

# fmocdmac — FM's OCD L<sup>A</sup>T<sub>E</sub>X Macro\*

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## Abstract

This package contains almost all the latex macros I heavily use in my tcs research activity and, in particular, in the writing of conference and journal articles. As few of my co-authors have kindly pointed out, and probably many have thought, they are somehow a clear expression of an underlying ocd-like behavior... hence the name!

## 1 Implementation & Usage

1 `\package`

### Required external packages:

```
2
3 \RequirePackage{etoolbox}
4
5 \RequirePackage{xargs}
6 \RequirePackage{xspace}
7 \RequirePackage{stringstrings}
8
```

### Package options:

```
9
10 %% Auxiliary packages
11 \newif\ifaux@ \aux@false
12 \DeclareOption{aux}{\aux@true}
13 \DeclareOption{noaux}{\aux@false}
14
15 %% AMS defaults
16 \newif\ifamsdef@ \amsdef@true
17 \DeclareOption{noamsdef}{\amsdef@false}
18
19 %% AMS theorem tools
20 \newif\ifamsthm@ \amsthm@true
21 \DeclareOption{noamsthm}{\amsthm@false}
22
23 %% Extended Theorem tools
24 \newif\ifthmtls@ \thmtls@true
25 \DeclareOption{nothmtls}{\thmtls@false}
26
27 %% Enumeration tools
28 \newif\ifenmtls@ \enmtls@true
29 \DeclareOption{noenmtls}{\enmtls@false}
30
31 %% Hyper reference
32 \newif\ifhympref@ \hympref@true
33 \DeclareOption{nohympref}{\hympref@false}
34
```

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\*This document describes version v0.18 of the fmocdmac package, last revised 2023/05/24.

```

35 %% Font tools
36 \newif\iffnttts@ \fnttts@true
37 \DeclareOption{nofnttts}{\fnttts@false}
38
39 %% Camera-ready version
40 \newif\ifcrv@ \crv@false
41 \DeclareOption{crv}{\crv@true}
42
43 %% Change bars
44 \newif\ifchgbar@ \chgbar@false
45 \DeclareOption{chgbar}{\chgbar@true}
46
47 %% Line numbers
48 \newif\iflinnum@ \linnum@false
49 \DeclareOption{linnum}{\linnum@true}
50
51
52 %% Text macro generation
53 \newif\iftxtgen@ \txtgen@false
54 \DeclareOption{txtgen}{\txtgen@true}
55 \DeclareOption{notxtgen}
56   {\txtgen@false\txt@false\com@false\gam@false\log@false\aut@false}
57
58 %% Math macro generation
59 \newif\ifmthgen@ \mthgen@false
60 \DeclareOption{mthgen}{\mthgen@true}
61 \DeclareOption{nomthgen}
62   {\mthgen@false\mth@false\gam@false\log@false\aut@false}
63
64
65 %% Elementary macros for text
66 \newif\iftxt@ \txt@false
67 \DeclareOption{txt}{\txt@true\txtgen@true}
68 \DeclareOption{notxt}{\txt@false}
69
70 %% Elementary macros for math
71 \newif\ifmth@ \mth@false
72 \DeclareOption{mth}{\mth@true\mthgen@true}
73 \DeclareOption{nomth}{\mth@false}
74
75
76 %% Macros for computational-complexity classes
77 \newif\ifcom@ \com@false
78 \DeclareOption{com}{\com@true\txtgen@true}
79 \DeclareOption{nocom}{\com@false}
80
81
82 %% Macros for games
83 \newif\ifgam@ \gam@false
84 \DeclareOption{gam}{\gam@true\txtgen@true\mthgen@true}
85 \DeclareOption{nogam}{\gam@false}
86
87 %% Macros for logics
88 \newif\iflog@ \log@false
89 \DeclareOption{log}{\log@true\txtgen@true\mthgen@true}
90 \DeclareOption{nolog}{\log@false}
91
92 %% Macros for automata
93 \newif\ifaut@ \aut@false
94 \DeclareOption{aut}{\aut@true\txtgen@true\mthgen@true}
95 \DeclareOption{noaut}{\aut@false}
96
97

```

```

98 %% Format-related tricks
99 \newif\iffirm@ \firm@false
100 \DeclareOption{firm}{\firm@true}
101 \DeclareOption{nofirm}{\firm@false}
102
103
104 %% Figure-related tricks
105 \newif\iffig@ \fig@false
106 \DeclareOption{fig}{\fig@true}
107 \DeclareOption{nofig}{\fig@false}
108
109 %% Wrapfig package
110 \newif\ifwrpfig@ \wrpfig@true
111 \DeclareOption{nowrpfig}{\wrpfig@false}
112
113
114 %% Table-related tricks
115 \newif\iftab@ \tab@false
116 \DeclareOption{tab}{\tab@true}
117 \DeclareOption{notab}{\tab@false}
118
119
120 %% Algorithm-related tricks
121 \newif\ifalg@ \alg@false
122 \DeclareOption{alg}{\alg@true}
123 \DeclareOption{noalg}{\alg@false}
124

```

### Option-processing code:

```

125
126 \DeclareOption*{\PackageWarning{fmocdmac}{Unknown~'\CurrentOption'}}%
127
128 \ExecuteOptions{aux,txtgen,mthgen,txt,mth,com,gam,log,aut}%
129
130 \ProcessOptions\relax%
131
132 \ifcsdef{if@twocolumn}{\newif\if@twocolumn}
133

```

### Package main body:

```

134
135 %%*****%
136 %** Auxiliary Alphabet Letters *****%
137 %*****%

```

`\omicron` **Auxiliary Greek lowercase letter: ... to do!**

```
138 \csdef{omicron}{o}
```

`\Alpha`, ... **Auxiliary Greek uppercase letters: ... to do!**

```

139 \csdef{Alpha}{A} \csdef{Beta}{B} \csdef{Epsilon}{E} \csdef{varEpsilon}{E}
140 \csdef{Zeta}{Z} \csdef{Eta}{H} \csdef{Iota}{I} \csdef{Kappa}{K}
141 \csdef{varKappa}{K} \csdef{Mu}{M} \csdef{Nu}{N} \csdef{Omicron}{O}
142 \csdef{Rho}{P} \csdef{varRho}{P} \csdef{Tau}{T} \csdef{Chi}{X}

```

```

143 %%*****%
144 %*****%
145 %** Tools *****%
146 %*****%

```

`\empchk` **Emptiness check:** `\empchk{⟨A⟩}{⟨B⟩}` evaluates to the empty string, if Argument  $\langle A \rangle$  is empty, and to Argument  $\langle B \rangle$ , otherwise.

