Part III

F A S T E X

LaTeX Shortcuts

Appendix: Alphabetical Listing

Draft Version May 29, 1996

Appendix A. Alphabetical List of Shortcuts

0

00p	`(0,0)`	0,0 in parentheses
03p	`(0,␣0,␣0)`	0,0,0 in parentheses
0p	`(0)`	0 in parentheses

a

ace	`\'{E}`	acute E
ad	`&`	ampersand
ad	`&`	ampersand
ada	`&␣=␣&`	for aligning = signs in some displays
ae	`\'{e}`	(acute e
ag	`\arg`	arument
ale	`\aleph`	aleph
angl	`\angle`	angle
aplb	`{\bf␣a}␣+␣{\bf␣b}`	bold a plus bold b
apx	`\approx`	approximately
artl	`\mapsto`	arrow with tail; maps to
atib	`{\bf␣a}␣\times␣{\bf␣b}`	bold a times bold b
atibp	`({\bf␣a}␣\times␣{\bf␣b})`	(bold a times bold b)
ats	`@`	at symbol
au	`\mbox{\rm␣Aut}(`	Automorphism universal (in roman)
ava	`|a|`	absolute value of a
avb	`|b|`	absolute value of b
avc	`|c|`	absolute value of c
avx	`|x|`	absolute value of x
avy	`|y|`	absolute value of y

avz	`|z|`	absolute value of z

b

b0	`{\bf␣0}`	bold 0
b1	`{\bf␣1}`	bold 1
b10	`{\bf␣10}`	bold 10
b2	`{\bf␣2}`	bold 2
b3	`{\bf␣3}`	bold 3
b4	`{\bf␣4}`	bold 4
b5	`{\bf␣5}`	bold 5
b6	`{\bf␣6}`	bold 6
b7	`{\bf␣7}`	bold 7
b8	`{\bf␣8}`	bold 8
b9	`{\bf␣9}`	bold 9
ba	`{\bf␣a}`	bold a
bac	`\begin{acknowledgment}`	begin acknowledgment environment;
balg	`\begin{algorithm}`	begin algorithm environment;
bb	`{\bf␣b}`	bold b
bbca	`\Bbb␣A`	blackboard bold A
bbcb	`\Bbb␣B`	blackboard bold B
bbcc	`\Bbb␣C`	blackboard bold C
bbcd	`\Bbb␣D`	blackboard bold D
bbce	`\Bbb␣E`	blackboard bold E
bbcf	`\Bbb␣F`	blackboard bold F
bbcg	`\Bbb␣G`	blackboard bold G
bbch	`\Bbb␣H`	blackboard bold H
bbci	`\Bbb␣I`	blackboard bold I
bbcj	`\Bbb␣J`	blackboard bold J
bbck	`\Bbb␣K`	blackboard bold K
bbcl	`\Bbb␣L`	blackboard bold L
bbcm	`\Bbb␣M`	blackboard bold M
bbcn	`\Bbb␣N`	blackboard bold N
bbco	`\Bbb␣O`	blackboard bold O

bbcp	`\Bbb␣P`	blackboard bold P
bbcq	`\Bbb␣Q`	blackboard bold Q
bbcr	`\Bbb␣R`	blackboard bold R
bbcr1	`{\Bbb␣R}^1`	blackboard bold R to power 1
bbcr2	`{\Bbb␣R}^2`	blackboard bold R to power 2
bbcr3	`{\Bbb␣R}^3`	blackboard bold R to power 3
bbcrm	`{\Bbb␣R}^m`	blackboard bold R to power m
bbcrn	`{\Bbb␣R}^n`	blackboard bold R to power n
bbcs	`\Bbb␣S`	blackboard bold S
bbct	`\Bbb␣T`	blackboard bold T
bbcu	`\Bbb␣U`	blackboard bold U
bbcv	`\Bbb␣V`	blackboard bold V
bbcw	`\Bbb␣W`	blackboard bold W
bbcx	`\Bbb␣X`	blackboard bold X
bbcy	`\Bbb␣Y`	blackboard bold Y
bbcz	`\Bbb␣Z`	blackboard bold Z
bblk	`\begin{quotation}`	begin block/quotation
bbu	`{\Bbb␣`	blackboard bold universal
bbu	`{\Bbb␣`	blackboard bold universal
bc	`{\bf␣c}`	bold c
bca	`{\bf␣A}`	bold A
bcap	`\caption{Text␣of␣Caption}`	bottom caption
bcase	`\begin{case}`	begin case environment;
bcb	`{\bf␣B}`	bold B
bcc	`{\bf␣C}`	bold C
bcd	`{\bf␣D}`	bold D
bce	`{\bf␣E}`	bold E
bcf	`{\bf␣F}`	bold F
bcg	`{\bf␣G}`	bold G
bch	`{\bf␣H}`	bold H
bci	`{\bf␣I}`	bold I
bcj	`{\bf␣J}`	bold J
bck	`{\bf␣K}`	bold K
bcl	`{\bf␣L}`	bold L
bclm	`\begin{claim}`	begin claim environment;
bcm	`{\bf␣M}`	bold M
bcmnt	`\begin{comment}`	begin comment environment
bcn	`{\bf␣N}`	bold N
bcncl	`\begin{conclusion}`	begin conclusion environment;

bcnd	`\begin{condition}`	begin condition environment;
bcnj	`\begin{conjecture}`	begin conjecture environment;
bco	`{\bf␣O}`	bold O
bcor	`\begin{cor}`	to begin a Corollary environement
bcp	`{\bf␣P}`	bold P
bcq	`{\bf␣Q}`	bold Q
bcr	`{\bf␣R}`	bold R
bcrit	`\begin{criterion}`	begin criterion environment;
bcs	`{\bf␣S}`	bold S
bct	`{\bf␣T}`	bold T
bcu	`{\bf␣U}`	bold U
bcv	`{\bf␣V}`	bold V
bcw	`{\bf␣W}`	bold W
bcx	`{\bf␣X}`	bold X
bcy	`{\bf␣Y}`	bold Y
bcz	`{\bf␣Z}`	bold Z
bd	`{\bf␣d}`	bold d
bdfn	`\begin{definition}`	begin definition environment;
bdfn	`\begin{dfn}`	to begin a Definition environement
bdmu		to begin demo environement (not in LaTeX)
bdo	`\begin{document}`	begin text of document
bdp	`\[`	begin display math: one line formula, unnumbered
bdpex	`\[`	display math equation unnumbered example
bds	`\begin{description}`	begin description
bea	`\begin{array}{ccc}`	begin display alignedat 3 places; see also Section 5.3
bec	`\begin{center}`	begin center
bee	`{\bf␣e}`	bold e; (note the extra e)
bel1	`{\bf␣e}_1`	bold e subscript 1
bel2	`{\bf␣e}_2`	bold e subscript 2
bel3	`{\bf␣e}_3`	bold e subscript 3
beln	`{\bf␣e}_n`	bold e subscript n
ben	`\begin{enumerate}`	begin enumerate
beq	`\begin{equation}`	begin display math: one line formula, numbered
beqex	`\begin{equation}`	display math equation numbered example
beql	`\begin{equation}\label{`	begin display math: one line formula, numbered, with label
bff	`{\bf␣f}`	bold f; (note the extra f)
bfig	`\begin{figure}`	begin figure environment
bfll	`\begin{flushleft}`	begin flush left
bflr	`\begin{flushright}`	begin flush right

bfu	`{\bf`	**boldface** type
bg	`{\bf␣g}`	bold g
bh	`{\bf␣h}`	bold h
bi	`{\bf␣i}`	bold i
biba	`\item␣Author␣[year]`	item description for articles
bibb	`\item␣Author␣[year]`	item description for books
bibia	`\bibitem[]{}`	bibitem for articles
bibib	`\bibitem[]{}`	bibitem for books
bints	`\bigcap`	big intersection; cap
bitm	`\begin{itemize}`	begin itemize
biu	`{\tenbi`	start ***bold italic*** type; "eit" to finish
bj	`{\bf␣j}`	bold j
bk	`{\bf␣k}`	bold k
bl	`{\bf␣l}`	bold l
blackl	`\quad␣\blacklozenge`	black lozenge (math mode)
blem	`\begin{lem}`	to begin a Lemma environement
blskp	`\baselineskip`	reset baselineskip
blstr	`\renewcommand{\baselinestretch}{1.5}`	reset baselinestretch
blt	`\bullet`	bullet
bm	`{\bf␣m}`	bold m
bmpg	`\begin{minipage}{\textwidth}`	begin minipage
bn	`{\bf␣n}`	bold n
bnota	`\begin{notation}`	begin notation environment;
bnote	`\begin{note}`	begin note environment;
bo	`{\bf␣o}`	bold o
boxa	`\quad␣\mbox{and}␣\quad`	add text "and" within math formula
boxu	`\quad␣\mbox{␣␣}␣\quad`	use to put roman text within math
bp	`{\bf␣p}`	bold p
bpf	`\noindent{\bf␣Proof\,}`	to begin a Proof environement
bpf	`\noindent{\bf␣Proof\,}`	to begin a Proof environement
bprf	`\noindent{\bf␣Proof\,}`	to begin a Proof environement
bprob	`\begin{problem}`	begin problem environment;
bprop	`\begin{prop}`	to begin a Proposition environement
bq	`{\bf␣q}`	bold q
bqa	`\begin{eqnarray}`	begin multiline aligned display math array, numbered
bqaex	`\begin{eqnarray}`	align equation example, numbered
bqal	`\begin{eqnarray}\label{`	begin multiline aligned display math array, numbered with label
bqas	`\begin{eqnarray*}`	begin multiline aligned display math array star, unnumbered
bqasex	`\begin{eqnarray*}`	align equation star example, unnumbered

