleftrightarrow$). math symbol: long left and right arrow \longleftrightarrow
math symbol: long left arrow ($\longleftarrow$). ..... \longleftarrow
math symbol: long left double arrow ($\Longleftarrow$). \Longleftarrow
arrow ($\Longleftrightarrow$). math symbol: long left-right double . \Longleftrightarrow
math symbol: long maps to ($\longmapsto$). ..... \longmapsto

math symbol: long right arrow ($\longrightarrow$). .... \longrightarrow
math symbol: long right double arrow ($\Longrightarrow$). \Longrightarrow
math symbol: maps to char ($\mapsto$). ..... \mapstochar
math symbol: maps to ($\mapsto$). ..... \mapsto
math symbol: mho ($\mho$). ..... \mho L
math symbol: nabla (∇). ..... \nabla
math symbol: natural ($\natural$). ..... \natural
math symbol: northeast arrow ($\nearrow$). ..... \nearrow
math symbol: northwest arrow ($\nwarrow$). ..... \nwarrow
ligature digraph symbol oe (œ). ..... \oe
math symbol: paragraph ($\P$). ..... \P
math symbol: partial (∂). ..... \partial
math symbol: Planck's constant or h-bar ($\hbar$). .... \hbar
British pound symbol (£). ..... \pounds L
math symbol: prime (x'). ..... \prime
math symbol: real, Fraktur R ($\Re$). ..... \Re
math symbol: relation bar ($-$). ..... \relbar
math symbol: right arrow ($\rightarrow$). ..... \rightarrow
math symbol: right double arrow ($\Rightarrow$). ..... \Rightarrow
math symbol: right half diamond ($\rhd$). ..... \rhd L
math symbol: right harpoon down ($\rightharpoondown$). \rightharpoondown
math symbol: right harpoon up ($\rightharpoonup$). ..... \rightharpoonup
math symbol: right hook ($\hookrightarrow$). ..... \rhook
math symbol: right left harpoon ($\rightleftharpoons$). \rightleftharpoons
math symbol: right moustache ($\rmoustache$). ..... \rmoustache
math symbol: section ($\S$). ..... \S
math symbol: sharp ($\sharp$). ..... \sharp
math symbol: small script L (ℓ). ..... \ell
math symbol: southeast arrow ($\searrow$). ..... \searrow
math symbol: southwest arrow ($\swarrow$). ..... \swarrow
math symbol: spade suit ($\spadesuit$). ..... \spadesuit
math symbol: square subset ($\sqsubset$). ..... \sqsubset L
math symbol: square superset ($\sqsupset$). ..... \sqsupset L
math symbol: surd ($\surd$). ..... \surd
and script sizes. define a symbol that will work properly in text . \mathpalette
math symbol: top ($\top$). ..... \top
math symbol: triangle ($\triangle$). ..... \triangle
math symbol: underlined left half diamond ($\unlhd$). .. \unlhd L
math symbol: underlined right half diamond ($\unrhd$). \unrhd L
math symbol: up-and-down double arrow ($\Updownarrow$). \Updownarrow
math symbol: upward double arrow ($\Uparrow$). ..... \Uparrow
math symbol: vertical bar ($\arrowvert$). ..... \arrowvert
math symbol: vertical bar ($\|$). ..... \|
math symbol: vertical dots ($\vdots$). ..... \vdots
math symbol: Weierstrass p ($\wp$). ..... \wp
lower dot math symbol with special spacing. ..... \ldotp
internal Plain TEX operation to define math text symbols. ..... \mathhexbox
put symbols over math relations. ..... \buildrel
sequence. define a synonym for the current meaning of a control \let *
space between aligned tab entries. ..... \tabskip *
move to next tab position in tabbing environment. ..... \> L
define a tab stop in tabbing environment. ..... \= L

unindents left margin one — tab stop in tabbing environment. ..... \-[L]
indents left margin one — tab stop in tabbing environment. ..... \+[L]
save current — tab stops in tabbing environment. ..... \pushtabs[L]
begin a — tabbed line in an inner environment. ..... \tabalign
begin a — tabbed line in an outer environment. ..... \+
produce TEX accents in — tabbing environment. ..... \a[L]
discard current line in — tabbing environment. ..... \kill[L]
cancel effect of one \+ command in — tabbing environment. ..... \<[L]
define a tab stop in — tabbing environment. ..... \=[L]
move to next tab position in — tabbing environment. ..... \>[L]
put text flush right in a column in — tabbing environment. ..... \'[L]
unindents left margin one tab stop in — tabbing environment. ..... \-[L]
restore tabs stops in — tabbing environment. ..... \poptabs[L]
save current tab stops in — tabbing environment. ..... \pushtabs[L]
indents left margin one tab stop in — tabbing environment. ..... \+[L]
distance left by \' command between — tabbing fields. ..... \tabbingsep[L]
adds an entry to the specified list or — table. ..... \addcontentsline[L]
create an aligned — table. ..... \halign*
create a multicolumn entry in an aligned — table. ..... \span*
add text to — table contents, figures, or tables. ..... \addtocontents[L]
generate a — table of contents. ..... \tableofcontents[L]
add text to table contents, figures, or — tables. ..... \addtocontents[L]
generate a list of — tables. ..... \listoftables[L]
flush figures and — tables and start a new right-hand page. ..... \cleardoublepage[L]
reset — tabs. ..... \cleartabs
define horizontal — tabs. ..... \settabs
box containing current — tabs. ..... \tabs
restore — tabs stops in tabbing environment. ..... \poptabs[L]
start an \halign with — \tabskip initialized to zero. ..... \ialign
space between rows of array or — tabular environment. ..... \arraystretch[L]
multicolumn line in array or — tabular environment. ..... \cline[L]
double rule separation in array or — tabular environment. ..... \doublerulesep[L]
add extra space before a column in array or — tabular environment. ..... \extracolsep[L]
multicolumn entry in array or — tabular environment. ..... \multicolumn[L]
half the width separating columns in a — tabular environment. ..... \tabcolsep[L]
horizontal line in array and — tabular environments. ..... \hline[L]
vertical line in array and — tabular environments. ..... \vline[L]
math function: arc — tangent. ..... \arctan
math function: — tangent. ..... \tan
math function: hyperbolic — tangent. ..... \tanh
math Greek letter: — tau (τ). ..... \tau
suppress the — template in the alignment preamble for this entry. \omit*
math operator: — tensor product, circle times ($\otimes$). ..... \otimes
write balanced error message to the — terminal. ..... \errmessage*
write balanced text to — terminal. ..... \message*
show diagnostics on the — terminal. ..... \tracingonline*
execute a command from the — terminal. ..... \typein[L]
write a message on the — terminal. ..... \typeout[L]
— terminate a \csname token list. ..... \endcsname*
— terminate LATEX and flush the final page. ... \stop[L]
— terminate TEX. ..... \end*
— terminate TEX and write a format file: ..... \dump* INITEX only.
en entry in a file of index — terms. ..... \indexentry[L]

test always false. ..... \iffalse*
test always succeeds. ..... \iftrue*
test category codes. ..... \ifcat*
test for a horizontal box. ..... \ifhbox*
test for a vertical box. ..... \ifvbox*
test for an empty box. ..... \ifvoid*
test for an internal mode. ..... \ifinner*
test for end of file. ..... \ifeof*
test for horizontal mode. ..... \ifhmode*
test for math mode. ..... \ifmmode*
test for odd integer. ..... \ifodd*
test for vertical mode. ..... \ifvmode*
test the next character. ..... \@ifnextchar L
test two dimensions. ..... \ifdim*
test two integers. ..... \ifnum*
terminate TEX. ..... \end*
produce TEX accents in tabbing environment. ..... \a L
terminate TEX and write a format file: INITEX only. . \dump*
name of current TEX format package. ..... \fmtname
version of current TEX format package. ..... \fmtversion
pause for normal errors while processing TEX input. ..... \errorstopmode*
process errors. TEX input without pausing for normal .. \scrollmode*
TEX primitive \par. ..... \@@par L

space between columns in double column text. ..... \columnsep L
end a line in \halign aligned text. ..... \cr*
rule between double-column floats and text. ..... \dblfigrule L
space between double-column floats and text. ..... \dbltextfloatsep L
define a macro with expanded replacement text. ..... \edef*
equivalent to \cr, end of aligned text. ..... \endline
insert a footnote mark without text. ..... \footnotemark L
macro to draw the rule separating footnotes from text. ..... \footnoterule L
put a frame around some text. ..... \frame L
space between page header and text. ..... \headsep L
distance between marginal note and text. ..... \marginparsep L
define kerning around math in text. ..... \mathsurround*
verbatim line breaks in input text. ..... \obeylines
verbatim spaces in input text. ..... \obeyspaces
suppress bottom justification of page text. ..... \raggedbottom
set a length command to width of text. ..... \settowidth L
space between floats and the text. ..... \textfloatsep L
select font for non-math text. ..... \textfont*
size of column that must contain text. ..... \textfraction L
place rule between top floats and text. ..... \topfigrule L
generate a short amount of verbatim text. ..... \verb L
define a global macro with expanded replacement text. ..... \xdef*
place rule between text and bottom floats. ..... \botfigrule L
space between main text and footnotes. ..... \footins L
space between text and page footer. ..... \footskip L
define a symbol that will work properly in text and script sizes. ..... \mathpalette
insert text at the top of the page. ..... \topinsert
tokens to insert when math in text begins. ..... \everymath*
height of text, excluding head and foot. ..... \textheight L
mark text first encountered in a split box. \splitfirstmark*