- `\empchk{}{B}` = “”
- `\empchk{A}{B}` = “B”

```

147 \newcommand{\empchk}[2]
148   {\if&#1&\else#2\fi}

\defval Default value: \defval{<A>}{<B>} evaluates to Argument <B>, if Argument <A> is empty, and to
Argument <A> itself, otherwise.
    • \defval{}{B} = “B”
    • \defval{A}{B} = “A”
149 \newcommand{\defval}[2]
150   {\if&#1&#2\else#1\fi}

151 %%*****%

\arglef Left extension: \arglef{<A>}{<B>} evaluates to the concatenation <AB> of the two arguments, if
Argument <B> is non-empty, and to the empty string, otherwise.
    • \arglef{A}{} = “”
    • \arglef{A}{B} = “AB”
152 \newcommand{\arglef}[2]
153   {\empchk{#2}{#1#2}}

\argrig Right extension: \argrig{<A>}{<B>} evaluates to the concatenation <AB> of the two arguments,
if Argument <A> is non-empty, and to the empty string, otherwise.
    • \argrig{}{B} = “”
    • \argrig{A}{B} = “AB”
154 \newcommand{\argrig}[2]
155   {\empchk{#1}{#1#2}}

\argmid Middle extension: \argmid{<A>}{<B>}{<C>} evaluates to the concatenation <ABC> of the three
arguments, if Argument <B> is non-empty, and to the empty string, otherwise.
    • \argmid{A}{}{C} = “”
    • \argmid{A}{B}{C} = “ABC”
156 \newcommand{\argmid}[3]
157   {\empchk{#2}{#1#2#3}}

\argsep Separators: \argsep{<A>}{<B>}{<C>} evaluates to Argument <C>, if Argument <A> is empty, to
Argument <A>, if Argument <C> is empty, and to the concatenation <ABC>, otherwise.
    • \argsep{}{B}{C} = “C”
    • \argsep{A}{B}{} = “A”
    • \argsep{A}{}{C} = “AC”
    • \argsep{A}{B}{C} = “ABC”
158 \newcommand{\argsep}[3]
159   {\if&#1&#3\else#1\arglef{#2}{#3}\fi}

160 %%*****%

\varcmd Variadic commands: \varcmd{<A>}{<B>}{<C>}{<D>}{<E>}{<F>} ... to do!
161 \newcommand{\varcmd}[6]
162   {\expandafter\newcommand\csname gobble#1arg\endcsname[2]
163     {\csname check#1arg\endcsname{\argsep{##1}{#4}{\empchk{##2}{#{##2}}}}}%
164     \expandafter\newcommand\csname check#1arg\endcsname[1]
165     {\csname @ifnextchar\endcsname%
166       \bgroup{\csname gobble#1arg\endcsname{##1}{#2{##1#5}#6}}}%
167     \expandafter\newcommand\csname#1\endcsname[1]
168     {\csname check#1arg\endcsname{#3##1}}}%

169 %%*****%

```

```

\seqoftag Sequence of tags: \seqoftag{⟨A⟩}{⟨B⟩}{⟨C⟩} ... to do!
170 \newcommand{\seqoftag}[3]
171   {\@for\itr:={#1}\do%
172     {\expandafter\csedef{\itr#2}%
173       {\noexpand\csname #3\endcsname{\itr}}}}

\seqofcmd Sequence of commands: \seqofcmd{⟨A⟩}{⟨B⟩}{⟨C⟩} ... to do!
174 \newcommand{\seqofcmd}[3]
175   {\@for\itr:={#1}\do%
176     {\expandafter\csedef{\itr#2}%
177       {\noexpand\csname #3\endcsname{\csname \itr\endcsname}}}}

178 %%*****%

\seqoflatlow Sequence of Latin lowercase letters: \seqoflatlow{⟨A⟩}{⟨B⟩} ... to do!
179 \newcommand{\seqoflatlow}
180   {\seqoftag{a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x,y,z}}

\seqoflatupp Sequence of Latin uppercase letters: \seqoflatupp{⟨A⟩}{⟨B⟩} ... to do!
181 \newcommand{\seqoflatupp}
182   {\seqoftag{A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,X,Y,Z}}

\seqoflatlet Sequence of Latin letters: \seqoflatlet{⟨A⟩}{⟨B⟩} ... to do!
183 \newcommand{\seqoflatlet}[2]
184   {\seqoflatlow{#1}{#2}\seqoflatupp{#1}{#2}}

185 %%*****%

\seqofgrklow Sequence of Greek lowercase letters: \seqofgrklow{⟨A⟩}{⟨B⟩} ... to do!
186 \newcommand{\seqofgrklow}
187   {\seqofcmd{alpha,beta,gamma,delta,epsilon,varepsilon,zeta,eta,theta,vartheta,%
188     iota,kappa,varkappa,lambda,mu,nu,xi,omicron,pi,varpi,rho,varrho,sigma,%
189     varsigma,tau,upsilon,phi,varphi,chi,psi,omega}}

\seqofgrkupp Sequence of Greek uppercase letters: \seqofgrkupp{⟨A⟩}{⟨B⟩} ... to do!
190 \newcommand{\seqofgrkupp}
191   {\seqofcmd{Alpha,Beta,Gamma,Delta,Epsilon,varEpsilon,Zeta,Eta,Theta,varTheta,%
192     Iota,Kappa,varKappa,Lambda,Mu,Nu,Xi,Omicron,Pi,varPi,Rho,varRho,Sigma,%
193     varSigma,Tau,Upsilon,Phi,varPhi,Chi,Psi,Omega}}

\seqofgrklet Sequence of Greek letters: \seqofgrklet{⟨A⟩}{⟨B⟩} ... to do!
194 \newcommand{\seqofgrklet}[2]
195   {\seqofgrklow{#1}{#2}\seqofgrkupp{#1}{#2}}

196 %%*****%

\seqoflow Sequence of lowercase letters: \seqoflow{⟨A⟩}{⟨B⟩} ... to do!
197 \newcommand{\seqoflow}[2]
198   {\seqoflatlow{#1}{#2}\seqofgrklow{#1}{#2}}

\seqofupp Sequence of uppercase letters: \seqofupp{⟨A⟩}{⟨B⟩} ... to do!
199 \newcommand{\seqofupp}[2]
200   {\seqoflatupp{#1}{#2}\seqofgrkupp{#1}{#2}}

\seqoflet Sequence of all letters: \seqoflet{⟨A⟩}{⟨B⟩} ... to do!
201 \newcommand{\seqoflet}[2]
202   {\seqoflow{#1}{#2}\seqofupp{#1}{#2}}

203 %%*****%