bqm	‘‘	begin (left) quotation marks
bqst	`\begin{question}`	begin question environment;
bqt	`\begin{quotation}`	begin quotation
br	`{\bf␣r}`	bold r
brmk	`\begin{Remark}␣`	begin remark environment;
bros	`\begin{enumerate}`	begin roster; enumerate
bs	`{\bf␣s}`	bold s
bskp		big skip
bsol	`\begin{solution}`	begin solution environment;
bsum	`\begin{summary}`	begin summary environment;
bt	`{\bf␣t}`	bold t
btab	`\begin{table}`	begin table environment
btb	`\begin{tabbing}`	begin tabbing
btd	`\quad␣\blacktriangledown`	black triangle down (math mode)
bthm	`\begin{thm}`	to begin a Theorem environement
bthmt	`\begin{thm}[Gauss'␣Theorem]`	to begin a Theorem, with title, environement
btr	`\begin{tabular}{|c|c|}`	begin tabular with vertical lines
bu	`{\bf␣u}`	bold u
buni	`\bigcup`	big intersection; cup
bv	`{\bf␣v}`	bold v
bvrb	`\begin{verbatim}`	begin the verbatim environment
bw	`{\bf␣w}`	bold w
bx	`{\bf␣x}`	bold x
bxca		begin Exercise—body of text; (not in LaTeX)
bxcb		begin Exercises—end chpt. monographs; (not in LaTeX)
bxo	`\mbox{\boldmath$\omega$}`	boldmath omega
bxu	`\mbox{\boldmath$␣␣␣$}`	boldmath universal
bxu	`\mbox{\boldmath$␣␣␣$}`	boldmath universal
bxx	`\mbox{\boldmath$\xi$}`	boldmath xi
byy	`{\bf␣y}`	bold y; (note the extra y)
bz	`{\bf␣z}`	bold z

C

cap	`\caption{Text␣of␣Caption}`	caption
cau	`{\cal`	calligraphic univeral; math mode, capital letters only
cau	`{\cal`	calligraphic univeral; math mode, capital letters only
cbx	`%=====================================================%`	
cca	`{\cal␣A}`	calligraphic A
ccb	`{\cal␣B}`	calligraphic B
ccc	`{\cal␣C}`	calligraphic C
ccd	`{\cal␣D}`	calligraphic D
cce	`{\cal␣E}`	calligraphic E
ccf	`{\cal␣F}`	calligraphic F
ccg	`{\cal␣G}`	calligraphic G
cch	`{\cal␣H}`	calligraphic H
cci	`{\cal␣I}`	calligraphic I
ccj	`{\cal␣J}`	calligraphic J
cck	`{\cal␣K}`	calligraphic K
ccl	`{\cal␣L}`	calligraphic L
ccm	`{\cal␣M}`	calligraphic M
ccn	`{\cal␣N}`	calligraphic N
cco	`{\cal␣O}`	calligraphic O
ccp	`{\cal␣P}`	calligraphic P
ccq	`{\cal␣Q}`	calligraphic Q
ccr	`{\cal␣R}`	calligraphic R
ccs	`{\cal␣S}`	calligraphic S
cct	`{\cal␣T}`	calligraphic T
ccu	`{\cal␣U}`	calligraphic U
ccv	`{\cal␣V}`	calligraphic V
ccw	`{\cal␣W}`	calligraphic W
ccx	`{\cal␣X}`	calligraphic X
ccy	`{\cal␣Y}`	calligraphic Y
ccz	`{\cal␣Z}`	calligraphic Z
cd	`D`	capital D
cdo	`\cdot`	centered dot
cds	`\cdots`	centered dots
chhdl		change headlines to be justified (not in LaTeX)
cir	`\circ`	composite (small circle)
cit	`\cite{␣}`	to cite a reference
citp	`(\cite{␣})`	to cite a reference inside parentheses
citu	`\cite{`	to cite a reference universal
cl	`\centerline{`	centerline

cld	`%------------------------------------------------------------------------`	
cldd	`%========================================================================`	
clin	`\centerline{...}`	centerline
co	`\cos`	cosine
coh	`\cosh`	hyperbolic cosine
coph	`\cos␣\phi`	cosine of phi
coq	`\cos^2`	cosine squared
coth	`\cos␣\theta`	cosine of theta
cp	`\clearpage`	clear page
cpct	`%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%`	
cprt	`\copyright`	copyright symbol
cr2	`\sqrt[3]{2}`	third root of 2
crlr	`%=========================================================================%`	
csd	`%---------------------------`	
csdd	`%===========================`	
cso3	`\mbox{\rm␣SO(3)}`	SO(3) (in roman)
csp	`\quad`	single character space (width em)
cu	`^3`	cubed
cxcd1	`\begin{picture}(150,180)(-70,10)`	complex commutative diagram 1

d

d	`$`	dollar symbol; starts and terminates text in math mode
d0	`$0$`	dollar 0
d00p	`$(0,0)$`	dollar 0,0 in parentheses
d03p	`$(0,␣0,␣0)$`	dollar 0,0,0 in parentheses
d0p	`$(0)$`	dollar 0 in parentheses
d1	`$1$`	dollar 1
d10	`$10$`	dollar 10
d2	`$2$`	dollar 2
d3	`$3$`	dollar 3
d4	`$4$`	dollar 4
d5	`$5$`	dollar 5
d6	`$6$`	dollar 6

d7	`$7$`	dollar 7
d8	`$8$`	dollar 8
d9	`$9$`	dollar 9
da	`$a$`	dollar a
db	`$b$`	dollar b
db0	`${\bf␣0}$`	dollar bold 0; use in text mode
db1	`${\bf␣1}$`	dollar bold 1; use in text mode
db10	`${\bf␣10}$`	dollar bold 10; use in text mode
db2	`${\bf␣2}$`	dollar bold 2; use in text mode
db3	`${\bf␣3}$`	dollar bold 3; use in text mode
db4	`${\bf␣4}$`	dollar bold 4; use in text mode
db5	`${\bf␣5}$`	dollar bold 5; use in text mode
db6	`${\bf␣6}$`	dollar bold 6; use in text mode
db7	`${\bf␣7}$`	dollar bold 7; use in text mode
db8	`${\bf␣8}$`	dollar bold 8; use in text mode
db9	`${\bf␣9}$`	dollar bold 9; use in text mode
dba	`${\bf␣a}$`	dollar bold a; use in text mode
dbb	`${\bf␣b}$`	dollar bold b; use in text mode
dbbcr1	`${\Bbb␣R}^1$`	dollar blackboard bold R to power 1
dbbcr2	`${\Bbb␣R}^2$`	dollar blackboard bold R to power 2
dbbcr3	`${\Bbb␣R}^3$`	dollar blackboard bold R to power 3
dbbcrm	`${\Bbb␣R}^m$`	dollar blackboard bold R to power m
dbbcrn	`${\Bbb␣R}^n$`	dollar blackboard bold R to power n
dbc	`${\bf␣c}$`	dollar bold c; use in text mode
dbca	`${\bf␣A}$`	dollar bold A; use in text mode
dbcb	`${\bf␣B}$`	dollar bold B; use in text mode
dbcc	`${\bf␣C}$`	dollar bold C; use in text mode
dbcd	`${\bf␣D}$`	dollar bold D; use in text mode
dbce	`${\bf␣E}$`	dollar bold E; use in text mode
dbcf	`${\bf␣F}$`	dollar bold F; use in text mode
dbcg	`${\bf␣G}$`	dollar bold G; use in text mode
dbch	`${\bf␣H}$`	dollar bold H; use in text mode
dbci	`${\bf␣I}$`	dollar bold I; use in text mode
dbcj	`${\bf␣J}$`	dollar bold J; use in text mode
dbck	`${\bf␣K}$`	dollar bold K; use in text mode
dbcl	`${\bf␣L}$`	dollar bold L; use in text mode
dbcm	`${\bf␣M}$`	dollar bold M; use in text mode
dbcn	`${\bf␣N}$`	dollar bold N; use in text mode
dbco	`${\bf␣O}$`	dollar bold O; use in text mode

dbcp	`${\bf␣P}$`	dollar bold P; use in text mode
dbcq	`${\bf␣Q}$`	dollar bold Q; use in text mode
dbcr	`${\bf␣R}$`	dollar bold R; use in text mode
dbcs	`${\bf␣S}$`	dollar bold S; use in text mode
dbct	`${\bf␣T}$`	dollar bold T; use in text mode
dbcu	`${\bf␣U}$`	dollar bold U; use in text mode
dbcv	`${\bf␣V}$`	dollar bold V; use in text mode
dbcw	`${\bf␣W}$`	dollar bold S
dbcx	`${\bf␣X}$`	dollar bold W; use in text mode
dbcy	`${\bf␣Y}$`	dollar bold X; use in text mode
dbcz	`${\bf␣Z}$`	dollar bold Y; use in text mode
dbd	`${\bf␣d}$`	dollar bold Z; use in text mode
dbe	`${\bf␣e}$`	dollar bold e; use in text mode
dbf	`${\bf␣f}$`	dollar bold f; use in text mode
dbg	`${\bf␣g}$`	dollar bold g; use in text mode
dbh	`${\bf␣h}$`	dollar bold h; use in text mode
dbi	`${\bf␣i}$`	dollar bold i; use in text mode
dbj	`${\bf␣j}$`	dollar bold j; use in text mode
dbk	`${\bf␣k}$`	dollar bold k; use in text mode
dbl	`${\bf␣l}$`	dollar bold l; use in text mode
dblackl	`\quad␣$\blacklozenge$`	dollar black lozenge (text mode)
dbm	`${\bf␣m}$`	dollar bold m; use in text mode
dbn	`${\bf␣n}$`	dollar bold n; use in text mode
dbo	`${\bf␣o}$`	dollar bold o; use in text mode
dbp	`${\bf␣p}$`	dollar bold p; use in text mode
dbq	`${\bf␣q}$`	dollar bold q; use in text mode
dbr	`${\bf␣r}$`	dollar bold r; use in text mode
dbs	`${\bf␣s}$`	dollar bold s; use in text mode
dbt	`${\bf␣t}$`	dollar bold t; use in text mode
dbtd	`\quad␣$\blacktriangledown$`	dollar black triangle down (text mode)
dbu	`${\bf␣u}$`	dollar bold u; use in text mode
dbv	`${\bf␣v}$`	dollar bold v; use in text mode
dbw	`${\bf␣w}$`	dollar bold w; use in text mode
dbx	`${\bf␣x}$`	dollar bold x; use in text mode
dby	`${\bf␣y}$`	dollar bold y; use in text mode
dbz	`${\bf␣z}$`	dollar bold z; use in text mode
dc	`$c$`	dollar c
dca	`$A$`	dollar A
dcb	`$B$`	dollar B