mark text first encountered on page just boxed. \firstmark*
environment. put text flush right in a column in tabbing ..... \'L
center text in a line. ..... \centerline
create an underlined box with text in it. ..... \underlineL
include balanced text in DVI file for post-processing. ..... \special*
place balanced text into a mark item on the current list. ... \mark*
10 point text italic font. ..... \tenit
mark text last encountered in a split box. ... \splitbotmark*
mark text last encountered on page just boxed. .. \botmark*
flush text left on a line. ..... \leftline
space between a label and text of a list item. ..... \labelsepL
flush right text on a line. ..... \rightline
height of text on a page or \vbox. ..... \vsize*
length of text preceding a display. ..... \predisplaysize*
internal Plain TEX operation to define math text symbols. ..... \mathhexbox
translate balanced text to lower-case. ..... \lowercase*
add text to table contents, figures, or tables. \addtocontentsL
write balanced text to terminal. ..... \message*
create a zero-width box with text to the left. ..... \llap
create a zero-width box with text to the right. ..... \rlap
translate balanced text to upper-case. ..... \uppercase*
formatted. define where text will be inserted when the page is ..... \insert*
produce footnote text without a mark. ..... \footnotetextL
select font four steps larger than normal size. ..... \hugeL
select font one step larger than normal size. ..... \largeL
select font three steps larger than normal size. ..... \LARGEL
select font two steps larger than normal size. ..... \LargeL
define a new theorem environment. ..... \newtheoremL
environment. begin theorem with special format in math ..... \proclaim
math Greek letter: theta (θ). ..... \theta
math Greek letter: capital theta (Θ). ..... \Theta
math Greek letter: variant theta (ϑ). ..... \vartheta
thick lines for lines and circles. ..... \thicklinesL
thick space in math formulas. ..... \thickmuskip*
thick space (math mode). ..... \;
fraction with rule thickness. ..... \above*
thickness of rule surrounding framed box. .. \fboxruleL
thin lines for lines and circles. ..... \thinlinesL
math mode negative thin space. ..... \!
thin space in math formulas. ..... \thinmuskip*
thin space (math mode). ..... \,
current value of the third-level item counter. ..... \theenumiiiL
third-level item in an index. ..... \subsubitemL
mark denoting third-level items. ..... \labelitemiiiL
width of left margin in third-level list. ..... \leftmarginiiiL
tie-after accent (o͡o). ..... \t
tilde accent (ñ). ..... \~
math accent: tilde ($\tilde{x}$). ..... \tilde
math accent: wide tilde ($\widetilde{x}$). ..... \widetilde
space. unbreakable tiny negative math mode horizontal ... \negthinspace
produce the title. ..... \maketitleL
declare the title. ..... \titleL
additional authors on title page. ..... \andL

date on title page. ..... \date L
add footnote to title page. ..... \thanks L
title page author. ..... \author L
display today's date. ..... \today L
internal Plain TEX command to piece together long arrows. ..... \joinrel
expand the token following the next token. ..... \expandafter *
give a token list defining the semantics of a token. ..... \meaning *
show a token. ..... \show *
insert a token after the current group is completed. \aftergroup *
command. insert a token after the next assignment ... \afterassignment *
expand the token following the next token. ..... \expandafter *
terminate a \csname token list. ..... \endcsname *
give a token list defining the semantics of a token. \meaning *
use a token list register. ..... \toks *
define a name for a token list register. ..... \toksdef *
write a token list to a file. ..... \write *
allocate a new token register. ..... \newtoks
convert a number to a token string. ..... \number *
assigns the second token to a control sequence and continues. \futurelet *
an empty list of tokens. ..... \empty
character in the output of control sequence tokens. escape ..... \escapechar *
compare tokens. ..... \ifx *
expand a control sequence into character tokens. ..... \string *
begin expanding tokens to construct a command name. ..... \csname *
nonredundant \crcr. tokens to insert after every \cr or ..... \everycr *
tokens to insert when a paragraph begins. . \everypar *
tokens to insert when a vbox begins. ..... \everyvbox *
tokens to insert when an hbox begins. .... \everyhbox *
begins. tokens to insert when display math ... \everydisplay *
tokens to insert when math in text begins. \everymath *
tokens to insert when the job begins. ..... \everyjob *
read, expand, then ignore tokens until a non-space is found. ..... \ignorespaces *
badness tolerance after hyphenation. ..... \tolerance *
attempted. badness tolerance before hyphenation is ..... \pretolerance *
vertical mode material with the baseline at the top. create a box with ..... \vtop *
fraction of two-column page for top floats. ..... \dbltopfraction L
fraction of column for top floats. ..... \topfraction L
place rule between top floats and text. ..... \topfigrule L
space at the top of a page. ..... \topskip *
insertion class for inserts at the top of a page. ..... \topins
space at top of a split box. ..... \splittopskip *
extra space added to top of page. ..... \topmargin L
penalty for creating a widow line at top of page. ..... \widowpenalty *
insert text at the top of the page. ..... \topinsert
math symbol: top (⊤). ..... \top
trace output processing. ..... \showoutput L
translate balanced text to lower-case. ..... \lowercase *
translate balanced text to upper-case. .... \uppercase *
math operator: large down triangle (▽). ..... \bigtriangledown
math operator: large up triangle (△). ..... \bigtriangleup
math symbol: triangle (△). ..... \triangle
math operator: left triangle (◁). ..... \triangleleft
math operator: right triangle (▷). ..... \triangleright

fraction of two-column page for top floats. ..... \dbltopfraction L
set a character's processing category type. ..... \catcode *
set a math character's processing category type. ..... \mathcode *
typeset page number. ..... \folio
11 point typewriter font. ..... \elvtt L
9 point typewriter font. ..... \nintt L
10 point typewriter font. ..... \tentt
select typewriter font. ..... \tt
12 point typewriter font. ..... \twltt L
typewriter font family. ..... \ttfam
suppress right justification of typewriter font lines. ..... \ttraggedright
math operator: large U plus (⨄). ..... \biguplus
math operator: U plus (⊎). ..... \uplus
diæresis or umlaut accent (ẍ). ..... \"
long Hungarian umlaut accent (ő). ..... \H
insert unaligned material in \halign or \valign. . \noalign *
show unassignments when groups end. .. \tracingrestores *
vertical list. un-box a copy of a vbox and add it to the .. \unvcopy *
horizontal list. un-box a copy of an hbox and add it to the \unhcopy *
un-box a vbox and add it to the vertical list. \unvbox *
list. un-box an hbox and add it to the horizontal \unhbox *
unbreakable small horizontal space. ..... \enspace
unbreakable small horizontal space. ..... \thinspace
unbreakable space. ..... ~
horizontal space. unbreakable tiny negative math mode . \negthinspace
an undefined control sequence. ..... \undefined
draw a line under a formula. ..... \underline *
horizontal brace under a math formula. ..... \underbrace
put a math field under a radical. ..... \radical *
dot under accent (x̣). ..... \d
math accent: bar under (x̲). ..... \b
create a box with an underline. ..... \underbar
create an underlined box with text in it. ..... \underline L
math symbol: underlined left half diamond (⩤). ..... \unlhd L
math symbol: underlined right half diamond (⩥). ..... \unrhd L
underscore symbol. ..... _
environment. unindents left margin one tab stop in tabbing \- L
math operator: union or cup (∪). ..... \cup
unit of distance in picture environment. . \unitlength L
unit of measure for opening up displays. .... \jot
set sectional units to appendix style. ..... \appendix L
an unoriented skip amount with stretch of 1fill. \fill L
unselect bold math italic and symbol fonts. \unboldmath L
define an unusual paragraph shape. ..... \parshape *
math delimiter: up-and-down arrow (↕). ..... \updownarrow
math symbol: up-and-down double arrow (⇕). ..... \Updownarrow
upper bound on output routine calls. \maxdeadcycles *
upper left piece of a horizontal brace. ..... \bracelu
upper right piece of a horizontal brace. ..... \braceru
translate balanced text to upper-case. ..... \uppercase *
upper-case code for a character. ..... \uccode *
display counter as upper-case letter. ..... \Alph L
display counter as upper-case Roman numerals. ..... \Roman L

Polish letter: upper-case slashed L (Ł). ..... \L
math Greek letter: upsilon (υ). ..... \upsilon
math Greek letter: capital upsilon (Υ). ..... \Upsilon
math delimiter: upward arrow ($\uparrow$). ..... \uparrow
fill a space with an upward brace. ..... \upbracefill
math symbol: upward double arrow ($\Uparrow$). ..... \Uparrow
show statistics about memory usage. ..... \tracingstats*
redefinable scratch control sequence used by \dospecials. ..... \do
internal Plain TEX space used for centering. ..... \centering
current language used for hyphenation. ..... \language[3]
define a new language to be used for hyphenation. ..... \newlanguage[3]
specify language to be used for hyphenation. ..... \setlanguage[3]
special Plain TEX space used in alignment. ..... \hideskip
scratch control sequence used in preloading fonts. ..... \preloaded
help message to display if user asks for help. ..... \errhelp*
restores a carriage return to its usual meaning. ..... \restorecr[L]
math join operator: large V ($\bigvee$). ..... \bigvee
math relation: dash V ($\dashv$). ..... \dashv
math binary operator: join or V ($\vee$). ..... \vee
field separator in \halign or \valign. ..... &*
insert unaligned material in \halign or \valign. ..... \noalign*
divide a register by a value. ..... \divide*
multiply a register by a value. ..... \multiply*
set value of a counter. ..... \setcounter[L]
produce the value of a counter. ..... \value[L]
increment the value of a length command. ..... \addtolength[L]
was boxed. value of \botmark just before current page . \topmark*