```

```

204 %*****%
205 %** Auxiliary Packages *****%
206 %*****%
207 \ifaux@
208
209 \ifamsdef@
210 % AMS Packages
211 \RequirePackage{mathtools}
212 \RequirePackage{amssymb}
213 \RequirePackage{stmaryrd}
214 \interdisplaylinepenalty=2500
215 \fi
216
217 \ifamsthm@
218 % AMS Theorem Tools
219 \RequirePackage{amsthm}
220 \fi
221
222 \ifthmtls@
223 % Extended Theorem Tools
224 \RequirePackage{thmtools, thm-restate}
225 \fi
226
227 \ifenmtls@
228 % Enumeration Tools
229 \RequirePackage{paralist}
230 \fi
231
232 \ifhympref@
233 % Hyper References
234 \RequirePackage{hyperref}
235 \hypersetup {
236     pdfsubject    = {},
237     pdfkeywords   = {},
238     pdfproducer   = {},
239     pdfcreator    = {},
240     pdfpagemode   = {UseNone},
241     pdfstartview  = {FitH},
242     urlcolor      = {blue},
243     colorlinks
244 }
245 \fi
246
247 \iffnttts@
248 % Font Tools
249 \RequirePackage[final]{microtype}
250 \fi
251
252 \ifcrv@
253 % Camera-Ready Version
254
255 %...
256
257 \else
258 % Draft Version
259
260 %...
261
262 \ifchgbar@
263 % Change Bars
264 \RequirePackage{changebar}
265 \fi
266

```

```

267 \iflinnu@
268 % Line Numbers
269 \if@twocolumn
270 \RequirePackage[switch, columnwise, mathlines]{lineno}\linenumbers
271 \else
272 \RequirePackage[columnwise, mathlines]{lineno}\linenumbers
273 \fi
274 \fi
275
276 %...
277
278 \fi
279
280 \fi
281 %*****%
282 %*****%
283 %** Auxiliary Font Declarations *****%
284 %*****%

```

**\mathbbo Bbo Math Font: ... to do!**

```
285 \ifdef{\mathbbo}{\DeclareMathAlphabet{\mathbbo}{U}{bbold}{m}{n}}
```

**\matheus Eus Math Font: ... to do!**

```
286 \ifdef{\matheus}{\DeclareMathAlphabet{\matheus}{U}{eus}{m}{n}}
```

**\mathpzc Pzc Math Font: ... to do!**

```
287 \ifdef{\mathpzc}{\DeclareMathAlphabet{\mathpzc}{T1}{pzc}{m}{it}}
```

**\mathscr Scr Math Font: ... to do!**

```
288 \ifdef{\mathscr}{\DeclareMathAlphabet{\mathscr}{U}{rsfs}{m}{n}}
```

```

289 %*****%
290 %*****%
291 %** Text Meta Commands *****%
292 %*****%

```

**\newtxt ... to do!**

- $\newtxt[\rmfamily]{Name}[sub][sup][Ext] = \text{“Name}_{sub}^{sup}Ext\text{”}$
- $\newtxt[\sfamily]{Name}[sub][sup][Ext] = \text{“Name}_{sub}^{sup}Ext\text{”}$
- $\newtxt[\ttfamily]{Name}[sub][sup][Ext] = \text{“Name}_{sub}^{sup}Ext\text{”}$

```

293 \newcommandx{\newtxt}[5][1=, 3=, 4=, 5=]
294 {\text{#1#2\textsubsup{#1}{#3}{#4}{#5}\xspace}

```

**\newtxtsty ... to do!**

- $\newtxtsty[\rmfamily]{Name}[sub][sup][Ext] = \text{“Name}_{sub}^{sup}Ext\text{”}$
- $\newtxtsty[\rmfamily][\sfamily]{Name}[sub][sup][Ext] = \text{“Name}_{sub}^{sup}Ext\text{”}$
- $\newtxtsty[\rmfamily][\ttfamily]{Name}[sub][sup][Ext] = \text{“Name}_{sub}^{sup}Ext\text{”}$

```

295 \newcommandx{\newtxtsty}[2][2=]
296 {\newtxt[\defval{#2}{#1}]}

```

**\newxtarg ... to do!**

- $\newxtarg[\rmfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = \text{“Name}_{sub}^{sup}Ext1(Arg)Ext2\text{”}$
- $\newxtarg[\sfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = \text{“Name}_{sub}^{sup}Ext1(Arg)Ext2\text{”}$
- $\newxtarg[\ttfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = \text{“Name}_{sub}^{sup}Ext1(Arg)Ext2\text{”}$

```

297 \newcommandx{\newxtarg}[7][1=, 3=, 4=, 5=, 7=]
298 {\newtxt{#1}{#2}{#3}{#4}[\argmid{#5}{#6}{#7}]}

```

**\newxtargsty ... to do!**

- $\newxtargsty[\rmfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = \text{“Name}_{sub}^{sup}Ext1(Arg)Ext2\text{”}$

- $\newtxxargsty{\rmfamily}\{\textsf{family}\}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}$
- $\newtxxargsty{\rmfamily}\{\ttfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}$

```

299 \newcommandx{\newtxxargsty}[2][2=]
300 {\newtxxarg[\defval{#2}{#1}]}

```

$\newtxxtoarg$  ... to do!

- $\newtxxtoarg[\rmfamily]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\newtxxtoarg[\textsf{family}]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\newtxxtoarg[\ttfamily]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$

```

301 \newcommandx{\newtxxtoarg}[5][1=, 3=, 4=, 5=]
302 {\newtxxarg[#1]{#2}[#3][#4][#5]}

```

$\newtxxtoargsty$  ... to do!

- $\newtxxtoargsty{\rmfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\newtxxtoargsty{\rmfamily}\{\textsf{family}\}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\newtxxtoargsty{\rmfamily}\{\ttfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$

```

303 \newcommandx{\newtxxtoargsty}[2][2=]
304 {\newtxxtoarg[\defval{#2}{#1}]}

```

$\newtxxtpar$  ... to do!

- $\newtxxtpar[\rmfamily]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\newtxxtpar[\textsf{family}]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\newtxxtpar[\ttfamily]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$

```

305 \newcommandx{\newtxxtpar}[7][1=, 3=, 4=, 5=, 7=]
306 {\newtxt[#1]{#2}[#3][#4][\argmid{#5}{#6}{#7}]}

```

$\newtxxtparsty$  ... to do!

- $\newtxxtparsty{\rmfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\newtxxtparsty{\rmfamily}\{\textsf{family}\}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\newtxxtparsty{\rmfamily}\{\ttfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$

```

307 \newcommandx{\newtxxtparsty}[2][2=]
308 {\newtxxtpar[\defval{#2}{#1}]}

```

$\newtxxtopar$  ... to do!

- $\newtxxtopar[\rmfamily]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\newtxxtopar[\textsf{family}]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\newtxxtopar[\ttfamily]\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$

```

309 \newcommandx{\newtxxtopar}[5][1=, 3=, 4=, 5=]
310 {\newtxxtpar[#1]{#2}[#3][#4][#5]}

```

$\newtxxtoparsty$  ... to do!

- $\newtxxtoparsty{\rmfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\newtxxtoparsty{\rmfamily}\{\textsf{family}\}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\newtxxtoparsty{\rmfamily}\{\ttfamily}\{\text{Name}\}_{\text{sub}}^{\text{sup}}[\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$

```

311 \newcommandx{\newtxxtoparsty}[2][2=]
312 {\newtxxtopar[\defval{#2}{#1}]}

```

$\txxsubsup$  ... to do!