dcc	`$C$`	dollar C
dcca	`${\cal␣A}$`	dollar calligraphic A
dccb	`${\cal␣B}$`	dollar calligraphic B
dccc	`${\cal␣C}$`	dollar calligraphic C
dccd	`${\cal␣D}$`	dollar calligraphic D
dcce	`${\cal␣E}$`	dollar calligraphic E
dccf	`${\cal␣F}$`	dollar calligraphic F
dccg	`${\cal␣G}$`	dollar calligraphic G
dcch	`${\cal␣H}$`	dollar calligraphic H
dcci	`${\cal␣I}$`	dollar calligraphic I
dccj	`${\cal␣J}$`	dollar calligraphic J
dcck	`${\cal␣K}$`	dollar calligraphic K
dccl	`${\cal␣L}$`	dollar calligraphic L
dccm	`${\cal␣M}$`	dollar calligraphic M
dccn	`${\cal␣N}$`	dollar calligraphic N
dcco	`${\cal␣O}$`	dollar calligraphic O
dccp	`${\cal␣P}$`	dollar calligraphic P
dccq	`${\cal␣Q}$`	dollar calligraphic Q
dccr	`${\cal␣R}$`	dollar calligraphic R
dccs	`${\cal␣S}$`	dollar calligraphic S
dcct	`${\cal␣T}$`	dollar calligraphic T
dccu	`${\cal␣U}$`	dollar calligraphic U
dccv	`${\cal␣V}$`	dollar calligraphic V
dccw	`${\cal␣W}$`	dollar calligraphic W
dccx	`${\cal␣X}$`	dollar calligraphic X
dccy	`${\cal␣Y}$`	dollar calligraphic Y
dccz	`${\cal␣Z}$`	dollar calligraphic Z
dcd	`$D$`	dollar D
dcd1	`\begin{picture}(150,160)(-80,5)`	double commutative diagram 1
dcd2	`\begin{picture}(150,160)(-80,5)`	double commutative diagram 2
dce	`$E$`	dollar E
dcf	`$F$`	dollar F
dcg	`$G$`	dollar G
dch	`$H$`	dollar H
dci	`$I$`	dollar I
dcj	`$J$`	dollar J
dck	`$K$`	dollar K
dcl	`$L$`	dollar L
dcm	`$M$`	dollar M

dcn	`$N$`	dollar N
dco	`$O$`	dollar O
dcp	`$P$`	dollar P
dcq	`$Q$`	dollar Q
dcr	`$R$`	dollar R
dcs	`$S$`	dollar S
dcso3	`$\mbox{\rm␣SO(3)}$`	SO(3) (in roman) with dollar signs around
dct	`$T$`	dollar T
dcu	`$U$`	dollar U
dcv	`$V$`	dollar V
dcw	`$W$`	dollar W
dcx	`$X$`	dollar X
dcy	`$Y$`	dollar Y
dcz	`$Z$`	dollar Z
dd	`$d$`	dollar d
dds	`\ddots`	diagonal dots
de	`$e$`	dollar e
defu	`\newcommand{...}{...}`	define a new command macro
dep	`\quad␣$\blacksquare$`	dollar black square/end proof (text mode)
desq	`\quad␣$\square$`	dollar empty square (text mode)
detd	`\quad␣$\bigtriangledown$`	dollar empty triangle down (text mode)
df	`$f$`	dollar f
dfrbox	`\fbox{\fbox{\parbox{2.0in}{`	double framed box with header and text; edit its size
dg	`$g$`	dollar g
dgmb	`$\frak␣b$`	dollar german b
dgmca	`$\frak␣A$`	dollar german A
dgmcg	`$\frak␣G$`	dollar german G
dgmch	`$\frak␣H$`	dollar german H
dgmck	`$\frak␣K$`	dollar german K
dgmct	`$\frak␣T$`	dollar german T
dgmcx	`$\frak␣X$`	dollar german X
dgmg	`$\frak␣g$`	dollar german g
dgmgs	`$\frak␣g␣^{\ast}$`	dollar german g star
dgmh	`$\frak␣h$`	dollar german h
dgmhs	`$\frak␣h␣^{\ast}$`	dollar german h star
dgmk	`$\frak␣k$`	dollar german k
dgmks	`$\frak␣k␣^{\ast}$`	dollar german k star
dgmp	`$\frak␣p$`	dollar german p
dgmt	`$\frak␣t$`	dollar german t

dgmu	`$\frak␣␣$`	dollar german universal; only in text mode
dh	`$h$`	dollar h
di	`$i$`	dollar i
difu	`\mbox{\rm␣Diff}(`	Diffeomorphism universal (in roman)
disu	`{\displaystyle`	display style; for larger math mode forumlas
divg	`\mbox{\rm␣div}\,`	divergence, div (in roman)
divi	`\div`	divide
dj	`$j$`	dollar j
dk	`$k$`	dollar k
dl	`$l$`	dollar l
dlr	`$$`	double dollar
dm	`$m$`	dollar m
dmn	`\dim`	dimension
dn	`$n$`	dollar n
doo	`$o$`	dollar o
dopcc	`${\Bbb␣C}$`	dollar open letter C
dopci	`${\Bbb␣I}$`	dollar open letter I
dopcr	`${\Bbb␣R}$`	dollar open letter R
dopcr1	`${\Bbb␣R}^1$`	dollar open letter R to power 1
dopcr2	`${\Bbb␣R}^2$`	dollar open letter R to power 2
dopcr3	`${\Bbb␣R}^3$`	dollar open letter R to power 3
dopcrm	`${\Bbb␣R}^m$`	dollar open letter R to power m
dopcrn	`${\Bbb␣R}^n$`	dollar open letter R to power n
dopct	`${\Bbb␣T}$`	dollar open letter T
dopcz	`${\Bbb␣Z}$`	dollar open letter Z
dp	`$p$`	dollar p
dpdzy	`$\partial␣z/\partial␣y$`	dollar partial derivatives z over y
dq	`$q$`	dollar q
dr	`$r$`	dollar r
ds	`$s$`	dollar s
dsart	`\documentstyle{article}`	document style article
dsartv	`\documentstyle[verbatim]{article}`	document style article
dsbook	`\documentstyle{book}`	document style article
dslet	`\documentstyle{letter}`	document style letter
dso3	`$\mbox{\rm␣so(3)}$`	so(3) (in roman) with dollar signs around
dsp	`\qquad`	double space
dsrep	`\documentstyle{report}`	document style report
dsu	`\documentstyle{`	document style universal
dsz	`\displaystyle`	display size

dszu	`{\displaystyle`	display size universal
dt	`$t$`	dollar t
dtriap	`$(a_1,␣a_2,␣a_3)$`	dollar triad in parentheses;
dtsq	`$T^\ast␣Q$`	dollar T superscript-asterisk Q
dtsqq	`$T^{\ast}_{q}␣Q$`	dollar T superscript-asterisk subscript-q Q
dtt	`\det`	determinant
du	`$u$`	dollar u
dv	`$v$`	dollar v
dvcpp	`$\stackrel{\textstyle`	vector arrow above PP with dollar signs (text mode)
dvcpq	`$\stackrel{\textstyle`	vector arrow above PQ with dollar signs (text mode)
dw	`$w$`	dollar w
dx	`$x$`	dollar x
dxa	`$\alpha$`	dollar greek alpha
dxb	`$\beta$`	dollar greek beta
dxc	`$\chi$`	dollar greek chi
dxcd	`$\Delta$`	dollar greek Delta
dxcg	`$\Gamma$`	dollar greek Gamma
dxcl	`$\Lambda$`	dollar greek Lambda
dxco	`$\Omega$`	dollar greek Omega
dxcp	`$\Pi$`	dollar greek Pi
dxcph	`$\Phi$`	dollar greek Phi
dxcps	`$\Psi$`	dollar greek Psi
dxcs	`$\Sigma$`	dollar greek Sigma
dxcth	`$\Theta$`	dollar greek Theta
dxcu	`$\Upsilon$`	dollar greek Upsilon
dxcx	`$\Xi$`	dollar greek Xi
dxd	`$\delta$`	dollar greek delta
dxdt	`dx/dt`	derivatives x over t
dxdy	`\,dx\,dy`	derivatives x y
dxdydz	`\,dx\,dy\,dz`	derivatives x y z
dxe	`$\epsilon$`	dollar greek epsilon
dxet	`$\eta$`	dollar greek eta
dxg	`$\gamma$`	dollar greek gamma
dxio	`$\iota$`	dollar greek iota
dxk	`$\kappa$`	dollar greek kappa
dxl	`$\lambda$`	dollar greek lambda
dxm	`$\mu$`	dollar greek mu
dxn	`$\nu$`	dollar greek nu
dxo	`$\omega$`	dollar greek omega