\lineskiplimit. value of normal \lineskip. ..... \normallineskip
value of normal ..... \normallineskiplimit
current value of the fifth-level item counter. ..... \theenumv[L]
current value of the figure counter. ..... \thefigure[L]
current value of the first-level item counter. ..... \theenumi[L]
current value of the fourth-level item counter. .... \theenumiv[L]
current value of the second-level item counter. .... \theenumii[L]
current value of the sixth-level item counter. ..... \theenumvi[L]
current value of the third-level item counter. .... \theenumiii[L]
set line spacing to normal values. ..... \normalbaselines
define a new counter variable. ..... \newcounter[L]
ratio for variable delimiters times 1000. .... \delimiterfactor*
math Greek letter: variant epsilon (ε). ..... \varepsilon
math Greek letter: variant phi (φ). ..... \varphi
math Greek letter: variant pi (ϖ). ..... \varpi
math Greek letter: variant rho (ϱ). ..... \varrho
math Greek letter: variant sigma (ς). ..... \varsigma
math Greek letter: variant theta (ϑ). ..... \vartheta
height of text on a page or \vbox. ..... \vsize*
split off a specified amount from a vbox. ..... \vsplit*
un-box a vbox and add it to the vertical list. ..... \unvbox*
un-box a copy of a vbox and add it to the vertical list. ..... \unvcopy*
tokens to insert when a vbox begins. ..... \everyvbox*
maximum overrun before overfull vbox error. ..... \vfuzz*
limit for bad vbox errors. ..... \vbadness*
store an hbox or vbox in a box register. ..... \setbox*

create a centered vbox in a math list. ..... \vcenter*
create a zero-width vbox the height and depth of a formula. ... \vphantom
math accent: vector ($\vec{x}$). ..... \vec
vector in a picture environment. ..... \vector[L]
verbatim line breaks in input text. ..... \obeylines
verbatim spaces in input text. ..... \obeyspaces
generate a short amount of verbatim text. ..... \verb[L]
version of current TEX format package. .. \fmtversion
math symbol: vertical bar ($\arrowvert$). ..... \arrowvert
math symbol: double vertical bar ($\Arrowvert$). ..... \Arrowvert
math symbol: vertical bar ($\|$). ..... \|
math delimiter: vertical bar ($\vert$). ..... \vert
math delimiter: double vertical bar ($\Vert$). ..... \Vert
test for a vertical box. ..... \ifvbox*
suppress interline space before next vertical box. ..... \nointerlineskip
piece of a vertical brace ($\bracevert$). ..... \bracevert
large vertical break. ..... \bigskip
math symbol: vertical dots ($\vdots$). ..... \vdots
environments. vertical line in array and tabular ..... \vline[L]
minimum space between lines in a vertical list. ..... \lineskiplimit*
depth of the last box on the vertical list. ..... \prevdepth*
un-box a vbox and add it to the vertical list. ..... \unvbox*
un-box a copy of a vbox and add it to the vertical list. ..... \unvcopy*
place a footnote in a caption or other vertical list. ..... \vfootnote
produce a vertical list of the body of a page. .... \pagecontents
add a box to the vertical list shifted left. ..... \moveleft*
add a box to the vertical list shifted right. ..... \moveright*
insert vertical material into a paragraph. ..... \vadjust*
test for vertical mode. ..... \ifvmode*
switch to horizontal mode from vertical mode. ..... \leavevmode
create a box with vertical mode material. ..... \vbox*
the top. create a box with vertical mode material with the baseline at . \vtop*
vertical offset of a page. ..... \voffset*
produce a vertical rule. ..... \vrule*
vertical skip a large amount. ..... \bigskip[L]
vertical skip a medium amount. ..... \medskip[L]
vertical skip a small amount. ..... \smallskip[L]
add extra vertical space. ..... \addvspace[L]
medium vertical space. ..... \medskip
small vertical space. ..... \smallskip
infinitely stretchable vertical space. ..... \vfil*
more infinitely stretchable vertical space. ..... \vfill*
cancel infinitely stretchable vertical space. ..... \vfilneg*
create some vertical space. ..... \vglue
add vertical space. ..... \vskip*
skip vertical space. ..... \vspace[L]
infinitely stretchable and shrinkable vertical space. ..... \vss*
small vertical space and a good page break. ... \smallbreak
a page. vertical space around a float in the middle of \intextsep[L]
vertical space between marginal notes. \marginparpush[L]
large vertical space or a good page break. ..... \bigbreak

medium vertical space or a good page break. ..... \medbreak
paragraph. extra vertical space when environment starts a . \partopsep[L]
vertical strut to preserve line spacing. ..... \strut
math binary operator: meet or wedge ($\wedge$). ..... \wedge
math meet operator: large wedge ($\bigwedge$). ..... \bigwedge
math symbol: Weierstrass p ($\wp$). ..... \wp
formatted. define where text will be inserted when the page is \insert[*]
10 point wide circle font. ..... \tencircw[L]
math accent: wide hat ($\widehat{x}$). ..... \widehat
10 point wide line font. ..... \tenlnw[L]
math accent: wide tilde ($\widetilde{x}$). ..... \widetilde
penalty for creating a widow line at top of page. ..... \widowpenalty[*]
penalty for creating a widow line before a display. .. \displaywidowpenalty[*]
create a box of current line width. ..... \line
label width in a list environment. ..... \labelwidth[L]
width of a box. ..... \wd[*]
width of a column. ..... \columnwidth[L]
width of a displayed equation. ..... \displaywidth[*]
create a zero-height hbox with the width of a formula. ..... \hphantom
width of a null delimiter. ..... \nulldelimiterspace[*]
width of a paragraph or \hbox. ..... \hsize[*]
set width of array rules. ..... \arrayrulewidth[L]
width of left margin in fifth-level list. .. \leftmarginv[L]
width of left margin in first-level list. .. \leftmargini[L]
width of left margin in fourth-level list. \leftmarginiv[L]
width of left margin in second-level list. \leftmarginii[L]
width of left margin in sixth-level list. \leftmarginvi[L]
width of left margin in third-level list. \leftmarginiii[L]
set width of lines in picture environment. \linethickness[L]
width of marginal notes. ..... \marginparwidth[L]
width of printing on page. ..... \textwidth[L]
columns. width of rule separating double ..... \columnseprule[L]
boxes. width of rules appended to overfull ... \overfullrule[*]
set a length command to width of text. ..... \settowidth[L]
width of the current line. ..... \linewidth[L]
environment. half the width separating columns in a tabular .... \tabcolsep[L]
of characters before hyphenation at the start of a word. minimum number ... \lefthyphenposition[3]
of characters after hyphenation at the end of a word. minimum number .. \righthyphenposition[3]
word delimiter character. ..... \boundarychar[3]
show hyphenations of given words. ..... \showhyphens
space between words. ..... \spaceskip[*]
define a symbol that will work properly in text and script sizes. . \mathpalette
math binary operator: wreath product ($\wr$). ..... \wr
terminate TEX and write a format file: INITEX only. ..... \dump[*]
write a glossary entry. ..... \glossary[L]
write a message on the terminal. ..... \typeout[L]
write a token list to a file. ..... \write[*]
terminal. write balanced error message to the ..... \errmessage[*]
write balanced text to terminal. ..... \message[*]
perform a \read or \write immediately. ..... \immediate[*]
character that starts a new output line in a write statement. ..... \newlinechar[*]
write to the log file only. ..... \wlog
suppress writing all auxiliary files. ..... \nofiles[L]

math Greek letter:	xi (ξ).	`\xi`
math Greek letter: capital	xi (Ξ).	`\Xi`
current month of the	year.	`\month`*
start an `\halign` with `\tabskip` initialized to	zero.	`\ialign`
create a formula with	zero height.	`\smash`
align	zero or more columns.	`\valign`*
create a	zero-height hbox with the width of a formula.	`\hphantom`
create a	zero-width box with text to the left.	`\llap`
create a	zero-width box with text to the right.	`\rlap`
create a	zero-width vbox the height and depth of a formula.	`\vphantom`
math Greek letter:	zeta (ζ).	`\zeta`

Chapter 3

Primitive and Plain TEX commands

This is a list of the TEX primitives and the Plain TEX commands. Primitives are marked with an asterisk. TEX version 3 commands are marked with a '3'.

*␣ space character.
~ unbreakable space.
*$ enter math mode.
*$$ enter display math mode.
% begin comment.
*& field separator in \halign or \valign.
*\␣ control space.
\! math mode negative thin space.
\# pound, hatch mark, sharp sign, octothorpe (#).
\$ dollar sign.
\% percent sign (%).
\& ampersand.
\' acute accent (é).
* math operator: discretionary multiply sign.
\+ begin a tabbed line in an outer environment.
\, thin space (math mode).
*\- discretionary hyphen.
\. dot accent (ẋ).
*\/ italic correction.
\; thick space (math mode).
\= macron or bar accent (ō).
\> medium space in math mode.
\{ open brace symbol.
\} close brace symbol.
\^ circumflex accent (ô).
_ underscore symbol.
\` grave accent (è).
\| math symbol: vertical bar (‖).
\~ tilde accent (ñ).
\" diæresis or umlaut accent (ẍ).
\aa symbol å.
\AA symbol capital Å.

*\above fraction with rule thickness.
*\abovedisplayshortskip extra space above displays following short lines.
*\abovedisplayskip extra space above displays.
*\abovewithdelims fraction with specified rule and delimiters.
*\accent put an accent over the next character.
\active category code for active characters.
\acute math accent: acute ($\acute{x}$).
*\adjdemerits demerits for adjacent incompatible lines.
*\advance perform arithmetic on a register.
\advancepageno advance \pageno by one.
\ae ligature digraph symbol ae (æ).
\AE ligature digraph symbol capital AE (Æ).
*\afterassignment insert a token after the next assignment command.
*\aftergroup insert a token after the current group is completed.
\aleph math symbol: aleph ($\aleph$).
\allocationnumber most recently allocated register number.
\allowbreak allow a line break.
\alpha math Greek letter: alpha (α).
\amalg math operator: amalgamated sum, co-product ($\amalg$).
\angle angle symbol ($\angle$).
\approx math relation: approximately equal ($\approx$).
\arccos math function: arc cosine.
\arcsin math function: arc sine.
\arctan math function: arc tangent.
\arg math function: arg.
\arrowvert math symbol: vertical bar ($\arrowvert$).
\Arrowvert math symbol: double vertical bar ($\Arrowvert$).
\ast math operator: asterisk ($\ast$).