- $\txxsubsup_{\text{sub}}\{\} = \text{“}_{\text{sub}}\text{”}$ ;  $\txxsubsup_{\text{sup}}\{\} = \text{“}^{\text{sup}}\text{”}$ ;  $\txxsubsup_{\text{sub}}\{\text{sub}\}\{\text{sup}\} = \text{“}_{\text{sub}}^{\text{sup}}\text{”}$
- $\txxsubsup[\textsf{family}]\{\text{Aa}\}\{\text{Bb}\} = \text{“}_{\text{Aa}}^{\text{Bb}}\text{”}$
- $\txxsubsup[\ttfamily]\{\text{Aa}\}\{\text{Bb}\} = \text{“}_{\text{Aa}}^{\text{Bb}}\text{”}$

```

313 \newcommand{\txxsubsup}[3]{}
314 {\ensuremath{\empchk{#2}{\text{#1#2}}}\empchk{#3}{\text{#1#3}}}}

```

```

315 %*****%

```



```

\txt ... to do!
    • \txt{Name}[sub][sup][Ext] = "NamesubExt"
    • \txt{\scshape}{Name}[sub][sup][Ext] = "NAMESUBEXT"
    • \txt{\bfseries}{Name}[sub][sup][Ext] = "NamesubExt"
316 \newcommand{\txt}
317 {\newtxtsty{\txtsty}}

\txtgarg ... to do!
    • \txtgarg{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"
    • \txtgarg{\scshape}{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NAMESUBEXT1(ARG)EXT2"
    • \txtgarg{\bfseries}{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"
318 \newcommand{\txtgarg}
319 {\newtxtgargsty{\txtsty}}

\txtoarg ... to do!
    • \txtoarg{Name}[sub][sup][Arg] = "Namesub(Arg)"
    • \txtoarg{\scshape}{Name}[sub][sup][Arg] = "NAMESUB(ARG)"
    • \txtoarg{\bfseries}{Name}[sub][sup][Arg] = "Namesub(Arg)"
320 \newcommand{\txtoarg}
321 {\newtxtoargsty{\txtsty}}

\txtpar ... to do!
    • \txtpar{Name}[sub][sup][Ext1]{Par}[Ext2] = "NamesubExt1[Par]Ext2"
    • \txtpar{\scshape}{Name}[sub][sup][Ext1]{Par}[Ext2] = "NAMESUBEXT1[PAR]EXT2"
    • \txtpar{\bfseries}{Name}[sub][sup][Ext1]{Par}[Ext2] = "NamesubExt1[Par]Ext2"
322 \newcommand{\txtpar}
323 {\newtxtparsty{\txtsty}}

\txtopar ... to do!
    • \txtopar{Name}[sub][sup][Par] = "Namesub[Par]"
    • \txtopar{\scshape}{Name}[sub][sup][Par] = "NAMESUB[PAR]"
    • \txtopar{\bfseries}{Name}[sub][sup][Par] = "Namesub[Par]"
324 \newcommand{\txtopar}
325 {\newtxtoparsty{\txtsty}}

\txtsty ... to do!
326 \newcommand{\txtsty}
327 {\mdseries\upshape\rmfamily}

328 %*****%

\cmdtxt ... to do!
    • \cmdtxt{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
    \txtNewCmd{Name}[sub][sup][Ext] = NAMESUBEXT
329 \newcommand{\cmdtxt}[1]
330 {\csdef{txt#1}{\newtxtsty{\csname txtsty#1\endcsname}}}

\cmdtxtgarg ... to do!
    • \cmdtxtgarg{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
    \txtgargNewCmd{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUBEXT1(ARG)EXT2
331 \newcommand{\cmdtxtgarg}[1]
332 {\csdef{txtgarg#1}{\newtxtgargsty{\csname txtsty#1\endcsname}}}

\cmdtxtoarg ... to do!
    • \cmdtxtoarg{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
    \txtoargNewCmd{Name}[sub][sup][Arg] = NAMESUB(ARG)

```

```

333 \newcommand{\cmdtxtoarg}[1]
334 {\csdef{txttoarg#1}{\newtxttoargsty{\csname txtsty#1\endcsname}}}

\cmdtxtpar ... to do!


- \cmdtxtpar{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtparNewCmd{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUBEXT1[PAR]EXT2


335 \newcommand{\cmdtxtpar}[1]
336 {\csdef{txtpar#1}{\newtxtparsty{\csname txtsty#1\endcsname}}}

\cmdtxtopar ... to do!


- \cmdtxtopar{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtoparNewCmd{Name}[sub][sup][Par] = NAMESUB[PAR]


337 \newcommand{\cmdtxtopar}[1]
338 {\csdef{txtopar#1}{\newtxtoparsty{\csname txtsty#1\endcsname}}}

\cmdtxtall ... to do!


- \cmdtxtall{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtNewCmd{Name}[sub][sup][Ext] = NAMESUBEXT
  \txtargNewCmd{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUBEXT1(ARG)EXT2
  \txtoargNewCmd{Name}[sub][sup][Arg] = NAMESUB(ARG)
  \txtparNewCmd{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUBEXT1[PAR]EXT2
  \txtoparNewCmd{Name}[sub][sup][Par] = NAMESUB[PAR]


339 \newcommand{\cmdtxtall}[1]
340 {\cmdtxt{#1}\cmdtxtarg{#1}\cmdtxtoarg{#1}\cmdtxtpar{#1}\cmdtxtopar{#1}}

341 %*****%

\usrtxt ... to do!


- \usrtxt{cmdName}{Suf}{}; \cmdNameSuf = cmdName
  \usrtxt{cmdName}{Suf}{arg}; \cmdNameSuf{Arg} = cmdName(Arg)
  \usrtxt{cmdName}{Suf}{par}; \cmdNameSuf{Par} = cmdName[Par]
- \usrtxt{cmdName}{Suf}{}[newName]; \cmdNameSuf = newName
  \usrtxt{cmdName}{Suf}{arg}[newName]; \cmdNameSuf{Arg} = newName(Arg)
  \usrtxt{cmdName}{Suf}{par}[newName]; \cmdNameSuf{Par} = newName[Par]


342 \newcommandx{\usrtxt}[4][4=]
343 {\csdef{#1#2}{\csname txt#3\endcsname{\defval{#4}{#1}}}}

344 %*****%
345 %*****%
346 %** Math Meta Commands *****%
347 %*****%

\newmth ... to do!


- \newmth[mathrm]{Name}[sub][sup][Ext] = "NamesupsubExt"
- \newmth[mathsf]{Name}[sub][sup][Ext] = "NamesupsubExt"
- \newmth[mathtt]{Name}[sub][sup][Ext] = "NamesupsubExt"


348 \newcommandx{\newmth}[5][1=, 3=, 4=, 5=]
349 {\ensuremath{\csname#1\endcsname{#2}\mthsubsup{#3}{#4}{#5}}}

\newmthsty ... to do!


- \newmthsty[mathrm]{Name}[sub][sup][Ext] = "NamesupsubExt"
- \newmthsty[mathsf]{Name}[sub][sup][Ext] = "NamesupsubExt"
- \newmthsty[mathtt]{Name}[sub][sup][Ext] = "NamesupsubExt"


350 \newcommandx{\newmthsty}[2][2=]
351 {\newmth{\defval{#2}{#1}}}

\newmtharg ... to do!


- \newmtharg[mathrm]{Name}[sub][sup][Ext1]{ArgEx{Ex}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"