dxp	`$\pi$`	dollar greek pi
dxph	`$\phi$`	dollar greek phi
dxps	`$\psi$`	dollar greek psi
dxpyq	`$x^2␣+␣y^2$`	dollar x squared + y squared
dxr	`$\rho$`	dollar greek rho
dxs	`$\sigma$`	dollar greek sigma
dxt	`$\tau$`	dollar greek tau
dxth	`$\theta$`	dollar greek theta
dxu	`$\upsilon$`	dollar greek upsilon
dxve	`$\varepsilon$`	dollar greek varesilon
dxvp	`$\varpi$`	dollar greek varpi
dxvph	`$\varphi$`	dollar greek varphi
dxvr	`$\varrho$`	dollar greek varrho
dxvs	`$\varsigma$`	dollar greek varsigma
dxvth	`$\vartheta$`	dollar greek vartheta
dxx	`$\xi$`	dollar greek xi
dxyp	`$(x,␣y)$`	dollar x,y in parentheses
dxyzp	`$(x,␣y,␣z)$`	dollar x,y,z in parentheses
dxz	`$\zeta$`	dollar greek zeta
dy	`$y$`	dollar y
dydt	`dy/dt`	derivatives y over t
dz	`$z$`	dollar z
dzdt	`dz/dt`	derivatives z over t

e

ea	`\end{array}`	end display alignedat
eabb	`\begin{eqnarray*}`	equation array with big brackets
eabr	`\begin{eqnarray*}`	equation array with big braces
eac	`\end{acknowledgment}`	end acknowledgment environment;
ealg	`\end{algorithm}`	end algorithm environment;
eb	`}`	end (right) brace
ebk	`]`	end (right) bracket
eblk	`\end{quotation}`	end block/quotation

ec	`\end{center}`	end center
ecase	`\end{case}`	end case environment;
ecd1	`\begin{picture}(150,60)(5,50)`	exact commuative diagram 1
eclm	`\end{claim}`	end algorithm environment;
ecmnt	`\end{comment}`	end commend enviornment
ecncl	`\end{conclusion}`	end conclusion environment;
ecnd	`\end{condition}␣`	end condition environment;
ecnj	`ecnj`	end conjecture environment;
ecor	`\end{cor}`	to end a Corollary environement
ecrit	`\end{criterion}`	end criterion environment;
ed	`\end{document}`	end text of document
edfn	`\end{definition}`	end definition environment;
edfn	`\end{dfn}`	to end a Definition environement
edmu		to end demo universal environement (not in LaTeX)
edo	`\end{document}`	end text of document
edp	`\]`	end display math: one line formula, unnumbered
eds	`\end{description}`	end description
ee	`\end{enumerate}`	end enumerate
eea	`\end{array}`	end display alignedat
eec	`\end{center}`	begin center
een	`\end{enumerate}`	end enumerate
eeq	`\end{equation}`	end display math: one line formula, numbered
efig	`\end{figure}`	end figure environment
efll	`\end{flushleft}`	end flush left
eflr	`\end{flushright}`	begin flush right
egraf		endparagraph (not in LaTeX)
einf	`\end{figure}`	end insert figure
eit	`\/}`	end italic space and (right) brace
eitm	`\end{itemize}`	end itemize
elem	`\end{lem}`	to end a Lemma environement
emp	`\varnothing`	empty set; varnothing
empa	`\emptyset`	empty set alternative; emptyset
empg	`\end{minipage}`	end minipage
emu	`{\em`	start emphasized type; “eb” to finish
enota	`\end{notation}`	end notation environment;
enote	`\end{note}␣`	end note environment;
eo	`\in`	element of
ep	`)`	end (right) parenthesis
epf		to end a Proof environement (not in LaTeX)

epf		to end a Proof environement (not in LaTeX)
epr	`\quad␣\blacksquare`	black square/end proof (math mode)
eprf		to end a Proof environement (not in LaTeX)
eprob	`\end{problem}`	end problem environment;
eprop	`\end{prop}`	to end a Proposition environement
epsfb	`\begin{figure}[t]`	epsfbox figure template
epsfbb	`\begin{figure}[t]`	epsfbox(with bounding box) figure template
epsfbb2	`\begin{figure}[t]`	epsfbox two figure side by side template
epsff	`\begin{figure}[t]`	epsffile figure template
epsfv	`\epsfverbosetrue`	epsf verbose true command
eq	`=`	equals
eqa	`\end{eqnarray}`	end multiline aligned display math array, numbered
eqas	`\end{eqnarray*}`	end multiline aligned display math array star, unnumbered
eqbox	`\begin{equation}`	equation displayed in a box
eqbrc	`\begin{equation}`	equation array example
eqbrl	`\begin{equation}`	equation array example
eqm	`''`	end (right) quotation marks
eqng	`\begin{eqnarray}`	aligned equations left justified; numbered as a group
eqsp	`\begin{eqnarray*}`	equation split star, unnumbered
eqst	`\end{question}`	end question environment;
eqt	`\end{quotation}`	end quotation
eqtx	`\[`	display math equation with text
eqv	`\equiv`	equivalent
eqvt	`\Leftrightarrow`	equivalent to; open Left-right arrow
ermk	`\end{Remark}␣`	end remark environment;
eros	`\end{enumerate}`	end roster; enumerate
esol	`\end{solution}`	end solution environment;
esq	`\quad␣\square`	empty square (math mode)
esum	`\end{summary}`	end summary environment;
etab	`\end{table}`	end table environment
etb	`\end{tabbing}`	end tabbing
etd	`\quad␣\bigtriangledown`	empty triangle down (math mode)
ethm	`\end{thm}`	to end a Theorem environement
etr	`\end{tabular}`	end tabular
eval	`\[`	evaluation of expression
evrb	`\end{verbatim}`	end the verbatim environment
ex	`\exp`	exponential
exa	`\noindent{\large␣\bf␣Example\,}`	Example (title in large bold)
exca		end Exercise in body of text; (not in LaTeX)

excb		end Exercises—end chpt. monographs; (not in LaTeX)
ez	=␣0	equals zero

f

f12	\frac{1}{2}	fraction half
f13	\frac{1}{3}	fraction 1 over 3
f14	\frac{1}{4}	fraction 1 over 4
fa	\forall	for all
fddt	\frac{d}{dt}	fraction d over dt
fdudt	\frac{du}{dt}	fraction du over dt
fdxdt	\frac{dx}{dt}	fraction dx over dt
fdydt	\frac{dy}{dt}	fraction dy over dt
fdzdt	\frac{dz}{dt}	fraction dz over dt
fig	\begin{figure}	general figure space allocation;
fldtu		folded text inside math (not in LaTeX)
flt	\flat	flat; use "hpr" for superscript
fof	}{	function of; "fu fof eb" gives \frac{}{}
fps	\frac{\partial^2}	fraction partial squared over partial x partial y
fpt	\frac{\partial^3}	fraction partial squared over partial x partial y partial z
fpx	\frac{\partial}{\partial␣x}	fraction partial over partial x
fpy	\frac{\partial}{\partial␣y}	fraction partial over partial y
fpzx	\frac{\partial␣z}{\partial␣x}	fraction partial z over partial x
frbox	\fbox{\parbox{2.0in}{\centerline{\large␣\bf␣type␣header}␣text␣}}	framed box with header and text; edit its size
frboxn	\fbox{\parbox{2.0in}{{\large␣\bf␣Note:␣\,}␣text␣}}	framed box note with in line text; edit its size
frboxt		framed box with header, topfolded text (not in LaTeX)
ftn	\footnote{	footnote
fu	\frac{	start fraction

g

gc	`\gcd`	greatest common denominator
gce	`\‘{E}`	grave E
ge	`\‘{e}`	grave e
gij	`g_{ij}`	g subscript (lower) ij
gmb	`\frak␣b`	german b
gmca	`\frak␣A`	german A
gmcg	`\frak␣G`	german G
gmch	`\frak␣H`	H
gmck	`\frak␣K`	german K
gmct	`\frak␣T`	german T
gmcx	`\frak␣X`	german X
gmg	`\frak␣g`	german g
gmgs	`\frak␣g␣^{\ast}`	german g star
gmh	`\frak␣h`	german h
gmhs	`\frak␣h␣^{\ast}`	german h star
gmk	`\frak␣k`	german k
gmks	`\frak␣k␣^{\ast}`	german k star
gmp	`\frak␣p`	german p
gmso3	`\frak{so}(3)`	german so(3)
gmt	`\frak␣t`	german t
gmu	`\frak␣`	german universal; only in math mode
gmu	`\frak␣`	german universal; only in math mode
gss	`\ss`	german s
gte	`\geq`	greater than or equal

h

h0	`^0`	superscript (higher) 0
h1	`^1`	superscript (higher) 1
h10	`^{10}`	superscript (higher) 10

h2	`^2`	superscript (higher) 2
h3	`^3`	superscript (higher) 2
h4	`^4`	superscript (higher) 4
h5	`^5`	superscript (higher) 5
h6	`^6`	superscript (higher) 6
h7	`^7`	superscript (higher) 7
h8	`^8`	superscript (higher) 8
h9	`^9`	superscript (higher) 9
ha	`^a`	superscript (higher) a
haf	`\frac{1}{2}`	fraction half
hb	`^b`	superscript (higher) b
hba	`\hbar`	Planck's constant; hbar
hc	`^c`	superscript (higher) c
hca	`^A`	superscript (higher) A
hcb	`^B`	superscript (higher) B
hcc	`^C`	superscript (higher) C
hcd	`^D`	superscript (higher) D
hce	`^E`	superscript (higher) E
hcf	`^F`	superscript (higher) F
hcg	`^G`	superscript (higher) G
hch	`^H`	superscript (higher) H
hci	`^I`	superscript (higher) I
hcj	`^J`	superscript (higher) J
hck	`^K`	superscript (higher) K
hcl	`^L`	superscript (higher) L
hcm	`^M`	superscript (higher) M
hcn	`^N`	superscript (higher) N
hco	`^O`	superscript (higher) O
hcp	`^P`	superscript (higher) P
hcq	`^Q`	superscript (higher) Q
hcr	`^R`	superscript (higher) R
hcs	`^S`	superscript (higher) S
hct	`^T`	superscript (higher) T
hcu	`^U`	superscript (higher) U
hcv	`^V`	superscript (higher) V
hcw	`^W`	superscript (higher) W
hcx	`^X`	superscript (higher) X
hcy	`^Y`	superscript (higher) Y
hcz	`^Z`	superscript (higher) Z