\asymp math relation: asymptote ($\asymp$).
*\atop fraction without rule.
*\atopwithdelims fraction without rule with given delimiters.
\b math accent: bar under ($\underline{x}$).
\backslash math delimiter: backslash ($\backslash$).
3\badness badness of a box.
\bar math accent: bar ($\bar{x}$).
*\baselineskip normal space between lines.
*\batchmode process input without displaying errors.
*\begingroup begin a group.
\beginsection mark the beginning of a major subdivision.
*\belowdisplayshortskip extra space just below displays following short lines.
*\belowdisplayskip extra space just below displays.
\beta math Greek letter: beta (β).
\bf select bold extended font.
\bffam bold font family.
\bgroup begin a group.
\big 1-line math delimiter size.
\Big 1.5-line math delimiter size.
\bigbreak large vertical space or a good page break.
\bigcap math operator: large cap ($\bigcap$).
\bigcirc math operator: large circle ($\bigcirc$).
\bigcup math operator: large cup ($\bigcup$).
\bigg 2-line math delimiter size.
\Bigg 2.5-line math delimiter size.
\biggl 2-line left math delimiter.
\Biggl 2.5-line left math delimiter.
\biggm 2-line middle math delimiter.
\Biggm 2.5-line middle math delimiter.
\biggr 2-line right math delimiter.
\Biggr 2.5-line right math delimiter.
\bigl 1-line left math delimiter.
\Bigl 1.5-line left math delimiter.
\bigm 1-line middle math delimiter.
\Bigm 1.5-line middle math delimiter.
\bigodot math operator: large circle with dot ($\bigodot$).
\bigoplus math operator: large circle with plus ($\bigoplus$).
\bigotimes math operator: large circle with times ($\bigotimes$).
\bigr 1-line right math delimiter.
\Bigr 1.5-line right math delimiter.
\bigskip large vertical break.
\bigskipamount \bigskip space.
\bigsqcup math operator: large square cup ($\bigsqcup$).
\bigtriangledown math operator: large down triangle ($\bigtriangledown$).
\bigtriangleup math operator: large up triangle ($\bigtriangleup$).
\biguplus math operator: large U plus ($\biguplus$).
\bigvee math join operator: large V ($\bigvee$).
\bigwedge math meet operator: large wedge ($\bigwedge$).
*\binoppenalty penalty for line break after binary operation.
\bmod math operator: binary modulo (mod).
\bordermatrix generate a matrix labeled on rows and columns.
\bot math symbol: bottom ($\bot$).
*\botmark mark text last encountered on page just boxed.
3\boundarychar word delimiter character.
\bowtie math relation: bowtie ($\bowtie$).
*\box use a box.
*\boxmaxdepth maximum depth of boxes on explicit pages.
\brace fraction without a rule with braces.
\braceld lower left piece of a horizontal brace.
\bracelu upper left piece of a horizontal brace.
\bracerd lower right piece of a horizontal brace.
\braceru upper right piece of a horizontal brace.
\bracevert piece of a vertical brace ($\Big|$).
\brack fraction without a rule with brackets.
\break force a line break.
\breve math accent: breve ($\breve{x}$).
*\brokenpenalty penalty if page break after hyphenated line.
\buildrel put symbols over math relations.
\bullet math operator: bullet ($\bullet$).
\bye finish processing input.
\c cedilla accent (ç).
\cal math mode calligraphic letters font.
\cap math operator: intersection or cap ($\cap$).
\cases generate a matrix with a left brace delimiter.
*\catcode set a character's processing category type.
\cdot math operator: centered dot ($\cdot$).
\cdotp centered dot with special spacing in math mode.
\cdots three centered dots in math mode ($\cdots$).
\centering internal Plain TEX space used for centering.
\centerline center text in a line.

*\char specify a character by its numeric code.
*\chardef define a name for a character.
\check math accent: check ($\check{x}$).
\chi math Greek letter: chi (χ).
\choose fraction without a rule with parentheses.
\circ math operator: circle ($\circ$).
*\cleaders surround a space with a repeated box or rule.
\cleartabs reset tabs.
*\closein close an input file.
*\closeout close an output file.
*\clubpenalty penalty if page break after first line of paragraph.
\clubsuit math symbol: club suit (♣).
\colon colon in a math formula.
\columns end a \settabs definition.
\cong math relation: congruent ($\cong$).
\coprod math operator: large co-product ($\coprod$).
*\copy use a copy of a box.
\copyright copyright symbol (©).
\cos math function: cosine.
\cosh math function: hyperbolic cosine.
\cot math function: cotangent.
\coth math function: hyperbolic cotangent.
*\count use a count register.
*\countdef define a name for a count register.
*\cr end a line in \halign aligned text.
*\crcr ensure a \cr in \halign.
\csc math function: cosecant.
*\csname begin expanding tokens to construct a command name.
\cup math operator: union or cup ($\cup$).
\d dot under accent ($\underset{\cdot}{x}$).
\dag dagger symbol (†).
\dagger math operator: dagger (†).
\dashv math relation: dash V ($\dashv$).
*\day current day of the month.
\ddag double dagger symbol (‡).
\ddagger math operator: double dagger (‡).
\ddot math accent: double dot ($\ddot{x}$).
\ddots three diagonal dots in math mode ($\ddots$).
*\deadcycles number of output routine calls since last \shipout.
*\def define a macro.
*\defaulthyphenchar default hyphen when a font is loaded.
*\defaultskewchar default horizontal kern character to position accents.
\deg math function: degree of a polynomial (deg).
*\delcode define a character as a delimiter.
*\delimiter define a delimiter for math mode.
*\delimiterfactor ratio for variable delimiters times 1000.
*\delimitershortfall amount by which delimiters can fail to span included material.
\delta math Greek letter: delta (δ).
\Delta math Greek letter: capital delta (Δ).
\det math function: det.
\diamond math operator: diamond ($\diamond$).
\diamondsuit math symbol: diamond suit ($\diamondsuit$).
\dim math function: dim.
*\dimen use a dimension register.
*\dimendef define a name for a dimension register.
*\discretionary append a discretionary item to the current list.
*\displayindent indentation of line for displayed equation.
*\displaylimits restore default limit placement on large math operators.
\displaylines display a stack of formulas without alignment.
*\displaystyle use normal math script style.
*\displaywidowpenalty penalty for creating a widow line before a display.
*\displaywidth width of a displayed equation.
\div math operator: div.
*\divide divide a register by a value.
\do redefinable scratch control sequence used by \dospecials.
\dospecials change the character code for a set of special characters.
\dosupereject flush insertions and eject to a new page.
\dot math accent: dot ($\dot{x}$).
\doteq math relation: dotted equal ($\doteq$).
\dotfill fill a space with dots.
\dots an ellipsis, equivalent to \ldots in math mode.
*\doublehyphendemerits demerits for consecutive broken lines.
\downarrow math symbol: down arrow ($\downarrow$).
\Downarrow math symbol: downward double arrow ($\Downarrow$).
\downbracefill fill a space with a downward brace.
*\dp depth of a box.
*\dump terminate TEX and write a format file: INITEX only.
*\edef define a macro with expanded replacement text.
\egroup end a group.

\eject force a page break.
\ell math symbol: small script L (ℓ).
*\else alternative to an \if.
3\emergencystretch extra space in badly-stretched lines.
\empty an empty list of tokens.
\emptyset math symbol: empty set ($\emptyset$).
*\end terminate TEX.
*\endcsname terminate a \csname token list.
\endgraf equivalent to \par.
*\endgroup end a group.
*\endinput stop reading current input file at the end of the current line.
\endinsert end of an insert.
\endline equivalent to \cr, end of aligned text.
*\endlinechar character placed at the right end of an input line.
\enskip breakable small horizontal skip.
\enspace unbreakable small horizontal space.
\epsilon math Greek letter: epsilon (ϵ).
\eqalign align a stack of equations.
\eqalignno align a stack of equations with equation numbers.
*\eqno equation number.
\equiv math relation: equivalence ($\equiv$).
*\errhelp help message to display if user asks for help.
*\errmessage write balanced error message to the terminal.
3\errorcontextlines number of lines of context to be displayed in an error message.
*\errorstopmode pause for normal errors while processing TEX input.
*\escapechar escape character in the output of control sequence tokens.
\eta math Greek letter: eta (η).
*\everycr tokens to insert after every \cr or nonredundant \crcr.
*\everydisplay tokens to insert when display math begins.
*\everyhbox tokens to insert when an hbox begins.
*\everyjob tokens to insert when the job begins.
*\everymath tokens to insert when math in text begins.
*\everypar tokens to insert when a paragraph begins.
*\everyvbox tokens to insert when a vbox begins.
*\exhyphenpenalty penalty for line break after explicit hyphen.
\exists math symbol: exists quantifier ($\exists$).
\exp math function: exp.
*\expandafter expand the token following the next token.
*\fam current family number.
*\fi end of an \if clause.
\filbreak break a page unless there is a better \filbreak below.
*\finalhyphendemerits demerits for a penultimate broken line.
*\firstmark mark text first encountered on page just boxed.
\fivebf 5 point boldface Roman font.
\fivei 5 point math italic font.
\fiverm 5 point Roman font.
\fivesy 5 point math symbol font.
\flat math symbol: flat ($\flat$).
*\floatingpenalty penalty for insertions that are split.
\fmtname name of current TEX format package.
\fmtversion version of current TEX format package.
\folio typeset page number.
*\font load a font.
*\fontdimen set a font-related parameter.
*\fontname gives the external file name for the given font.
\footins insertion class for footnote inserts.
\footline page foot line.
\footnote create a footnote.
\footnoterule define the rule separating a page and footnotes.
\footstrut ensure footnote line separation.
\forall math symbol: for-all quantifier ($\forall$).
\frenchspacing suppress special spacing after punctuation.
\frown math relation: frown ($\frown$).
*\futurelet assigns the second token to a control sequence and continues.
\gamma math Greek letter: gamma (γ).
\Gamma math Greek letter: capital gamma (Γ).
\gcd math function: gcd.
*\gdef define a macro globally.
\ge math relation: greater or equal ($\geq$).
\geq math relation: greater or equal ($\geq$).
\gets math relation: gets ($\leftarrow$).
\gg math relation: much greater ($\gg$).
*\global the following macro definition or register setting is global.
*\globaldefs override \global specifications.
\goodbreak good page break.
\grave math accent: grave ($\grave{x}$).
\H long Hungarian umlaut accent (ő).
*\halign create an aligned table.