```

- ```

352 \newcommand{\newmtharg}
353   {\@ifstar{\@snewmtharg}{\@newmtharg}}
354 \newcommandx{\@newmtharg}[7][1=, 3=, 4=, 5=, 7=]
355   {\newmth{#1}{#2}{#3}{#4}[\argmid{#5}\left{#6}{\right)}\arglef{!}{#7}]}
356 \newcommandx{\@snewmtharg}[7][1=, 3=, 4=, 5=, 7=]
357   {\newmth{#1}{#2}{#3}{#4}[\argmid{#5}{#6}{#7}]}

```

- `\newmthargsty{\mathrm}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2]` = “Name<sub>sub</sub><sup>sup</sup>Ext1(*Arg*<sup>Ex<sup>Ex</sup></sup>)Ext2”
- `\newmthargsty{\mathrm}[mathsf]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2]` = “Name<sub>sub</sub><sup>sup</sup>Ext1(*Arg*<sup>Ex<sup>Ex</sup></sup>)Ext2”
- `\newmthargsty{\mathrm}[mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2]` = “Name<sub>sub</sub><sup>sup</sup>Ext1(*Arg*<sup>Ex<sup>Ex</sup></sup>)Ext2”
- `\newmthargsty*{\mathrm}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2]` = “Name<sub>sub</sub><sup>sup</sup>Ext1(*Arg*<sup>Ex<sup>Ex</sup></sup>)Ext2”
- `\newmthargsty*{\mathrm}[mathsf]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2]` = “Name<sub>sub</sub><sup>sup</sup>Ext1(*Arg*<sup>Ex<sup>Ex</sup></sup>)Ext2”
- `\newmthargsty*{\mathrm}[mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2]` = “Name<sub>sub</sub><sup>sup</sup>Ext1(*Arg*<sup>Ex<sup>Ex</sup></sup>)Ext2”

- `\newmthoarg[mathrm]{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex</sup>Ex)”
- `\newmthoarg[mathsf]{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex</sup>Ex)”
- `\newmthoarg[mathtt]{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex</sup>Ex)”
- `\newmthoarg*[mathrm]{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex</sup>Ex)”
- `\newmthoarg*[mathsf]{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex</sup>Ex)”
- `\newmthoarg*[mathtt]{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex</sup>Ex)”

- `\newmthoargsty{\mathrm}{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex<sup>Ex</sup></sup>)”
- `\newmthoargsty{\mathsf}{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex<sup>Ex</sup></sup>)”
- `\newmthoargsty{\mathtt}{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex<sup>Ex</sup></sup>)”
- `\newmthoargsty*{\mathrm}{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex<sup>Ex</sup></sup>)”
- `\newmthoargsty*{\mathsf}{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex<sup>Ex</sup></sup>)”
- `\newmthoargsty*{\mathtt}{Name}[sub][sup][Arg^{Ex^{Ex}}]` = “Name<sub>sub</sub><sup>sup</sup>(Arg<sup>Ex<sup>Ex</sup></sup>)”

```

370 \newcommand{\newmthoargsty}
371   {\@ifstar{\@snewmthoargsty}{\@newmthoargsty}}
372 \newcommandx{\@newmthoargsty}[2][2=]
373   {\newmthoarg[\defval{#2}{#1}]}
374 \newcommandx{\@snewmthoargsty}[2][2=]
375   {\newmthoarg*[\defval{#2}{#1}]}

```

\newmthpar ... to do!

- $\newmthpar[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthpar[\mathsf]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthpar[\mathtt]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthpar*[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthpar*[\mathsf]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthpar*[\mathtt]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$

```

376 \newcommand{\newmthpar}
377   {\@ifstar{\@snewmthpar}{\@newmthpar}}
378 \newcommandx{\@newmthpar}[7][1=, 3=, 4=, 5=, 7=]
379   {\newmth[#1]{#2}[#3][#4][\argmid{#5}\left[\right]\arglef{!}{#7}]}
380 \newcommandx{\@snewmthpar}[7][1=, 3=, 4=, 5=, 7=]
381   {\newmth[#1]{#2}[#3][#4][\argmid{#5}{#6}{#7}]}

```

\newmthparsty ... to do!

- $\newmthparsty[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthparsty[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthparsty[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthparsty*[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthparsty*[\mathsf]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$
- $\newmthparsty*[\mathtt]{Name}[\mathrm{sub}][\mathrm{sup}][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \text{“Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2\text{”}$

```

382 \newcommand{\newmthparsty}
383   {\@ifstar{\@snewmthparsty}{\@newmthparsty}}
384 \newcommandx{\@newmthparsty}[2][2=]
385   {\newmthpar[\defval{#2}{#1}]}
386 \newcommandx{\@snewmthparsty}[2][2=]
387   {\newmthpar*[\defval{#2}{#1}]}

```

\newmthopar ... to do!

- $\newmthopar[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Par^{Ex^{Ex}}] = \text{“Name}_{sub}^{sup}[Par^{Ex^{Ex}}]\text{”}$
- $\newmthopar[\mathsf]{Name}[\mathrm{sub}][\mathrm{sup}][Par^{Ex^{Ex}}] = \text{“Name}_{sub}^{sup}[Par^{Ex^{Ex}}]\text{”}$
- $\newmthopar[\mathtt]{Name}[\mathrm{sub}][\mathrm{sup}][Par^{Ex^{Ex}}] = \text{“Name}_{sub}^{sup}[Par^{Ex^{Ex}}]\text{”}$
- $\newmthopar*[\mathrm]{Name}[\mathrm{sub}][\mathrm{sup}][Par^{Ex^{Ex}}] = \text{“Name}_{sub}^{sup}[Par^{Ex^{Ex}}]\text{”}$
- $\newmthopar*[\mathsf]{Name}[\mathrm{sub}][\mathrm{sup}][Par^{Ex^{Ex}}] = \text{“Name}_{sub}^{sup}[Par^{Ex^{Ex}}]\text{”}$
- $\newmthopar*[\mathtt]{Name}[\mathrm{sub}][\mathrm{sup}][Par^{Ex^{Ex}}] = \text{“Name}_{sub}^{sup}[Par^{Ex^{Ex}}]\text{”}$

```

388 \newcommand{\newmthopar}
389   {\@ifstar{\@snewmthopar}{\@newmthopar}}
390 \newcommandx{\@newmthopar}[5][1=, 3=, 4=, 5=]
391   {\newmthpar[#1]{#2}[#3][#4][\argmid{#5}]}
392 \newcommandx{\@snewmthopar}[5][1=, 3=, 4=, 5=]
393   {\newmthpar*[#1]{#2}[#3][#4][\argmid{#5}]}