hd	`^d`	superscript (higher) d
hdg	`^\dagger`	superscript (higher) dagger
hee	`^e`	superscript (higher) e
hf	`^f`	superscript (higher) f
hfi	`\hfill`	hfill
hflt	`^\flat`	superscript (higher) flat
hg	`^g`	superscript (higher) g
hh	`^h`	superscript (higher) h
hi	`^i`	superscript (higher) i
hij	`^{ij}`	superscript (higher) ij
hijk	`^{ijk}`	superscript (higher) ijk
hj	`^j`	superscript (higher) j
hjk	`^{jk}`	superscript (higher) jk
hk	`^k`	superscript (higher) k
hl	`^l`	superscript (higher) l
hlin	`\hline`	horizontal line
hm	`^m`	superscript (higher) m
hmo	`^{-1}`	superscript (higher) -1
hn	`^n`	superscript (higher) n
ho	`^o`	superscript (higher) o
hp	`^p`	superscript (higher) p
hpr	`^\prime`	superscript (higher) prime
hprp	`^\perp`	superscript (higher) perp
hq	`^q`	superscript (higher) q
hr	`^r`	superscript (higher) r
hrl	`\hline`	horizontal rule; line
hs	`^s`	superscript (higher) s
hshp	`^\sharp`	superscript (higher) sharp
hskp	`\hskip␣2in`	horizontal skip
hsp	`\hspace{0.2in}`	horizontal space
hst	`^\ast`	superscript (higher) asterisk
ht	`^t`	superscript (higher) t
hu	`^{`	superscript universal
huu	`^u`	superscript (higher) u
hv	`^v`	superscript (higher) v
hvst	`^\star`	superscript (higher) star
hw	`^w`	superscript (higher) w
hx	`^x`	superscript (higher) x
hxa	`^\alpha`	superscript (higher) greek alpha

hxb	`^\beta`	superscript (higher) greek beta
hxc	`^\chi`	superscript (higher) greek chi
hxcd	`^\Delta`	superscript (higher) greek Delta
hxcg	`^\Gamma`	superscript (higher) greek Gamma
hxcl	`^\Lambda`	superscript (higher) greek Lambda
hxco	`^\Omega`	superscript (higher) greek Omega
hxcp	`^\Pi`	superscript (higher) greek Pi
hxcph	`^\Phi`	superscript (higher) greek Phi
hxcps	`^\Psi`	superscript (higher) greek Psi
hxcs	`^\Sigma`	superscript (higher) greek Sigma
hxcth	`^\Theta`	superscript (higher) greek Theta
hxcu	`^\Upsilon`	superscript (higher) greek Upsilon
hxcx	`^\Xi`	superscript (higher) greek Xi
hxd	`^\delta`	superscript (higher) greek delta
hxe	`^\epsilon`	superscript (higher) greek epsilon
hxet	`^\eta`	superscript (higher) greek eta
hxg	`^\gamma`	superscript (higher) greek gamma
hxio	`^\iota`	superscript (higher) greek iota
hxk	`^\kappa`	superscript (higher) greek kappa
hxl	`^\lambda`	superscript (higher) greek lambda
hxm	`^\mu`	superscript (higher) greek mu
hxn	`^\nu`	superscript (higher) greek nu
hxo	`^\omega`	superscript (higher) greek omega
hxp	`^\pi`	superscript (higher) greek pi
hxph	`^\phi`	superscript (higher) greek phi
hxps	`^\psi`	superscript (higher) greek pis
hxr	`^\rho`	superscript (higher) greek rho
hxs	`^\sigma`	superscript (higher) greek sigma
hxt	`^\tau`	superscript (higher) greek tau
hxth	`^\theta`	superscript (higher) greek theta
hxu	`^\upsilon`	superscript (higher) greek upsilon
hxve	`^\varepsilon`	superscript (higher) greek varepsilon
hxvp	`^\varpi`	superscript (higher) greek varpi
hxvph	`^\varphi`	superscript (higher) greek varphi
hxvr	`^\varrho`	superscript (higher) greek varrho
hxvs	`^\varsigma`	superscript (higher) greek varsigma
hxvth	`^\vartheta`	superscript (higher) greek vartheta
hxx	`^\xi`	superscript (higher) greek xi
hxz	`^\zeta`	superscript (higher) greek zeta

hy	`^y`	superscript (higher) y
hz	`^z`	superscript (higher) z

i

i10	`\int^1_0`	integral superscript 1 subscript 0
i2xp0	`\int^{2␣\pi}_0`	integral superscript (2 pi) subscript 0
iba	`\int^b_a`	integral superscript b subscript a
idu	`\index{`	use for index entries
iinf	`\int^\infty_{-␣\infty}`	integral infinity: superscript (+infinity) subscript (-infinity)
ilcd	`\int_D`	integral lower capital D (subscript D)
illus	`\begin{figure}`	special illustration: mac
ima	`\Im`	imaginary part alternative
imp	`\Rightarrow`	implies; long Right arrow
impb	`\Leftarrow`	implied by; long Left arrow
imu	`\mbox{\rm␣Im}(`	imaginary part universal
imz	`\mbox{\rm␣Im}(z)`	imaginary part of z
infi	`\infty`	infinity
infm	`\inf`	infimum
ini1	`\bigcap^{n}_{i␣=␣1}`	intersection superscript n subscript i=1
intc	`\oint`	contour integral
intd	`\int␣\!\!\!␣\int`	double integral
ints	`\cap`	intersection
intt	`\int␣\!\!\!␣\int␣\!\!\!␣\int`	triple integral
intu	`\int`	integral universal; add limits with "hu", "lu"
intxtu	`\mbox{\rm␣`	interline text
ir3	`\int_{{\Bbb␣R}^3}`	integral R to power 3
iso	`\cong`	isomorphic; conjugate
itm	`\item`	item
itmu	`\item[`	item entry universal
itu	`{\it`	start *italic* type; "eit" to finish

k

kr	`\ker`	kernel

l

l0	`_0`	subscript (lower) 0
l1	`_1`	subscript (lower) 1
l10	`_{10}`	subscript (lower) 10
l2	`_2`	subscript (lower) 2
l3	`_3`	subscript (lower) 3
l4	`_4`	subscript (lower) 4
l5	`_5`	subscript (lower) 5
l6	`_6`	subscript (lower) 6
l7	`_7`	subscript (lower) 7
l8	`_8`	subscript (lower) 8
l9	`_9`	subscript (lower) 9
la	`_a`	subscript (lower) a
lam	`L_A{}^\mu`	staggered varation 1; (subscript-group superscript)
lb	`_b`	subscript (lower) b
lbl	`\label{`	to label an equation, theorem, etc.
lbrk	`\linebreak`	linebreak
lc	`_c`	subscript (lower) c
lca	`_A`	subscript (lower) A
lcb	`_B`	subscript (lower) B
lcc	`_C`	subscript (lower) C
lcd	`_D`	subscript (lower) D
lce	`_E`	subscript (lower) E
lcf	`_F`	subscript (lower) F
lcg	`_G`	subscript (lower) G
lch	`_H`	subscript (lower) H

lci	`_I`	subscript (lower) I
lcj	`_J`	subscript (lower) J
lck	`_K`	subscript (lower) K
lcl	`_L`	subscript (lower) L
lcm	`_M`	subscript (lower) M
lcn	`_N`	subscript (lower) N
lco	`_O`	subscript (lower) O
lcp	`_P`	subscript (lower) P
lcq	`_Q`	subscript (lower) Q
lcr	`_R`	subscript (lower) R
lcs	`_S`	subscript (lower) S
lct	`_T`	subscript (lower) T
lcu	`_U`	subscript (lower) U
lcv	`_V`	subscript (lower) V
lcw	`_W`	subscript (lower) W
lcx	`_X`	subscript (lower) X
lcy	`_Y`	subscript (lower) Y
lcz	`_Z`	subscript (lower) Z
ld	`_d`	subscript (lower) d
ldo	`\left.`	left followed by dot
lds	`\ldots`	lower dots
le	`_e`	subscript (lower) e
lea	`\leftarrow`	uparrow
lebk	`\left[`	left bracket
lebr	`\left\{`	left brace
lel	`\left\langle`	large left-angle
lep	`\left(`	left parenthesis
lequ	`\begin{eqnarray}`	numbered equation split over two lines,
lequex	`\begin{eqnarray}`	left equation array example
lequs	`\begin{eqnarray*}`	unnumbered equation split over two lines,
letterdef		letter.def; macro for letters; undefined use std letter.sty
lf	`_f`	subscript (lower) f
lg	`_g`	subscript (lower) g
lgn	`\ln`	natural logarithm
lh	`_h`	subscript (lower) h
lhtxt		leftheadtext (not in LaTeX)
li	`_i`	subscript (lower) i
li00	`\lim_{(x,y)␣\rightarrow␣(0,0)}`	limit subscript (x,y) to (0,0)
liai	`\lim_{a␣\rightarrow␣\infty}`	limit subscript a to infinity