\hang indent second and subsequent lines in a paragraph by \parindent.
*\hangafter hanging indentation changes after specified number of lines.
*\hangindent set hanging indentation.
\hat math accent: hat ($\hat{x}$).
*\hbadness limit for bad hbox errors.
\hbar math symbol: Planck's constant or h-bar ($\hbar$).
*\hbox create a box with horizontal mode material.
\headline page head line.
\heartsuit math symbol: heart suit ($\heartsuit$).
*\hfil infinitely stretchable horizontal space.
*\hfill more infinitely stretchable horizontal space.
*\hfilneg cancel infinitely stretchable horizontal space.
*\hfuzz maximum overrun before overfull hbox messages occur.
\hglue create some horizontal space.
\hideskip special Plain TEX space used in alignment.
\hidewidth permit an alignment entry to stick out of its column.
*\hoffset horizontal offset of a page.
\hom math function: hom.
\hookleftarrow math symbol: hook left arrow ($\hookleftarrow$).
\hookrightarrow math symbol: hook right arrow ($\hookrightarrow$).
\hphantom create a zero-height hbox with the width of a formula.
*\hrule produce a horizontal rule.
\hrulefill fill a space with a rule.
*\hsize width of a paragraph or \hbox.
*\hskip add horizontal space.
*\hss infinitely stretchable and shrinkable horizontal space.
*\ht height of a box.
*\hyphenation insert words into hyphenation dictionary.
*\hyphenchar hyphenation character for this font.
*\hyphenpenalty penalty for line break after discretionary hyphen.
\i dotless i letter (ı).
\ialign start an \halign with \tabskip initialized to zero.
*\if compare two character codes.
*\ifcase select one of several entries determined by an integer.
*\ifcat test category codes.
*\ifdim test two dimensions.
*\ifeof test for end of file.
\iff math relation: if and only if ($\iff$).
*\iffalse test always false.
*\ifhbox test for a horizontal box.
*\ifhmode test for horizontal mode.
*\ifinner test for an internal mode.
*\ifmmode test for math mode.
*\ifnum test two integers.
*\ifodd test for odd integer.
*\iftrue test always succeeds.
*\ifvbox test for a vertical box.
*\ifvmode test for vertical mode.
*\ifvoid test for an empty box.
*\ifx compare tokens.
*\ignorespaces read, expand, then ignore tokens until a non-space is found.
\Im math symbol: imaginary, Fraktur I ($\Im$).
\imath math symbol: dotless i ($\imath$).
*\immediate perform a \read or \write immediately.
\in math relation: in ($\in$).
*\indent start a paragraph indented \parindent.
\inf math function: inf.
\infty math symbol: infinity (∞).
*\input read a file.
*\insert define where text will be inserted when the page is formatted.
*\insertpenalties sum of penalties for split insertions on the page.
\int math operator: integral ($\int$).
\interdisplaylinepenalty penalty for breaking between lines of a display.
\interfootnotelinepenalty penalty for breaking between lines of a footnote.
*\interlinepenalty additional penalty for page break between lines.
\iota math symbol: iota (ι).
\it select italic font.
\item display an item.
\itemitem display a sub-item.
\itfam italic font family.
\j dotless j letter (ȷ).
\jmath math symbol: dotless j ($\jmath$).
*\jobname name of the principal input file.
\joinrel internal Plain TEX command to piece together long arrows.
\jot unit of measure for opening up displays.
\kappa math Greek letter: kappa (κ).
\ker math function: ker.

*\kern kern a given distance.
\l Polish letter: slashed L (ł).
\L Polish letter: upper-case slashed L (Ł).
\lambda math Greek letter: lambda (λ).
\Lambda math Greek letter: capital lambda (Λ).
\land math operator: logical and ($\wedge$).
\langle math delimiter: left angle bracket ($\langle$).
3\language current language used for hyphenation.
*\lastbox fetch last box off the current list.
*\lastkern fetch last kern off the current list.
*\lastpenalty fetch last penalty off the current list.
*\lastskip fetch last skip off the current list.
\lbrace math delimiter: left curly brace ({).
\lbrack math delimiter: left bracket ([).
*\lccode lower-case code for a character.
\lceil math delimiter: left ceiling bracket ($\lceil$).
\ldotp lower dot math symbol with special spacing.
\ldots three low dots in math mode (...).
\le math relation: less or equal ($\leq$).
*\leaders fill a space with a repeated box or rule.
\leavevmode switch to horizontal mode from vertical mode.
*\left begin a new math list with a left delimiter.
\leftarrow math symbol: left arrow ($\leftarrow$).
\Leftarrow math symbol: left double arrow ($\Leftarrow$).
\leftarrowfill fill a space with a left arrow.
\leftharpoondown math symbol: left harpoon down ($\leftharpoondown$).
\leftharpoonup math symbol: left harpoon up ($\leftharpoonup$).
3\lefthyphenposition minimum number of characters before hyphenation at the start of a word.
\leftline flush text left on a line.
\leftrightarrow math symbol: left-right arrow ($\leftrightarrow$).
\Leftrightarrow math symbol: left-right double arrow ($\Leftrightarrow$).
*\leftskip space to the left of a paragraph.
\leq math relation: less or equal ($\leq$).
\leqalignno align a stack of equations with left equation numbers.
*\leqno left equation number.
*\let define a synonym for the current meaning of a control sequence.
\lfloor math delimiter: left floor bracket ($\lfloor$).
\lg math function: lg.
\lgroup math delimiter: left group ($\lgroup$).
\lhook math symbol: left hook ($\lhook$).
\lim math function: lim.
\liminf math function: limit infimum ($liminf$).
*\limits place math limits above and below math operators.
\limsup math function: limit supremum ($limsup$).
\line create a box of current line width.
*\linepenalty amount added to badness of every line in a paragraph.
*\lineskip extra space between lines if \baselineskip isn't enough.
*\lineskiplimit minimum space between lines in a vertical list.
\ll math relation: much less ($\ll$).
\llap create a zero-width box with text to the left.
\lmoustache math symbol: left moustache ($\lmoustache$).
\ln math function: ln.
\lnot math operator: logical not, hook ($\neg$).
\log math function: log.
*\long the following macro may have multiple paragraphs as parameters.
\longleftarrow math symbol: long left arrow ($\longleftarrow$).
\Longleftarrow math symbol: long left double arrow ($\Longleftarrow$).
\longleftrightarrow math symbol: long left and right arrow ($\longleftrightarrow$).
\Longleftrightarrow math symbol: long left-right double arrow ($\Longleftrightarrow$).
\longmapsto math symbol: long maps to ($\longmapsto$).
\longrightarrow math symbol: long right arrow ($\longrightarrow$).
\Longrightarrow math symbol: long right double arrow ($\Longrightarrow$).
\loop begin a loop.
*\looseness force a change to the number of lines in a paragraph.
\lor math symbol: logical or ($\vee$).
*\lower lower a box a given distance.
*\lowercase translate balanced text to lower-case.
\lq math symbol: left quote (‘).
*\mag magnification ratio times 1000.
\magnification set the magnification for the document.
\magstep define font magnification.

\magstephalf use 11 point magnification.
\makefootline constructs a box with the page foot.
\makeheadline constructs a box with the page header.
\mapsto math symbol: maps to ($\mapsto$).
\mapstochar math symbol: maps to char ($\mapstochar$).
*\mark place balanced text into a mark item on the current list.
*\mathaccent place an accent over the next math field.
*\mathbin define a binary math operator.
*\mathchar specify a math character code.
*\mathchardef define a name for a math character.
*\mathchoice choose a math formula based on the current style.
*\mathclose select math spacing of a closing delimiter for the next item.
*\mathcode set a math character's processing category type.
\mathhexbox internal Plain TEX operation to define math text symbols.
*\mathinner define an inner math subformula.
*\mathop define a large math operator.
*\mathopen select math spacing of an opening delimiter for the next item.
*\mathord define an ordinary math operator.
\mathpalette define a symbol that will work properly in text and script sizes.
*\mathpunct define a math punctuation operator.
*\mathrel define a math relation operator.
\mathstrut math strut with height and depth of parentheses.
*\mathsurround define kerning around math in text.
\matrix generate a matrix without delimiters.
\max math function: max.
*\maxdeadcycles upper bound on output routine calls.
*\maxdepth maximum depth of boxes on main pages.
\maxdimen largest permissible dimension.
*\meaning give a token list defining the semantics of a token.
\medbreak medium vertical space or a good page break.
*\medmuskip medium space in math formulas.
\medskip medium vertical space.
\medskipamount \medskip space.
*\message write balanced text to terminal.
\mid math relation: mid ($\mid$).
\midinsert insert at current position in page.
\min math function: min.
\mit math mode italic font.
*\mkern kern in math mode.
\models math relation: models ($\models$).
*\month current month of the year.
*\moveleft add a box to the vertical list shifted left.
*\moveright add a box to the vertical list shifted right.
\mp math operator: minus plus ($\mp$).
*\mskip insert horizontal space in math mode.
\mu math Greek letter: mu (μ).
*\multiply multiply a register by a value.
\multispan span several columns in an alignment.
*\muskip math skip register.
*\muskipdef define a name for a math skip register.
\nabla math symbol: nabla (∇).
\narrower increase left and right margins by \parindent.
\natural math symbol: natural ($\natural$).
\ne math relation: not equal ($\neq$).
\nearrow math symbol: northeast arrow ($\nearrow$).
\neg math operator: negate ($\neg$).
\negthinspace unbreakable tiny negative math mode horizontal space.
\neq math relation: not equal ($\neq$).
\newbox allocate a new box register.
\newcount allocate a new count register.
\newdimen allocate a new dimension register.
\newfam define a new font family.
\newhelp define a new help message.
\newif define a new \if command.
\newinsert allocate a new insert register.
3\newlanguage define a new language to be used for hyphenation.
*\newlinechar character that starts a new output line in a write statement.
\newmuskip allocate a new math skip register.
\newread allocate a new input file.
\newskip allocate a new skip register.
\newtoks allocate a new token register.
\newwrite allocate a new output file.
\ni math relation: contains ($\ni$).
*\noalign insert unaligned material in \halign or \valign.
\nobreak prohibit a line or page break.
*\noexpand suppress expansion of a character.
*\noindent start a paragraph without indentation.
\nointerlineskip suppress interline space before next vertical box.