```

\newmthoparsty ... to do!

```

394 \newcommand{\newmthoparsty}
395   {\@ifstar{\@snewmthoparsty}{\@newmthoparsty}}
396 \newcommandx{\@newmthoparsty}[2][2=]
397   {\newmthopar[\defval{#2}{#1}]}
398 \newcommandx{\@snewmthoparsty}[2][2=]
399   {\newmthopar*[\defval{#2}{#1}]}

```

```

400 \newcommand{\mthsubsup}[2]
401   {\empchk{#1}_{#1}\empchk{#2}^{#2}}
402 %%*****

```

- $\text{\texttt{\textit{\textbf{Name}}}}_{\text{\texttt{sub}}}\text{\texttt{sup}}\text{\texttt{Ext}} = \text{\textit{Name}}_{\text{\textit{sub}}}^{\text{\textit{sup}}}\text{\textit{Ext}}$
- $\text{\texttt{\textbf{Name}}}_{\text{\texttt{sub}}}\text{\texttt{sup}}\text{\texttt{Ext}} = \text{\textbf{Name}}_{\text{\textbf{sub}}}^{\text{\textbf{sup}}}\text{\textbf{Ext}}$
- $\text{\texttt{Name}}_{\text{\texttt{sub}}}\text{\texttt{sup}}\text{\texttt{Ext}} = \text{\texttt{Name}}_{\text{\texttt{sub}}}^{\text{\texttt{sup}}}\text{\texttt{Ext}}$

- $\mathrm{\mtharg}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}]{\mathrm{Arg}^{\mathrm{Ex}}{\mathrm{Ex}}}{\mathrm{Ext2}} = \textit{“Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}”$
- $\mathrm{\mtharg}[\mathrm{mathbf}]{\mathrm{Name}}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}]{\mathrm{Arg}^{\mathrm{Ex}}{\mathrm{Ex}}}{\mathrm{Ext2}} = \textit{“Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}”$
- $\mathrm{\mtharg}[\mathrm{mathtt}]{\mathrm{Name}}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}]{\mathrm{Arg}^{\mathrm{Ex}}{\mathrm{Ex}}}{\mathrm{Ext2}} = \textit{“Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}”$
- $\mathrm{\mtharg}^*\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}]{\mathrm{Arg}^{\mathrm{Ex}}{\mathrm{Ex}}}{\mathrm{Ext2}} = \textit{“Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}”$
- $\mathrm{\mtharg}^*[\mathrm{mathbf}]{\mathrm{Name}}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}]{\mathrm{Arg}^{\mathrm{Ex}}{\mathrm{Ex}}}{\mathrm{Ext2}} = \textit{“Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}”$
- $\mathrm{\mtharg}^*[\mathrm{mathtt}]{\mathrm{Name}}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}]{\mathrm{Arg}^{\mathrm{Ex}}{\mathrm{Ex}}}{\mathrm{Ext2}} = \textit{“Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}”$

```

5 \newcommand{\mtharg}
6   {\@ifstar{\newmthargsty*{\mthsty}}{\newmthargsty{\mthsty}}

```

- $\backslash\text{mthoarg}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}^{\sim}\{\text{Ex}^{\sim}\{\text{Ex}\}\}] = \textit{“Name}_{sub}^{sup}\left(\textit{Arg}^{Ex^{Ex}}\right)”$
- $\backslash\text{mthoarg}[\text{mathbf}]{\{\text{Name}\}}[\text{sub}][\text{sup}][\text{Arg}^{\sim}\{\text{Ex}^{\sim}\{\text{Ex}\}\}] = \textit{“Name}_{sub}^{sup}\left(\textit{Arg}^{Ex^{Ex}}\right)”$
- $\backslash\text{mthoarg}[\text{mathtt}]{\{\text{Name}\}}[\text{sub}][\text{sup}][\text{Arg}^{\sim}\{\text{Ex}^{\sim}\{\text{Ex}\}\}] = \textit{“Name}_{sub}^{sup}\left(\textit{Arg}^{Ex^{Ex}}\right)”$
- $\backslash\text{mthoarg}^{*}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}^{\sim}\{\text{Ex}^{\sim}\{\text{Ex}\}\}] = \textit{“Name}_{sub}^{sup}(\textit{Arg}^{Ex^{Ex}})”$
- $\backslash\text{mthoarg}^{*}[\text{mathbf}]{\{\text{Name}\}}[\text{sub}][\text{sup}][\text{Arg}^{\sim}\{\text{Ex}^{\sim}\{\text{Ex}\}\}] = \textit{“Name}_{sub}^{sup}(\textit{Arg}^{Ex^{Ex}})”$
- $\backslash\text{mthoarg}^{*}[\text{mathtt}]{\{\text{Name}\}}[\text{sub}][\text{sup}][\text{Arg}^{\sim}\{\text{Ex}^{\sim}\{\text{Ex}\}\}] = \textit{“Name}_{sub}^{sup}(\textit{Arg}^{Ex^{Ex}})”$

```

7 \newcommand{\mthoarg}
8   {\@ifstar{\newmthoargsty*}{\mthsty}}{\newmthoargsty{\mthsty}}}

```

13

- $\backslash\mathit{mthpar}[\mathbf{mathtt}]{\text{Name}}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$
- $\backslash\mathit{mthpar}[\mathbf{mathtt}]{\text{Name}}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$
- $\backslash\mathit{mthpar}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$
- $\backslash\mathit{mthpar}[\mathbf{matbf}]{\text{Name}}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$
- $\backslash\mathit{mthpar}*\{\mathbf{matbf}\}{\text{Name}}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$

409  $\backslash\text{newcommand}\{\backslash\mathit{mthpar}\}$

410  $\{\backslash\text{ifstar}\{\backslash\text{newmthparsty}*\{\backslash\mathit{mthsty}\}\}\{\backslash\text{newmthparsty}\{\backslash\mathit{mthsty}\}\}\}$

$\backslash\mathit{mthopar}$  ... to do!

- $\backslash\mathit{mthopar}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]$
- $\backslash\mathit{mthopar}[\mathbf{matbf}]{\text{Name}}[\text{sub}][\text{sup}][\text{Par}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]$
- $\backslash\mathit{mthopar}[\mathbf{mathtt}]{\text{Name}}[\text{sub}][\text{sup}][\text{Par}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]$
- $\backslash\mathit{mthopar}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]$
- $\backslash\mathit{mthopar}[\mathbf{matbf}]{\text{Name}}[\text{sub}][\text{sup}][\text{Par}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]$
- $\backslash\mathit{mthopar}*\{\mathbf{matbf}\}{\text{Name}}[\text{sub}][\text{sup}][\text{Par}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]$

411  $\backslash\text{newcommand}\{\backslash\mathit{mthopar}\}$

412  $\{\backslash\text{ifstar}\{\backslash\text{newmthoparsty}*\{\backslash\mathit{mthsty}\}\}\{\backslash\text{newmthoparsty}\{\backslash\mathit{mthsty}\}\}\}$

$\backslash\mathit{mthsty}$  ... to do!