lied	`\pounds`	Lie derivative; pounds
lij	`_{ij}`	subscript (lower) ij
lijk	`_{ijk}`	subscript (lower) ijk
limi	`\liminf`	limit inferior
limm	`\lim`	limit
lims	`\limsup`	limit superior
limu	`\lim{`	limit universal
lin	`\line{...}`	line
lixl0	`\lim_{x␣\rightarrow␣x_0}`	limit subscript x to x subscript 0
lj	`_j`	subscript (lower) j
ljk	`_{jk}`	subscript (lower) jk
lk	`_k`	subscript (lower) k
ll	`_l`	subscript (lower) l
llb	`\{`	left literal brace
lld	`\left\langle␣\!␣\left\langle`	large left angle doubled
lle	`\langle`	left angle bracket
llin	`\leftline{...}`	leftline
lm	`_m`	subscript (lower) m
ln	`_n`	subscript (lower) n
lo	`_o`	subscript (lower) o
logg	`\log`	logarithm
lora	`\longrightarrow`	longrightarrow
lp	`_p`	subscript (lower) p
lq	`_q`	subscript (lower) q
lr	`_r`	subscript (lower) r
lra	`\leftrightarrow`	leftrightarrow
ls	`_s`	subscript (lower) s
lst	`_\ast`	subscript (lower) asterisk?
lt	`_t`	subscript (lower) t
lte	`\leq`	less than or equal
lu	`_{`	subscript universal
luu	`_u`	subscript (lower) u
lv	`_v`	subscript (lower) v
lvst	`_\star`	subscript (lower) star
lw	`_w`	subscript (lower) w
lx	`_x`	subscript (lower) x
lxa	`_\alpha`	subscript (lower) greek alpha
lxb	`_\beta`	subscript (lower) greek beta
lxc	`_\chi`	subscript (lower) greek chi

lxcd	`_\Delta`	subscript (lower) greek Delta
lxcg	`_\Gamma`	subscript (lower) greek Gamma
lxcl	`_\Lambda`	subscript (lower) greek Lambda
lxco	`_\Omega`	subscript (lower) greek Omega
lxcp	`_\Pi`	subscript (lower) greek Pi
lxcph	`_\Phi`	subscript (lower) greek Phi
lxcps	`_\Psi`	subscript (lower) greek Psi
lxcs	`_\Sigma`	subscript (lower) greek Sigma
lxcth	`_\Theta`	subscript (lower) greek Theta
lxcu	`_\Upsilon`	subscript (lower) greek Upsilon
lxcx	`_\Xi`	subscript (lower) greek Xi
lxd	`_\delta`	subscript (lower) greek delta
lxe	`_\epsilon`	subscript (lower) greek epsilon
lxet	`_\eta`	subscript (lower) greek eta
lxg	`_\gamma`	subscript (lower) greek gamma
lxio	`_\iota`	subscript (lower) greek iota
lxk	`_\kappa`	subscript (lower) greek kappa
lxl	`_\lambda`	subscript (lower) greek lambda
lxm	`_\mu`	subscript (lower) greek mu
lxn	`_\nu`	subscript (lower) greek nu
lxo	`_\omega`	subscript (lower) greek omega
lxp	`_\pi`	subscript (lower) greek pi
lxph	`_\phi`	subscript (lower) greek phi
lxps	`_\psi`	subscript (lower) greek psi
lxr	`_\rho`	subscript (lower) greek rho
lxs	`_\sigma`	subscript (lower) greek sigma
lxt	`_\tau`	subscript (lower) greek tau
lxth	`_\theta`	subscript (lower) greek theta
lxu	`_\upsilon`	subscript (lower) greek upsilon
lxve	`_\varepsilon`	subscript (lower) greek varepsilon
lxvp	`_\varpi`	subscript (lower) greek varpi
lxvph	`_\varphi`	subscript (lower) greek varphi
lxvr	`_\varrho`	subscript (lower) greek varrho
lxvs	`_\varsigma`	subscript (lower) greek varsigma
lxvth	`_\vartheta`	subscript (lower) greek vartheta
lxx	`_\xi`	subscript (lower) greek xi
lxz	`_\zeta`	subscript (lower) greek zeta
ly	`_y`	subscript (lower) y
lz	`_z`	subscript (lower) z

m

mag1		magnification magstep 1 (not in LaTeX)
magu		magnification magstep universal (not in LaTeX)
mbe	`\mbox{}`	empty box, use at the beginning/end of a line
mcor	`\newtheorem{cor}{Corollary}`	to make a new series of Corollaries
mdfn	`\newtheorem{dfn}{Definition}`	to make a new series of Definitions
mgt	`\gg`	much greater than
mi	`-`	minus
minf	`\begin{figure}[h]`	midinsert figure
mip	`\mp`	minus-plus
mlem	`\newtheorem{lem}{Lemma}`	to make a new series of Lemmas
mlt	`\ll`	much less than
mn	`\min`	minimum
mo	`-1`	minus 1
mprop	`\newtheorem{prop}{Proposition}`	to make a new series of Propositions
mskp	`\medskip`	medium skip
msp	`\:`	medium space; only in math mode
mthm	`\newtheorem{thm}{Theorem}`	to make a new series of Theorems
mx	`\max`	maximum
mx2b	`\left[␣\begin{array}{cc}`	matrix 2x2 with brackets
mx2i	`\left[␣\begin{array}{cc}`	matrix 2x2 identity
mx2p	`\left(␣\begin{array}{cc}`	matrix 2x2 with parentheses
mx2s	`\left[␣\begin{array}{cc}`	matrix 2x2 symplectic
mx3b	`\left[␣\begin{array}{ccc}`	matrix 3x3 with square brackets
mx3b35pt	`\left[␣\begin{array}{ccc}`	matrix 3x3 with square brackets
mx3d	`\left|␣\begin{array}{ccc}`	matrix 3x3 determinant
mx3i	`\left(␣\begin{array}{ccc}`	matrix 3x3 identity
mx3p	`\left(␣\begin{array}{ccc}`	matrix 3x3
mxbu	`\left[`	matrix 2x2 universal–with brackets
mxc	`\left(␣\begin{array}{c}`	matrix column
mxcb	`\left[␣\begin{array}{c}`	matrix column alternate (with square brackets)
mxcvu	`\left\Vert`	matrix 2x2 universal–double vertical bars
mxpu	`\left(`	matrix 2x2 universal–with parentheses
mxsbu	`\small\left[`	small matrix 2x2 universal–with brackets
mxspu	`\small\left(`	small matrix 2x2 universal–with parentheses

mxsu	`\small`	small matrix 2x2 matrix universal–no delimiters
mxu	`\begin{array}{cc}`	matrix 2x2 universal–no delimiters
mxvu	`\left|`	matrix 2x2 universal–single vertical bar

n

na	`\nabla`	nabla
nbb		hide line overflow black boxes (not in LaTeX)
ncmdu	`\newcommand{...}{...}`	define a new command macro
ndsp	`\!␣\!`	negative double space; only in math mode
ne	`\neq`	not equal
neo	`\not\in`	not an element of
nfnttbi	`\newfont{\tenbi}{cmbxti10}`	new font ten point bold italic
nfntu	`\newfont{\...}{\...}`	new font definition
nl	`\\`	newline (double backslashes)
nlg		no AmSTeX logo (not in LaTeX)
nlin	`\newline`	newline
nll	`\null`	null
noi	`\noindent`	no indent
nonu	`\nonumber`	supress numbering on equation
np	`\newpage`	newpage
npgno	`\pagestyle{empty}`	no page numbers
nr2	`\sqrt[n]{2}`	nth root of 2
nrbu	`\\|{\bf␣u}\\|`	norm bold u
nrh	`\pagestyle{empty}`	no running heads
nrm	`\\|`	norm; double vertical bars
nsp	`\!`	negative space; only in math mode
ntg	`\notag`	no tag

o

o0	`(0)`	of 0
o1	`(1)`	of 1
o2	`(2)`	of 2
o3	`(3)`	of 3
o4	`(4)`	of 4
o5	`(5)`	of 5
o6	`(6)`	of 6
o7	`(7)`	of 7
o8	`(8)`	of 8
o9	`(9)`	of 9
oa	`(a)`	of a
ob	`{`	open (left) brace
obk	`[`	open (left) bracket
obp	`\bar{p}`	over bar p
obq	`\bar{q}`	over bar q
obr	`\bar{r}`	over bar r
obs	`\bar{s}`	over bar s
obu	`\bar{`	overbar universal
obx	`\bar{x}`	over bar x
obxa	`\bar{\alpha}`	over bar greek alpha
obxb	`\bar{\beta}`	over bar greek beta
obxg	`\bar{\gamma}`	over bar greek gamma
oby	`\bar{y}`	over bar y
obz	`\bar{z}`	over bar z
oc	`(c)`	of c
oca	`(A)`	of A
ocb	`(B)`	of B
occ	`(C)`	of C
ocd	`(D)`	of D
oce	`(E)`	of E
ocf	`(F)`	of F
ocg	`(G)`	of G
och	`(H)`	of H
oci	`(I)`	of I
ocj	`(J)`	of J
ock	`(K)`	of K
ocl	`(L)`	of L
ocm	`(M)`	of M

ocn	`(N)`	of N
oco	`(O)`	of O
ocp	`(P)`	of P
ocq	`(Q)`	of Q
ocr	`(R)`	of R
ocs	`(S)`	of S
oct	`(T)`	of T
ocu	`\check{`	over check universal
ocuu	`(U)`	of u (note: ocuu)
ocv	`(V)`	of V
ocw	`(W)`	of W
ocx	`(X)`	of X
ocy	`(Y)`	of Y
ocz	`(Z)`	of Z
od	`(d)`	of d
oddp	`\ddot{p}`	over double dot p
oddq	`\ddot{q}`	over double dot q
oddr	`\ddot{r}`	over double dot 4
odds	`\ddot{s}`	over double dot s
oddu	`\ddot{`	over double dot universal
oddx	`\ddot{x}`	over double dot x
oddxa	`\ddot{\alpha}`	over double dot greek alpha
oddxb	`\ddot{\beta}`	over double dot greek beta
oddxg	`\ddot{\gamma}`	over double dot greek gamma
oddy	`\ddot{y}`	over double dot y
oddz	`\ddot{z}`	over double dot z
odp	`\dot{p}`	over dot p
odq	`\dot{q}`	over dot q
odr	`\dot{r}`	over dot r
ods	`\dot{s}`	over dot s
odu	`\dot{`	over dot universal
odx	`\dot{x}`	over dot x
odxa	`\dot{\alpha}`	over dot greek alpha
odxb	`\dot{\beta}`	over dot greek beta
odxg	`\dot{\gamma}`	over dot greek gamma
ody	`\dot{y}`	over dot y
odz	`\dot{z}`	over dot z
oe	`(e)`	e
oeb	`(b)`	of b