*\nolimits place superscripts and subscripts after math operators.
\nonfrenchspacing enable special spacing after punctuation.
*\nonscript suppress space in script and small script styles.
*\nonstopmode process input without stopping for errors.
\nopagenumbers suppress page numbers.
\normalbaselines set line spacing to normal values.
\normalbaselineskip normal \baselineskip.
\normalbottom justify page bottoms to the same height.
\normallineskip value of normal \lineskip.
\normallineskiplimit value of normal \lineskiplimit.
\not math operator: not (/).
\not= math relation: not equal ($\neq$).
\notin math operator: not in ($\notin$).
\nu math Greek letter: nu (ν).
\null an empty hbox.
*\nulldelimiterspace width of a null delimiter.
*\nullfont a font with no characters.
*\number convert a number to a token string.
\nwarrow math symbol: northwest arrow ($\nwarrow$).
\o Norwegian letter: o with slash (ø).
\O Norwegian letter: capital o with slash (Ø).
\obeylines verbatim line breaks in input text.
\obeyspaces verbatim spaces in input text.
\odot math operator: circle dot ($\odot$).
\oe ligature digraph symbol oe (œ).
\OE ligature digraph symbol capital OE (Œ).
\offinterlineskip turn off extra space between lines.
\oint math operator: contour integral ($\oint$).
\oldstyle select old-style numerals with descenders.
\omega math Greek letter: omega (ω).
\Omega math Greek letter: capital omega (Ω).
\ominus math operator: circle minus ($\ominus$).
*\omit suppress the template in the alignment preamble for this entry.
*\openin open a file for input.
*\openout open a file for output.
\openup increase line separation in math mode.
\oplus math operator: direct sum, circle plus ($\oplus$).
*\or separate cases in an \ifcase.
\oslash math operator: circle slash ($\oslash$).
\otimes math operator: tensor product, circle times ($\otimes$).
*\outer the following macro must not be called from another macro.
*\output define the page output routine.
*\outputpenalty penalty at the current page break.
*\over fraction with a rule.
\overbrace horizontal brace over a math formula.
*\overfullrule width of rules appended to overfull boxes.
\overleftarrow left arrow over a math formula.
*\overline draw a line over a formula.
\overrightarrow right arrow over a math formula.
*\overwithdelims fraction with rule and given delimiters.
\owns math relation: owns ($\ni$).
\P math symbol: paragraph (¶).
\pagebody put page contents in a box of the proper height.
\pagecontents produce a vertical list of the body of a page.
*\pagedepth depth of the current page.
*\pagefilllstretch amount of filll space in current page.
*\pagefillstretch amount of fill space in current page.
*\pagefilstretch amount of fil space in current page.
*\pagegoal desired page height.
\pageinsert insert a whole page.
\pageno current page number.
*\pageshrink amount of glue shrinkage in current page.
*\pagestretch amount of glue stretch in current page.
*\pagetotal natural height of page so far.
*\par end a paragraph.
\parallel math relation: parallel ($\parallel$).
*\parfillskip space at the end of the last line of a paragraph.
*\parindent define paragraph indentation.
*\parshape define an unusual paragraph shape.
*\parskip define space between paragraphs.
\partial math symbol: partial (∂).
*\patterns define a set of hyphenation patterns.
*\pausing pause after each line is read from a file.
*\penalty specify penalty for a line or page break.
\perp math relation: perpendicular ($\perp$).

\phantom use the space taken by a formula.
\phi math Greek letter: phi (ϕ).
\Phi math Greek letter: capital phi (Φ).
\pi math Greek letter: pi (π).
\Pi math Greek letter: capital pi (Π).
\plainoutput default Plain output routine.
\pm math operator: plus or minus ($\pm$).
\pmatrix generate a matrix with parentheses delimiters.
\pmod math function: mod within parentheses ((mod)).
*\postdisplaypenalty penalty for page break just after a display.
\Pr math function: probability (Pr).
\prec math relation: precedes ($\prec$).
\preceq math relation: precedes or equal ($\preceq$).
*\predisplaypenalty penalty for page break just before a display.
*\predisplaysize length of text preceding a display.
\preloaded scratch control sequence used in preloading fonts.
*\pretolerance badness tolerance before hyphenation is attempted.
*\prevdepth depth of the last box on the vertical list.
*\prevgraf number of lines in the last paragraph.
\prime math symbol: prime (x').
\proclaim begin theorem with special format in math environment.
\prod math operator: large product ($\prod$).
\propto math relation: proportional to ($\propto$).
\psi math Greek letter: psi (ψ).
\Psi math Greek letter: capital psi (Ψ).
\qquad large breakable horizontal skip.
\quad breakable medium horizontal skip.
*\radical put a math field under a radical.
\raggedbottom suppress bottom justification of page text.
\raggedright suppress right justification of paragraph lines.
*\raise raise a box a given distance.
\rangle math delimiter: right angle bracket ($\rangle$).
\rbrace math delimiter: right curly brace ($\}$).
\rbrack math delimiter: right bracket (]).
\rceil math delimiter: right ceiling bracket ($\rceil$).
\Re math symbol: real, Fraktur R ($\Re$).
*\read read a line from a file.
*\relax do nothing.
\relbar math symbol: relation bar ($-$).
\Relbar math symbol: double relation bar ($=$).
*\relpenalty penalty for line break after math relation.
\removelastskip remove last skip on the list.
\repeat end of a \loop body.
\rfloor math delimiter: right floor ($\rfloor$).
\rgroup math delimiter: right group (⟯).
\rho math Greek letter: rho (ρ).
\rhook math symbol: right hook ($\hookrightarrow$).
*\right end a math list with a right delimiter.
\rightarrow math symbol: right arrow ($\rightarrow$).
\Rightarrow math symbol: right double arrow ($\Rightarrow$).
\rightarrowfill fill a space with a right arrow.
\rightharpoondown math symbol: right harpoon down ($\rightharpoondown$).
\rightharpoonup math symbol: right harpoon up ($\rightharpoonup$).
3\righthyphenposition minimum number of characters after hyphenation at the end of a word.
\rightleftharpoons math symbol: right left harpoon ($\rightleftharpoons$).
\rightline flush right text on a line.
*\rightskip space to the right of a paragraph.
\rlap create a zero-width box with text to the right.
\rm select Roman font.
\rmoustache math symbol: right moustache (⟭).
*\romannumeral convert a number to lower-case Roman numerals.
\root specified root of a formula.
\rq right quote (').
\S math symbol: section (§).
\sb subscript, equivalent to _ .
*\scriptfont select font for small math scripts.
*\scriptscriptfont select font for very small math scripts.
*\scriptscriptstyle use very small math script style.
*\scriptspace extra space after subscript or superscript.
*\scriptstyle use small math script style.
*\scrollmode process TEX input without pausing for normal errors.
\searrow math symbol: southeast arrow ($\searrow$).
\sec math function: secant.
*\setbox store an hbox or vbox in a box register.
3\setlanguage specify language to be used for hyphenation.
\setminus math operator: set minus ($\setminus$).
\settabs define horizontal tabs.

\sevenbf 7 point bold Roman font.
\seveni 7 point math italic font.
\sevenrm 7 point Roman font.
\sevensy 7 point math symbol font.
*\sfcode set a character's space factor.
\sharp math symbol: sharp (♯).
*\shipout send a box to the DVI file.
*\show show a token.
*\showbox show a box.
*\showboxbreadth maximum boxed items shown at a given depth.
*\showboxdepth maximum box depth shown.
\showhyphens show hyphenations of given words.
*\showlists show the current lists.
*\showthe display the contents of a register.
\sigma math Greek letter: sigma (σ).
\Sigma math Greek letter: capital sigma (Σ).
\sim math relation: similar ($\sim$).
\simeq math relation: similar or equal ($\simeq$).
\sin math function: sine.
\sinh math function: hyperbolic sine.
\skew shift super accents.
*\skewchar horizontal kern to position accents.
*\skip use a skip register.
*\skipdef define a name for a skip register.
\sl select slanted font.
\slash permit a line break after a slash.
\slfam slanted font family.
\smallbreak small vertical space and a good page break.
\smallint math operator: small integral ($\int$).
\smallskip small vertical space.
\smallskipamount \smallskip space.
\smash create a formula with zero height.
\smile math relation: smile ($\smile$).
\sp superscript, equivalent to ^.
\space a blank space.
*\spacefactor set a character's spacing factor.
*\spaceskip space between words.
\spadesuit math symbol: spade suit (♠).
*\span create a multicolumn entry in an aligned table.
*\special include balanced text in DVI file for post-processing.
*\splitbotmark mark text last encountered in a split box.
*\splitfirstmark mark text first encountered in a split box.
*\splitmaxdepth maximum depth of boxes in a split box.
*\splittopskip space at top of a split box.
\sqcap math operator: square cap ($\sqcap$).
\sqcup math operator: square cup ($\sqcup$).
\sqrt square root of a formula.
\sqsubseteq math relation: square subset or equal ($\sqsubseteq$).
\sqsupseteq math relation: square superset or equal ($\sqsupseteq$).
\ss German letter: sharp s (ß).
\star math operator: star ($\star$).
*\string expand a control sequence into character tokens.
\strut vertical strut to preserve line spacing.
\strutbox box containing a strut.
\subset math relation: subset ($\subset$).
\subseteq math relation: subset or equal ($\subseteq$).
\succ math relation: successor ($\succ$).
\succeq math relation: successor or equal ($\succeq$).
\sum math operator: large sum ($\sum$).
\sup math function: sup.
\supereject flush all insertions and eject to a new page.
\supset math relation: superset ($\supset$).
\supseteq math relation: superset or equal ($\supseteq$).
\surd math symbol: surd ($\surd$).
\swarrow math symbol: southwest arrow ($\swarrow$).
\t tie-after accent (o͡o).
\tabalign begin a tabbed line in an inner environment.
\tabs box containing current tabs.
*\tabskip space between aligned tab entries.
\tan math function: tangent.
\tanh math function: hyperbolic tangent.
\tau math Greek letter: tau (τ).
\tenbf 10 point bold font.
\tenex 10 point math extension symbol font.
\teni 10 point math italic font.
\tenit 10 point text italic font.
\tenrm 10 point Roman font.
\tensl 10 point slanted font.
\tensy 10 point math symbol font.
\tentt 10 point typewriter font.
\TeX "TEX" logo.
*\textfont select font for non-math text.
\textindent display an item without hanging indentation.
*\textstyle use in-text style for math.
*\the convert a numeric register to displayable form.
\theta math Greek letter: theta (θ).
\Theta math Greek letter: capital theta (Θ).
*\thickmuskip thick space in math formulas.
*\thinmuskip thin space in math formulas.
\thinspace unbreakable small horizontal space.
\tilde math accent: tilde ($\tilde{x}$).
*\time current time of day.