413  $\backslash\text{newcommand}\{\backslash\mathit{mthsty}\}$

414  $\{\}$

415  $\%*****\%$

$\backslash\text{cmdmth}$  ... to do!

- $\backslash\text{cmdmth}\{\text{NewCmd}\}; \backslash\text{newcommand}\{\mathit{mthstyNewCmd}\}\{\backslash\mathbf{mathtt}\};$   
 $\backslash\mathit{mthNewCmd}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext}$

416  $\backslash\text{newcommand}\{\backslash\text{cmdmth}\}[1]$

417  $\{\backslash\text{csdef}\{\mathit{mth}\#1\}\{\backslash\text{newmthsty}\{\mathit{mthsty}\#1\}\}\}$

$\backslash\text{cmdmtharg}$  ... to do!

- $\backslash\text{cmdmtharg}\{\text{NewCmd}\}; \backslash\text{newcommand}\{\mathit{mthstyNewCmd}\}\{\backslash\mathbf{mathtt}\};$   
 $\backslash\mathit{mthargNewCmd}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Arg}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left(\text{Arg}^{\text{Ex}}{\text{Ex}}\right)\text{Ext2}$   
 $\backslash\mathit{mthargNewCmd}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Arg}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left(\text{Arg}^{\text{Ex}}{\text{Ex}}\right)\text{Ext2}$

418  $\backslash\text{newcommand}\{\backslash\text{cmdmtharg}\}[1]$

419  $\{\backslash\text{csdef}\{\mathit{mtharg}\#1\}\%$

420  $\{\backslash\text{ifstar}\{\backslash\text{newmthargsty}*\{\mathit{mthsty}\#1\}\}\{\backslash\text{newmthargsty}\{\mathit{mthsty}\#1\}\}\}\}$

$\backslash\text{cmdmthoarg}$  ... to do!

- $\backslash\text{cmdmthoarg}\{\text{NewCmd}\}; \backslash\text{newcommand}\{\mathit{mthstyNewCmd}\}\{\backslash\mathbf{mathtt}\};$   
 $\backslash\mathit{mthoargNewCmd}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left(\text{Arg}^{\text{Ex}}{\text{Ex}}\right)$   
 $\backslash\mathit{mthoargNewCmd}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}}^{\text{Ex}}{\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}\left(\text{Arg}^{\text{Ex}}{\text{Ex}}\right)$

421  $\backslash\text{newcommand}\{\backslash\text{cmdmthoarg}\}[1]$

422  $\{\backslash\text{csdef}\{\mathit{mthoarg}\#1\}\%$

423  $\{\backslash\text{ifstar}\{\backslash\text{newmthoargsty}*\{\mathit{mthsty}\#1\}\}\{\backslash\text{newmthoargsty}\{\mathit{mthsty}\#1\}\}\}\}$

$\backslash\text{cmdmthpar}$  ... to do!