oef	`(f)`	of f (note: ef)
oen	`(n)`	of n (note: en)
oep	`(p)`	of p (note: ep)
oer	`(r)`	of r (note: er)
og	`(g)`	of g
oh	`(h)`	of h
ohp	`\hat{p}`	over hat p
ohq	`\hat{q}`	over hat q
ohr	`\hat{r}`	over hat r
ohs	`\hat{s}`	over hat s
ohu	`\hat{`	over hat universal
ohx	`\hat{x}`	over hat x
ohxa	`\hat{\alpha}`	over hat greek alpha
ohxb	`\hat{\beta}`	over hat greek beta
ohxg	`\hat{\gamma}`	over hat greek gamma
ohy	`\hat{y}`	over hat y
ohz	`\hat{z}`	over hat z
oi	`(i)`	of i
oj	`(j)`	of j
ok	`(k)`	of k
ol	`(l)`	of l
olp	`\overline{p}`	over line p
olq	`\overline{q}`	over line q
olr	`\overline{r}`	over line r
olra	`\Leftrightarrow`	open Left-right arrow; equivalent to
ols	`\overline{s}`	over line s
olu	`\overline{`	overline universal
olx	`\overline{x}`	over line x
olxa	`\overline{\alpha}`	over line greek alpha
olxb	`\overline{\beta}`	over line greek beta
olxg	`\overline{\gamma}`	over line greek gamma
oly	`\overline{y}`	over line y
olz	`\overline{z}`	over line z
om	`(m)`	of m
omi	`\ominus`	ominus: direct difference
oo	`(o)`	of o
op	`(`	open (left) parenthesis
opad	`\mbox{\rm␣ad}`	operatorname ad
opcaut	`\mbox{\rm␣Aut}`	operatorname Aut

opcc	{\Bbb␣C}	open letter C
opccard	\mbox{\rm␣Card}	operatorname Card
opccorr	\mbox{\rm␣Corr}	operatorname Corr
opcext	\mbox{\rm␣Ext}	operatorname Ext
opcfcl	\mbox{\rm␣FL}	operatorname FL
opcgcl	\mbox{\rm␣GL}	operatorname GL
opchar	\mbox{\rm␣char}	operatorname char
opchom	\mbox{\rm␣Hom}	operatorname Hom
opci	{\Bbb␣I}	open letter I
opcjac	\mbox{\rm␣Jac}	operatorname Jac
opclie	\mbox{\rm␣Lie}	operatorname LIe
opcnm	\mbox{\rm␣Nm}	operatorname Nm
opcpcgcl	\mbox{\rm␣PGL}	operatorname PGL
opcpic	\mbox{\rm␣Pic}	operatorname Pic
opcprym	\mbox{\rm␣Prym}	operatorname Prym
opcr	{\Bbb␣R}	open letter R
opcr1	{\Bbb␣R}^1	open letter R to power 1
opcr2	{\Bbb␣R}^2	open letter R to power 2
opcr3	{\Bbb␣R}^3	open letter R to power 3
opcram	\mbox{\rm␣Ram}	operatorname Ram
opcrank	\mbox{\rm␣Rank}	operatorname Rank
opcres	\mbox{\rm␣Res}	operatorname Res
opcrm	{\Bbb␣R}^m	open letter R to power m
opcrn	{\Bbb␣R}^n	open letter R to power n
opcscl	\mbox{\rm␣SL}	operatorname SL
opcsco	\mbox{\rm␣SO}	operatorname SO
opcscp	\mbox{\rm␣SP}	operatorname SP
opcscu	\mbox{\rm␣SU}	operatorname SU
opcsp	\mbox{\rm␣Sp}	operatorname Sp
opcsym	\mbox{\rm␣Sym}	operatorname Sym
opct	{\Bbb␣T}	open letter T
opctr	\mbox{\rm␣Tr}	operatorname Tr
opcz	{\Bbb␣Z}	open letter Z
opl	\oplus	oplus: direct sum
opndef	\newcommand{\...}{\mbox{\rm␣...}}	operatorname macro definition
opnu	\mbox{\rm	operatorname universal
oprank	\mbox{\rm␣rank}	operatorname rank
opreg	\mbox{\rm␣reg}	operatorname reg
opres	\mbox{\rm␣res}	operatorname res

opsl	`\mbox{\rm␣sl}`	operatorname sl
opsq	`\mbox{\rm␣sq}`	operatorname sq
opu	`{\Bbb␣`	open letter universal
opu	`{\Bbb␣`	open letter universal
oq	`(q)`	of q
os	`(s)`	of s
ot	`(t)`	of t
oti	`\otimes`	otimes
otu	`\tilde{`	over tilde universal
ou	`(u)`	of u
ov	`(v)`	of v
ova	`\vec{a}`	over vector a
ovb	`\vec{b}`	over vector b
ovc	`\vec{c}`	over vector c
ovu	`\vec{`	over vector universal
ovv	`\vec{v}`	over vector v
ovw	`\vec{w}`	over vector w
ow	`(w)`	of w
ox	`(x)`	of x
oy	`(y)`	of y
oz	`(z)`	of z

p

para	`\P`	paragraph symbol
pd	`\partial`	partial derivative
pdzy	`\partial␣z/\partial␣y`	partial derivatives z over y
pgno		set page number (not in LaTeX)
pict	`\begin{figure}`	special picture: mac
pl	`+`	plus
plm	`\pm`	plus-minus
pni1	`\prod^{n}_{i␣=␣1}`	product superscript n subscript i=1
ppt	`\propto`	proportional to
prf	`\noindent{\bf␣Proof\,}`	Proof (title in bold)

prind	`\setlength{\parindent}{0em}`	set parindent
prm	`\prime`	prime; use "hpr" for superscript
prskp	`\setlength{\parskip1.5ex␣plus␣0.5ex␣minus␣0.5ex}`	set parskip
pt	`%`	percent

q

qd	`\quad`	quad space (width em)
qed	`\quad␣\square`	qed symbol or empty square (math mode)
qqd	`\qquad`	double quad space

r

ra	`\rightarrow`	right arrow
rcmdu	`\renewcommand{...}{...}`	redefine a command macro
rdefu	`\renewcommand{...}{...}`	redefine a command macro
rdo	`\right.`	right followed by dot
rea	`\Re`	real part alternative
refp	`(\ref{})`	to cross reference (put cursor between the {} by hand)
refr	`\ref{`	to cross reference an equation, theorem, etc.
reo	`\ni`	reverse element of
reu	`\mbox{\rm␣Re}(`	real part universal
rez	`\mbox{\rm␣Re}(z)`	real part of z
rhtxt		rightheadtext (not in LaTeX)
ribk	`\right]`	right bracket
ribr	`\right\}`	right brace
rip	`\right)`	right parenthesis
rir	`\right\rangle`	large right-angle
rlb	`\}`	right literal brace
rle	`\rangle`	right angle bracket

rlin	`\rightline{...}`	rightline
rmk	`\noindent{\large␣\bf␣Remarks\,}`	Remarks (title in bold)
rmu	`{\rm`	roman type
rom	`\mbox{\rm␣}`	make text roman
romu	`\mbox{\rm␣`	make text roman
ros	`\begin{enumerate}`	begin roster; enumerate
rqed	`\null\hfill$\square$`	right justified qed symbol
rrd	`\right\rangle␣\!␣\right\rangle`	large right-angle doubled

S

scd1	`\begin{picture}(150,100)(-70,0)`	square commutative diagram 1
scd2	`\begin{picture}(150,100)(-70,0)`	square commutative diagram 2
scd3	`\begin{picture}(150,100)(-70,0)`	square commutative diagram 3
scdw		rectangular CD (same as scd2 with variable width; not in LaTeX)
scl	`\ell`	script l
scu	`{\sc`	start Small Caps type; "eb" to finish
sd	`d`	small letter d
sd	`d`	small letter d
sdp	`\,\circledS\,`	semi direct product: (circled S)
sdr	`\searrow`	slanteddown right arrow; southeast arrow
sds	`\,ds`	spave derivative s
sdt	`\,dt`	space derivative t
sdu	`\,du`	space derivative u
sdv	`\,dv`	space derivative v
sdw	`\,dw`	space derivative w
sdx	`\,dx`	space derivative x
sdy	`\,dy`	space derivative y
sdz	`\,dz`	space derivative z
sect	`\S`	section symbol
seh	`\mbox{\rm␣sech}`	sech (in roman)
setc	`\setcounter{enumi}{`	set counter enumi
setcu	`\setcounter{...}{...}`	set counter universal
setlnu	`\setlength{...}{...}`	set length variables universal