\times math operator: times ($\times$).
\to math relation: to ($\rightarrow$).
*\toks use a token list register.
*\toksdef define a name for a token list register.
*\tolerance badness tolerance after hyphenation.
\top math symbol: top ($\top$).
\topins insertion class for inserts at the top of a page.
\topinsert insert text at the top of the page.
*\topmark value of \botmark just before current page was boxed.
*\topskip space at the top of a page.
\tracingall turn on all debugging commands.
*\tracingcommands show commands before they are executed.
*\tracinglostchars show characters not in the font.
*\tracingmacros show macros as they are expanded.
*\tracingonline show diagnostics on the terminal.
*\tracingoutput show boxes that are shipped out.
*\tracingpages show page-break calculations.
*\tracingparagraphs show line-break calculations.
*\tracingrestores show unassignments when groups end.
*\tracingstats show statistics about memory usage.
\triangle math symbol: triangle ($\triangle$).
\triangleleft math operator: left triangle ($\triangleleft$).
\triangleright math operator: right triangle ($\triangleright$).
\tt select typewriter font.
\ttfam typewriter font family.
\ttraggedright suppress right justification of typewriter font lines.
\u breve accent ($\breve{\text{x}}$).
*\uccode upper-case code for a character.
*\uchyph positive if hyphenating words beginning with capital letters.
\undefined an undefined control sequence.
\underbar create a box with an underline.
\underbrace horizontal brace under a math formula.
*\underline draw a line under a formula.
*\unhbox un-box an hbox and add it to the horizontal list.
*\unhcopy un-box a copy of an hbox and add it to the horizontal list.
*\unkern remove a kern just added to the current list.
*\unpenalty remove a penalty just added to the current list.
*\unskip remove a skip just added to the current list.
*\unvbox un-box a vbox and add it to the vertical list.
*\unvcopy un-box a copy of a vbox and add it to the vertical list.
\uparrow math delimiter: upward arrow ($\uparrow$).
\Uparrow math symbol: upward double arrow ($\Uparrow$).
\upbracefill fill a space with an upward brace.
\updownarrow math delimiter: up-and-down arrow ($\updownarrow$).
\Updownarrow math symbol: up-and-down double arrow ($\Updownarrow$).
\uplus math operator: U plus ($\uplus$).
*\uppercase translate balanced text to upper-case.
\upsilon math Greek letter: upsilon (υ).
\Upsilon math Greek letter: capital upsilon (Υ).
\v check accent ($\check{\text{x}}$).
*\vadjust insert vertical material into a paragraph.
*\valign align zero or more columns.
\varepsilon math Greek letter: variant epsilon (ε).
\varphi math Greek letter: variant phi (φ).
\varpi math Greek letter: variant pi (ϖ).
\varrho math Greek letter: variant rho (ϱ).
\varsigma math Greek letter: variant sigma (ς).
\vartheta math Greek letter: variant theta (ϑ).
*\vbadness limit for bad vbox errors.
*\vbox create a box with vertical mode material.
*\vcenter create a centered vbox in a math list.
\vdash math relation: dash ($\vdash$).
\vdots math symbol: vertical dots ($\vdots$).
\vec math accent: vector ($\vec{x}$).
\vee math binary operator: join or V ($\vee$).
\vert math delimiter: vertical bar ($|$).
\Vert math delimiter: double vertical bar ($\|$).
*\vfil infinitely stretchable vertical space.
*\vfill more infinitely stretchable vertical space.
*\vfilneg cancel infinitely stretchable vertical space.
\vfootnote place a footnote in a caption or other vertical list.
*\vfuzz maximum overrun before overfull vbox error.

\vglue create some vertical space.
*\voffset vertical offset of a page.
\vphantom create a zero-width vbox the height and depth of a formula.
*\vrule produce a vertical rule.
*\vsize height of text on a page or \vbox.
*\vskip add vertical space.
*\vsplit split off a specified amount from a vbox.
*\vss infinitely stretchable and shrinkable vertical space.
*\vtop create a box with vertical mode material with the baseline at the top.
*\wd width of a box.
\wedge math binary operator: operator ($\wedge$).
\widehat math accent: wide hat ($\widehat{x}$).
\widetilde math accent: wide tilde ($\widetilde{x}$).
*\widowpenalty penalty for creating a widow line at top of page.
\wlog write to the log file only.
\wp math symbol: Weierstrass p ($\wp$).
\wr math binary operator: wreath product ($\wr$).
*\write write a token list to a file.
*\xdef define a global macro with expanded replacement text.
\xi math Greek letter: xi (ξ).
\Xi math Greek letter: capital xi (Ξ).
*\xleaders fill a space with an evenly distributed box or rule.
*\xspaceskip space between sentences.
*\year current year of our Lord.
\zeta math Greek letter: zeta (ζ).

Number of TEX primitives and commands: 864.

Chapter 4

LaTeX Commands

\' put text flush right in a column in tabbing environment.
\(begin math mode.
\) end math mode.
\- unindents left margin one tab stop in tabbing environment.
\: medium space in math mode.
\< cancel effect of one \+ command in tabbing environment.
\= define a tab stop in tabbing environment.
\> move to next tab position in tabbing environment.
\@ create end-of-sentence space after following punctuation.
\[begin display math mode.
\\ force a line break in a paragraph.
\] end display math mode.
\+ indents left margin one tab stop in tabbing environment.
\@@par TeX primitive \par.
\@beginparpenalty penalty at the beginning of a list.
\@endparpenalty penalty at the end of a list.
\@hangfrom hanging indent of a paragraph.
\@ifnextchar test the next character.
\@itempenalty penalty between list items.
\a produce TeX accents in tabbing environment.
\addcontentsline adds an entry to the specified list or table.
\addtocontents add text to table contents, figures, or tables.
\addtocounter increment a counter.
\addtolength increment the value of a length command.
\addvspace add extra vertical space.
\alph display counter as lower-case letter.
\Alph display counter as upper-case letter.
\and additional authors on title page.
\appendix set sectional units to appendix style.
\arabic display counter as Arabic numerals.
\array begin array environment.
\arraycolsep column separation in array environment.
\arrayrulewidth set width of array rules.
\arraystretch space between rows of array or tabular environment.
\author title page author.
\baselinestretch multiple of normal \baselineskip.
\begin beginning of an environment.
\bf bold font style.
\bibitem create a bibliography entry.
\bibliography enable BibTeX bibliography interface.
\bibliographystyle specify bibliographic style for BibTeX.
\big big font size.
\Big bigger font size.
\BIG biggest font size.
\bigskip vertical skip a large amount.
\boldmath select bold math italic and symbol fonts.
\botfigrule place rule between text and bottom floats.
\bottomfraction fraction of column for bottom floats.
\Box math symbol: box (□).
\caption produce a numbered caption.
\center begin centering environment.
\centering declaration to center lines.
\chapter start a chapter.
\circle circle in a picture environment.
\cite generate an in-text citation of a reference.
\cleardoublepage flush figures and tables and start a new right-hand page.

`\clearpage` flush figures and start a new page.
`\cline` multicolumn line in array or tabular environment.
`\columnsep` space between columns in double column text.
`\columnseprule` width of rule separating double columns.
`\columnwidth` width of a column.
`\dashbox` create a box in dashes, with positioning.
`\date` date on title page.
`\dblfigrule` rule between double-column floats and text.
`\dblfloatpagefraction` size of float on double-column page.
`\dblfloatsep` space between double-column floats.
`\dbltextfloatsep` space between double-column floats and text.
`\dbltopfraction` fraction of two-column page for top floats.
`\Diamond` math symbol: diamond ($\diamond$).
`\document` read in the .AUX files and disable alpha `@` processing.
`\documentstyle` declare document style and options.
`\doublerulesep` double rule separation in array or tabular environment.
`\egtit` 8 point italic font.
`\egtly` 8 point LaTeX symbol font.
`\egtmi` 8 point math italic font.
`\egtrm` 8 point Roman font.
`\egtsy` 8 point math symbol font.
`\elvbf` 11 point bold extended font.
`\elvit` 11 point italic font.
`\elvly` 11 point LaTeX symbol font.
`\elvmi` 11 point math italic font.
`\elvrm` 11 point Roman font.
`\elvsf` 11 point sans serif font.
`\elvsl` 11 point slanted font.
`\elvsy` 11 point math symbol font.
`\elvtt` 11 point typewriter font.
`\em` emphasis font.
`\end` end of an environment.
`\endarray` end array environment.
`\endcenter` end centering environment.
`\endequation` end an equation.
`\endfigure` end a floating figure.
`\endflushleft` end flush left environment.
`\endflushright` end flush right environment.
`\endpicture` end picture environment.
`\endthebibliography` end bibliography environment.
`\equation` begin and cross reference an equation.
`\evensidemargin` left hand margin on even pages.
`\extracolsep` add extra space before a column in array or tabular environment.
`\fbox` create and frame a box.
`\fboxrule` thickness of rule surrounding framed box.
`\fboxsep` space between a box and its contents in `\fbox` and `\framebox`.
`\figure` begin a floating figure.
`\fill` an unoriented skip amount with stretch of `1fill`.
`\fivly` 5 point LaTeX symbol font.
`\fivmi` 5 point math italic font.
`\fivrm` 5 point Roman font.
`\fivsy` 5 point math symbol font.
`\floatpagefraction` portion of page that may be occupied by floats.
`\floatsep` space between floats.
`\flushbottom` justify page bottoms to the same height.
`\flushleft` begin flush left environment.
`\flushright` begin flush right environment.
`\fnsymbol` display counter as footnote symbol.
`\footheight` height of page footer.
`\footins` space between main text and footnotes.
`\footnotemark` insert a footnote mark without text.
`\footnoterule` macro to draw the rule separating footnotes from text.
`\footnotesep` footnote separation distance.
`\footnotesize` select footnote font size.
`\footnotetext` produce footnote text without a mark.
`\footskip` space between text and page footer.
`\frac` generate a fraction.
`\frame` put a frame around some text.
`\framebox` create and frame a box, with positioning.
`\frtnbf` 14 point bold extended font.
`\frtnly` 14 point LaTeX symbol font.
`\frtnmi` 14 point math italic font.
`\frtnrm` 14 point Roman font.
`\frtnsy` 14 point math symbol font.
`\fussy` require strict line and page breaks.
`\glossary` write a glossary entry.
`\headheight` height of page header.
`\headsep` space between page header and text.
`\hline` horizontal line in array and tabular environments.
`\hspace` skip horizontal space.

\huge select font four steps larger than normal size.
\Huge select largest available font.
\include read a file unless disabled by \includeonly.
\includeonly enable only specific \include commands.
\index create an index entry.
\indexentry en entry in a file of index terms.
\indexspace amount of extra space between entries in an index.
\interfootnotelinepenalty interline penalty for footnotes.
\intextsep vertical space around a float in the middle of a page.
\item start an entry in a list environment.
\itemindent indent before the label in a list environment.
\itemsep space between successive items in a list environment.
\Join math symbol: join (⋈).
\kill discard current line in tabbing environment.
\label define a cross reference label.
\labelitemi mark denoting first-level items.
\labelitemii mark denoting second-level items.
\labelitemiii mark denoting third-level items.
\labelitemiv mark denoting fourth-level items.
\labelitemv mark denoting fifth-level items.
\labelitemvi mark denoting sixth-level items.
\labelsep space between a label and text of a list item.
\labelwidth label width in a list environment.
\large select font one step larger than normal size.
\Large select font two steps larger than normal size.
\LARGE select font three steps larger than normal size.
\LaTeX LaTeX logo.
\leadsto math symbol: leads to (⇝).
\lefteqn set a formula flush left in display style.
\leftmargin left margin of a list environment.
\leftmargini width of left margin in first-level list.
\leftmarginii width of left margin in second-level list.
\leftmarginiii width of left margin in third-level list.
\leftmariniv width of left margin in fourth-level list.
\leftmarginv width of left margin in fifth-level list.
\leftmarginvi width of left margin in sixth-level list.
\leftmark produces current left page heading.
\lhd math symbol: left half diamond (◁).
\line line in a picture environment.
\linebreak encourage a line break.
\linethickness set width of lines in picture environment.
\linewidth width of the current line.
\listoffigures generate a list of figures.
\listoftables generate a list of tables.
\listparindent indent second and subsequent paragraphs in a list environment.
\load load a font.
\makeatletter set @ alphabetic to access internal commands.
\makeatother set @ non-alphabetic to hide internal commands.
\makebox create a box, with positioning.
\makeglossary enable glossary processing.
\makeindex enable index creation.
\makelabel create item label for a list environment.
\maketitle produce the title.
\marginpar produce a marginal note.
\marginparpush vertical space between marginal notes.
\marginparsep distance between marginal note and text.
\marginparwidth width of marginal notes.
\markboth set headings for left and right pages.
\markright set heading for right pages.
\mathindent indentation of display equations.
\mbox create a box.
\medskip vertical skip a medium amount.
\mho math symbol: mho (℧).
\minipage create a small sample page.
\multicolumn multicolumn entry in array or tabular environment.
\multiput place several copies of a picture object.
\newcommand define a new command.
\newcounter define a new counter variable.
\newenvironment define a new environment.
\newfont select a font.
\newlength define a new length command.
\newline force a line break in a paragraph.
\newpage start a new page.
\newsavebox define a new box register.
\newtheorem define a new theorem environment.
\ninbf 9 point bold extended font.
\ninit 9 point italic font.
\ninly 9 point LaTeX symbol font.

\ninmi 9 point math italic font.
\ninrm 9 point Roman font.
\ninsy 9 point math symbol font.
\nintt 9 point typewriter font.
\nocite reference a BibTeX item without citation.
\nofiles suppress writing all auxiliary files.
\nolinebreak suppress a line break.
\nonumber suppress numbering of displayed equations.
\nopagebreak suppress a page break.
\normalmarginpar put marginal notes on default side of page.
\normalsize select normal font size.
\numberline includes the section number in a \contentsline command.
\obeycr defines a carriage return as \\.
\oddsidemargin left hand margin on odd pages.
\onecolumn start a new page in single-column format.
\oval oval in a picture environment.
\pagebreak encourage a page break.
\pagenumbering specify page numbering style.
\pageref page number of a cross reference label.
\pagestyle set global page style.
\paragraph start a labeled paragraph.
\parbox put a paragraph in a box.
\parsep space between paragraphs within an item in a list environment.
\part start a major division of a long document.
\partopsep extra vertical space when environment starts a paragraph.
\picture begin picture environment.
\poptabs restore tabs stops in tabbing environment.
\pounds British pound symbol (£).
\protect protect fragile commands and moving arguments.
\pushtabs save current tab stops in tabbing environment.
\put place a picture object.
\raggedbottom justify page bottoms to their natural height.
\raggedleft flush lines right.
\raggedright flush lines left.
\raisebox raise a box a distance.
\ref refer to a cross reference label.
\refstepcounter increment and reference a counter.
\renewcommand redefine a command.
\renewenvironment redefine an environment.
\restorecr restores a carriage return to its usual meaning.
\reversemarginpar put marginal notes on opposite side of page.
\rhd math symbol: right half diamond (▷).
\rightmargin right margin in a list.
\rightmark produces current right page heading.
\roman display counter as lower-case Roman numerals.
\Roman display counter as upper-case Roman numerals.
\rule create a rule or line.
\samepage inhibit a page break over a region.
\savebox create and name a box, with positioning.
\sbox create and name a box.
\sc select small caps font.
\scriptscriptsize select sub-subscript font size.
\scriptsize select subscript or superscript font size.
\section start a section.
\setcounter set value of a counter.
\setlength set a length command.
\settowidth set a length command to width of text.
\sevit 7 point italic font.
\sevly 7 point LaTeX symbol font.
\sevmi 7 point math italic font.
\sevrm 7 point Roman font.
\sevsy 7 point math symbol font.
\sf select sans serif font.
\shortstack create a box with a single column of items.
\showoutput trace output processing.
\sixly 6 point LaTeX symbol font.
\sixmi 6 point math italic font.
\sixrm 6 point Roman font.
\sixsy 6 point math symbol font.
\sloppy accept looser line and page breaks.
\small select small font size.
\smallskip vertical skip a small amount.
\sqsubset math symbol: square subset (⊏).
\sqsupset math symbol: square superset (⊐).
\stackrel stack one equation above another.
\stepcounter increment a counter.
\stop terminate LaTeX and flush the final page.
\stretch infinitely stretchable space.
\subitem second-level item in an index.
\subparagraph start a labeled sub-level paragraph.
\subsection start a subsection.
\subsubitem third-level item in an index.

\subsubsection start a subsubsection.
\svtnbf 17 point bold extended font.
\svtnly 17 point LaTeX symbol font.
\svtnmi 17 point math italic font.
\svtnrm 17 point Roman font.
\svtnsy 17 point math symbol font.
\symbol display a symbol from a font.
\tabbingsep distance left by \' command between tabbing fields.
\tabcolsep half the width separating columns in a tabular environment.
\tableofcontents generate a table of contents.
\tencirc 10 point circle font.
\tencircw 10 point wide circle font.
\tenln 10 point line font.
\tenlnw 10 point wide line font.
\tenly 10 point LaTeX symbol font.
\tenmi 10 point math italic font.
\tensf 10 point sans serif font.
\textfloatsep space between floats and the text.
\textfraction size of column that must contain text.
\textheight height of text, excluding head and foot.
\textwidth width of printing on page.
\thanks add footnote to title page.
\theenumi current value of the first-level item counter.
\theenumii current value of the second-level item counter.
\theenumiii current value of the third-level item counter.
\theenumiv current value of the fourth-level item counter.
\theenumv current value of the fifth-level item counter.
\theenumvi current value of the sixth-level item counter.
\theequation number of the current displayed equation.
\thefigure current value of the figure counter.
\thefootnote produces the footnote number.
\thepage current page number.
\thicklines thick lines for lines and circles.
\thinlines thin lines for lines and circles.
\thispagestyle set current page style.
\tiny select smallest defined font.
\title declare the title.
\today display today's date.
\topfigrule place rule between top floats and text.
\topfraction fraction of column for top floats.
\topmargin extra space added to top of page.
\topsep space between first list item and preceding paragraph.
\twlbf 12 point bold extended font.
\twlit 12 point italic font.
\twlly 12 point LaTeX symbol font.
\twlmi 12 point math italic font.
\twlrm 12 point Roman font.
\twlsf 12 point sans serif font.
\twlsl 12 point slanted font.
\twlsy 12 point math symbol font.
\twltt 12 point typewriter font.
\twocolumn start a new page in double-column format.
\twtybf 20 point bold extended font.
\twtyly 20 point LaTeX symbol font.
\twtymi 20 point math italic font.
\twtyrm 20 point Roman font.
\twtysy 20 point math symbol font.
\typein execute a command from the terminal.
\typeout write a message on the terminal.
\unboldmath unselect bold math italic and symbol fonts.
\underline create an underlined box with text in it.
\unitlength unit of distance in picture environment.
\unlhd math symbol: underlined left half diamond ($\trianglelefteq$).
\unrhd math symbol: underlined right half diamond ($\trianglerighteq$).
\usebox use a named box.
\usecounter associate a counter with an item-type command.
\value produce the value of a counter.
\vector vector in a picture environment.
\verb generate a short amount of verbatim text.
\vline vertical line in array and tabular environments.
\vspace skip vertical space.

Number of LaTeX commands: 367.