setlu	`\left\{␣\left.␣␣\!\right|`	sized set ; for large displays
setm	`\setminus`	set difference; set-minus
setu	`\{␣␣␣␣\mid␣␣␣␣\}`	in-line set universal
sfu	`{\sf`	start sans serif type; "eb" to finish
sh	`\heartsuit`	(sweet)heart suit
shl	`A^i_{\;a}`	staggered high and low (superscript subscript-group)
shp	`\sharp`	sharp; use "hfs" for superscript
si	`\sin`	sine
sih	`\sinh`	hyperbolic sine
siph	`\sin␣\phi`	sine of phi
siq	`\sin^2`	sine squared
sith	`\sin␣\theta`	sine of theta
slu	`{\sl`	*slanted type* "eit" to finish
sn	`\section{`	start a numbered section
sni1	`\sum^{n}_{i␣=␣1}`	sum superscript n subscript i=1
sns	`\section*{`	start an unnumbered section
so3	`\mbox{\rm␣so(3)}`	so(3) (in roman)
sol	`\noindent{\bf␣Solution\,}`	Solution (title in bold)
sq	`^2`	squared
sq10	`\sqrt{10}`	square root of 10
sq2	`\sqrt{2}`	square root of 2
sq3	`\sqrt{3}`	3
sq5	`\sqrt{5}`	square root of 5
sq7	`\sqrt{7}`	square root of 7
squ	`\sqrt{`	square root universal
squ	`\sqrt{`	square root universal
sqxp	`\sqrt{\pi}`	square root of greek pi
sskp	`\smallskip`	small skip
ssn	`\subsection{`	start a numbered subsection
ssns	`\subsection*{`	start an unnumbered subsection
ssp	`\,`	small space
sube	`\subseteq`	subet or equals
subs	`\subset`	susbset
sumu	`\sum`	sum universal
supe	`\supseteq`	superset of equals
supr	`\sup`	supremum
sups	`\supset`	superset
sur	`\nearrow`	slanted up right arrow; northeast arrow

t

tabex1	`\begin{center}`	tabular example 1 (5 columns)
tabex2	`\begin{center}`	tabular example 2 (2 columns within a frame)
tabex3	`\begin{center}`	tabular example 3 (3 columns without a frame)
tabex4	`\begin{center}`	tabular example 4 (2 columns with lines)
tabex5	`\begin{center}`	tabular example 5 (2 columns with lines within a framed box)
tabex6	`\begin{center}`	tabular example 6 (3 columns with lines)
tabl	`\begin{table}[t]␣␣␣␣␣␣␣␣␣␣␣␣␣␣␣␣␣␣␣%optional␣[t,␣b␣or␣h];`	template for table environment
tb	`\>`	tab stop
tbex	`\begin{tabbing}`	tabbing example
tcap	`\caption{Text␣of␣Caption}`	top caption
tcd1	`\begin{picture}(150,100)(-70,0)`	triangular commutative diagram 1
tcd2	`\begin{picture}(150,100)(-70,0)`	triangular commutative diagram 2
te	`\exists`	there exists
te2bd	`\documentclass{article}`	template to begin document latex2e;
te2bdv	`\documentclass{article}`	template for documents using
te2bdvf	`\documentclass{article}`	template for documents using
te2book	`%&latex2e--te2book`	tebook
te2letter	`%&latex2e␣␣␣␣␣te2letter`	te2letter
te2paper	`%&latex2e␣␣␣␣␣te2paper`	te2paper latex2e paper template
teabs	`\begin{abstract}`	template insert for abstracts
teack	`\noindent{\bf␣Acknowledgments}␣We␣thank␣...`	template insert for acknowldegments
teaut	`\title{Title␣of␣paper}`	template insert for title and author
tebd	`\documentstyle{article}`	template to begin document;
tebdf	`\documentstyle[epsf]{article}`	template for documents using article and epsf style files
tebdv	`\documentstyle[verbatim]{article}`	template for documents using
tebdvf	`\documentstyle[verbatim,epsf]{article}`	template for documents using
tebib	`\begin{thebibliography}{}`	template insert for the bibliography
tebook	`%&latex2.09--tebook`	tebook
teletter	`%&latex2.09␣␣␣␣␣teletter`	teletter
temag1		template insert, changing margin size, magstep1 (not in LaTeX)
temar	`\textwidth␣6.5␣truein`	template insert for changing margin size
tepaper	`%&latex2.09␣␣␣␣␣tepaper`	tepaper latex2.09 paper template
tepapereqnwith	`%&latex2.09--tepaper␣eqnwith`	tepaper.eqnwith; paper simple numbering equations with theorems
tepapersimple	`%&latex2.09␣␣␣␣␣tepaper␣simple`	tepapersimple

tepapersimplest	%&latex209--tepaper␣simplest	tepapersimplest
teref	\section*{References}	template insert for references
tfldtu		top folded text inside math (not in LaTeX)
tfu		text size fraction universal (not in LaTeX)
tg	\tag{}	tag equation; label in parentheses
tgs	\tag*{}	tag equation; label not in parentheses
tgsol		tags for equations on left (not in LaTeX)
tgsor		tagst for equations on right (not in LaTeX)
thmsty	\newtheorem{thm}{Theorem}[section]	theoremstyle commands with abbreviated names
ti	\times	times
tinf	\begin{figure}[t]	topinsert figure
tn	\tan	tanent
tnh	\tanh	hyperbolic tangent
triap	(a_1,␣a_2,␣a_3)	triad in parentheses
trv	\pitchfork	transversal; pitchfork
tskp	\topskip␣24pt	topskip
tsp	\;	thick space
tsq	T^\ast␣Q	T superscript-asterisk Q
tsqq	T^{\ast}_{q}␣Q	T superscript-asterisk subscript-q Q
tsz		text size (not in LaTeX)
tszu		text size universal (not in LaTeX)
ttu	{\tt	**typewriter** type
txt	\quad␣\mbox{␣␣}␣\quad	use to put roman text with quad spaces within math
txta	\quad␣\text{and}␣\quad	add text “and” with quad spaces within math
txtu	\mbox{\rm␣	text inside math mode

u

ua	\"{a}	umlaut a
uca	\"{A}	umlaut A
uco	\"{O}	umlaut O
ucu	\"{U}	umlaut U
uhr	\upharpoonright	upharpoonright
uni	\cup	union

uni1	`\bigcup^{n}_{i␣=␣1}`	union superscript n subscript i=1
uo	`\"{o}`	umlaut o
upa	`\uparrow`	uparrow
uu	`\"{u}`	umlaut u

V

van	`v^A{}_\nu`	staggered variation 2; (superscript-group subscript)
vbar	`\mid`	vertical bar with spacing
vcpp	`\stackrel{\textstyle`	vector arrow above PP (math mode)
vcpq	`\stackrel{\textstyle`	vector arrow above PQ (math mode)
vds	`\vdots`	vertical dots
verbatimdef		macro verbatim.def for AmSTeX (not in LaTeX)
vfi	`\vfill`	vfill
vglu	`\vglue␣␣2in`	vglue
vrb	`\verb`	verbatim: usage \verb"phrase in tt font"
vrbinp		verbatim input file (not in LaTeX)
vskp	`\vskip␣12pt`	vertical skip
vsp	`\vspace{0.2in}`	vertical space

W

wace	`accelerate`
wacn	`acceleration`
wacs	`accelerates`
wcdm	`Department␣of␣Mathematics`
wcdp	`Department␣of␣Physics`
wcle	`calculate`
wcln	`calculation`
wcls	`calculates`

wder	`derivative`	
wders	`derivatives`	
wdm	`department␣of␣mathematics`	
wdp	`department␣of␣physics`	
wed	`\wedge`	wedge product
wep	`Euler-Poincar\'e`	
weqn	`equation`	
weqns	`equations`	
wex	`example`	
wfun	`function`	
wfuns	`functions`	
wgm	`geometry`	
wgmc	`geometric`	
wie	`i.e.,`	
wig	`integral`	
wigb	`integrable`	
wign	`integration`	
wigs	`integrals`	
wiie	`{\it␣i.e.,\/}`	
wlig	`line␣integral`	
wligs	`line␣integrals`	
wmx	`matrix`	
wneg	`negative`	
wnl	`nonlinear`	
wnly	`nonlinearity`	
wpf	`\wp`	Weierstrass p-function
wpos	`positive`	
wprp	`perpendicular`	
wrel	`relative`	
wrln	`relation`	
wrtg	`rotating`	
wrtn	`rotation`	
wrtns	`rotations`	
wsn	`solution`	
wsns	`solutions`	
wtm	`theorem`	
wtms	`theorems`	
wty	`theory`	
wun	`university`	

wve	`vector`	
wvel	`velocity`	
wvs	`vectors`	

X

xa	`\alpha`	greek alpha
xb	`\beta`	greek beta
xc	`\chi`	greek chi
xcd	`\Delta`	greek Delta
xcg	`\Gamma`	greek Gamma
xcl	`\Lambda`	greek Lambda
xco	`\Omega`	greek Omega
xcp	`\Pi`	greek Pi
xcph	`\Phi`	greek Phi
xcps	`\Psi`	greek Psi
xcs	`\Sigma`	greek Sigma
xcth	`\Theta`	greek Theta
xcu	`\Upsilon`	greek Upsilon
xcx	`\Xi`	greek Xi
xd	`\delta`	greek delta
xe	`\epsilon`	greek epsilon
xet	`\eta`	greek eta
xg	`\gamma`	greek gamma
xi	`\iota`	greek iota
xk	`\kappa`	greek kappa
xl	`\lambda`	greek lambda
xln	`x_n`	x subscript (lower) n
xm	`\mu`	greek mu
xn	`\nu`	greek nu
xo	`\omega`	greek omega
xp	`\pi`	greek pi
xph	`\phi`	greek phi
xps	`\psi`	greek psi

xpyq	`x^2␣+␣y^2`	x squared + y squared
xq	`x^2`	x squared
xr	`\rho`	greek rho
xs	`\sigma`	greek sigma
xt	`\tau`	greek tau
xth	`\theta`	greek theta
xu	`\upsilon`	greek upsilon
xve	`\varepsilon`	greek varepsilon
xvp	`\varpi`	greek varpi
xvph	`\varphi`	greek varphi
xvr	`\varrho`	greek varrho
xvs	`\varsigma`	greek varsigma
xvth	`\vartheta`	greek vartheta
xx	`\xi`	greek xi
xyp	`(x,␣y)`	x,y in parentheses
xyzp	`(x,␣y,␣z)`	x,y,z in parentheses
xz	`\zeta`	greek zeta

y

yln	`y_n`	y subscript (lower) n
yq	`y^2`	y squared

z

zln	`z_n`	z subscript (lower) n
zq	`z^2`	z squared