- $\backslash\text{cmdmthpar}\{\text{NewCmd}\}; \backslash\text{newcommand}\{\mathit{mthstyNewCmd}\}\{\backslash\mathbf{mathtt}\};$   
 $\backslash\mathit{mthparNewCmd}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$   
 $\backslash\mathit{mthparNewCmd}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Par}}^{\text{Ex}}{\text{Ex}}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}\left[\text{Par}^{\text{Ex}}{\text{Ex}}\right]\text{Ext2}$

```

424 \newcommand{\cmdmthpar}[1]
425   {\csdef{mthpar#1}%
426     {\@ifstar{\newmthparsty*{mthsty#1}}{\newmthparsty{mthsty#1}}}}

\cmdmthpar ... to do!
  • \cmdmthpar{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
    \mthparNewCmd{Name}[sub][sup][Par^{Ex^{Ex}}] = Name_{sub}^{sup}[Par^{Ex^{Ex}}]
    \mthparNewCmd*{Name}[sub][sup][Par^{Ex^{Ex}}] = Name_{sub}^{sup}[Par^{Ex^{Ex}}]
427 \newcommand{\cmdmthpar}[1]
428   {\csdef{mthpar#1}%
429     {\@ifstar{\newmthparsty*{mthsty#1}}{\newmthparsty{mthsty#1}}}}

\cmdmthall ... to do!
  • \cmdmthall{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
    \mthNewCmd{Name}[sub][sup][Ext] = Name_{sub}^{sup}Ext
    \mthargNewCmd{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
    \mthargNewCmd*{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
    \mthoargNewCmd{Name}[sub][sup][Arg^{Ex^{Ex}}] = Name_{sub}^{sup}(Arg^{Ex^{Ex}})
    \mthoargNewCmd*{Name}[sub][sup][Arg^{Ex^{Ex}}] = Name_{sub}^{sup}(Arg^{Ex^{Ex}})
    \mthparNewCmd{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
    \mthparNewCmd*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
    \mthoparNewCmd{Name}[sub][sup][Par^{Ex^{Ex}}] = Name_{sub}^{sup}[Par^{Ex^{Ex}}]
    \mthoparNewCmd*{Name}[sub][sup][Par^{Ex^{Ex}}] = Name_{sub}^{sup}[Par^{Ex^{Ex}}]
430 \newcommand{\cmdmthall}[1]
431   {\cmdmth{#1}\cmdmtharg{#1}\cmdmthoarg{#1}\cmdmthpar{#1}\cmdmthopar{#1}}
432 %%*****

\usrmth ... to do!
  • \usrmth{cmdName}{Suf}{}; \cmdNameSuf = cmdName
    \usrmth{cmdName}{Suf}{arg};
    \cmdNameSuf{Arg^{Ex^{Ex}}} = cmdName(Arg^{Ex^{Ex}})
    \cmdNameSuf*{Arg^{Ex^{Ex}}} = cmdName(Arg^{Ex^{Ex}})
    \usrmth{cmdName}{Suf}{par};
    \cmdNameSuf{Par^{Ex^{Ex}}} = cmdName[Par^{Ex^{Ex}}]
    \cmdNameSuf*{Par^{Ex^{Ex}}} = cmdName[Par^{Ex^{Ex}}]
  • \usrmth{cmdName}{Suf}{}[newName]; \cmdNameSuf = newName
    \usrmth{cmdName}{Suf}{arg}[newName];
    \cmdNameSuf{Arg^{Ex^{Ex}}} = newName(Arg^{Ex^{Ex}})
    \cmdNameSuf*{Arg^{Ex^{Ex}}} = newName(Arg^{Ex^{Ex}})
    \usrmth{cmdName}{Suf}{par}[newName];
    \cmdNameSuf{Par^{Ex^{Ex}}} = newName[Par^{Ex^{Ex}}]
    \cmdNameSuf*{Par^{Ex^{Ex}}} = newName[Par^{Ex^{Ex}}]
433 \newcommandx{\usrmth}[4][4=]
434   {\csdef{#1#2}{%
435     \@ifstar%
436     {\csname mth#3\endcsname*{\defval{#4}{#1}}}%
437     {\csname mth#3\endcsname{\defval{#4}{#1}}}%
438   }}
439 %%*****

\usrmthlatlow ... to do!
440 \newcommandx{\usrmthlatlow}[4][4=]
441   {\usrmth{#1}{#2}{#3}[#4]\seqoflatlow{#1#2}{mth#3}}

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\usrmthlatupp ... to do!
442 \newcommandx{\usrmthlatupp}[4][4=]
443   {\usrmth{#1}{#2}{#3}[#4]\seqoflatupp{#1#2}{mth#3}}

\usrmthlatlet ... to do!
444 \newcommandx{\usrmthlatlet}[4][4=]
445   {\usrmth{#1}{#2}{#3}[#4]\seqoflatlet{#1#2}{mth#3}}

\usrmthgrklow ... to do!
446 \newcommandx{\usrmthgrklow}[4][4=]
447   {\usrmth{#1}{#2}{#3}[#4]\seqofgrklow{#1#2}{mth#3}}

\usrmthgrkupp ... to do!
448 \newcommandx{\usrmthgrkupp}[4][4=]
449   {\usrmth{#1}{#2}{#3}[#4]\seqofgrkupp{#1#2}{mth#3}}

\usrmthgrklet ... to do!
450 \newcommandx{\usrmthgrklet}[4][4=]
451   {\usrmth{#1}{#2}{#3}[#4]\seqofgrklet{#1#2}{mth#3}}

\usrmthlow ... to do!
452 \newcommandx{\usrmthlow}[4][4=]
453   {\usrmth{#1}{#2}{#3}[#4]\seqoflow{#1#2}{mth#3}}

\usrmthupp ... to do!
454 \newcommandx{\usrmthupp}[4][4=]
455   {\usrmth{#1}{#2}{#3}[#4]\seqofupp{#1#2}{mth#3}}

\usrmthlet ... to do!
456 \newcommandx{\usrmthlet}[4][4=]
457   {\usrmth{#1}{#2}{#3}[#4]\seqoflet{#1#2}{mth#3}}

458 %%*****%
459 %%*****%
460 %%** Text Macro Generators *****%
461 %%*****%
462 \iftxtgen@

\txtdf, ... ... to do!
    • \txtdf{Name}[sub][sup][Ext] =  $Name_{sub}^{sup}Ext$ 
    • \txtargdf{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg)Ext2$ 
    • \txtpardef{Name}[sub][sup][Ext1]{Par}[Ext2] =  $Name_{sub}^{sup}Ext1[Par]Ext2$ 

463 %% Style for Definitions
464 \cmdtxtall{def}\newcommand{\txtstydef}{\normalfont\bfseries\em}

\cmdtxtdef ... to do!
    • \cmdtxtdef{cmdName};
      \cmdName[sub][sub][ext] =  $cmdName_{sub}^{sub}ext$ 
    • \cmdtxtdef{cmdName}[newName];
      \cmdName[sub][sub][ext] =  $newName_{sub}^{sub}ext$ 

465 \newcommandx{\cmdtxtdef}[2][2=]
466   {\usrtxt{#1}{\def}{#2}}

\cmdtxtargdef ... to do!
    • \cmdtxtargdef{cmdName};
      \cmdName[sub][sub][ext1]{arg}[ext2] =  $cmdName_{sub}^{sub}ext1(arg)ext2$ 
    • \cmdtxtargdef{cmdName}[newName];
      \cmdName[sub][sub][ext1]{arg}[ext2] =  $newName_{sub}^{sub}ext1(arg)ext2$ 

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467 \newcommandx{\cmdtxtargdef}[2][2=]
468   {\usrtxt{#1}{\argdef}[#2]}

\cmdtxttoargdef ... to do!
  • \cmdtxttoargdef{cmdName};
    \cmdName[sub][sub][arg] =  $cmdName_{sub}^{sub}(arg)$ 
  • \cmdtxttoargdef{cmdName}[newName];
    \cmdName[sub][sub][arg] =  $newName_{sub}^{sub}(arg)$ 
469 \newcommandx{\cmdtxttoargdef}[2][2=]
470   {\usrtxt{#1}{\oargdef}[#2]}

\cmdtxtpardef ... to do!
  • \cmdtxtpardef{cmdName};
    \cmdName[sub][sub][ext1]{par}[ext2] =  $cmdName_{sub}^{sub}ext1[par]ext2$ 
  • \cmdtxtpardef{cmdName}[newName];
    \cmdName[sub][sub][ext1]{par}[ext2] =  $newName_{sub}^{sub}ext1[par]ext2$ 
471 \newcommandx{\cmdtxtpardef}[2][2=]
472   {\usrtxt{#1}{\pardef}[#2]}

\cmdtxtopardef ... to do!
  • \cmdtxtopardef{cmdName};
    \cmdName[sub][sub][par] =  $cmdName_{sub}^{sub}[par]$ 
  • \cmdtxtopardef{cmdName}[newName];
    \cmdName[sub][sub][par] =  $newName_{sub}^{sub}[par]$ 
473 \newcommandx{\cmdtxtopardef}[2][2=]
474   {\usrtxt{#1}{\opardef}[#2]}

\txtabr, ... ... to do!
  • \txtabr{Name}[sub][sup][Ext] =  $Name_{sub}^{sup}Ext$ 
  • \txtargabr{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg)Ext2$ 
  • \txtparabr{Name}[sub][sup][Ext1]{Par}[Ext2] =  $Name_{sub}^{sup}Ext1[Par]Ext2$ 
475 %% Style for Abbreviations
476 \cmdtxtall{abr}\newcommand{\txtstyabr}{\em}

\cmdtxtabr ... to do!
  • \cmdtxtabr{cmdName};
    \cmdName[sub][sub][ext] =  $cmdName_{sub}^{sub}ext$ 
  • \cmdtxtabr{cmdName}[newName];
    \cmdName[sub][sub][ext] =  $newName_{sub}^{sub}ext$ 
477 \newcommandx{\cmdtxtabr}[2][2=]
478   {\usrtxt{#1}{\abr}[#2]}

\cmdtxtargabr ... to do!
  • \cmdtxtargabr{cmdName};
    \cmdName[sub][sub][ext1]{arg}[ext2] =  $cmdName_{sub}^{sub}ext1(arg)ext2$ 
  • \cmdtxtargabr{cmdName}[newName];
    \cmdName[sub][sub][ext1]{arg}[ext2] =  $newName_{sub}^{sub}ext1(arg)ext2$ 
479 \newcommandx{\cmdtxtargabr}[2][2=]
480   {\usrtxt{#1}{\argabr}[#2]}

\cmdtxttoargabr ... to do!
  • \cmdtxttoargabr{cmdName};
    \cmdName[sub][sub][arg] =  $cmdName_{sub}^{sub}(arg)$ 
  • \cmdtxttoargabr{cmdName}[newName];
    \cmdName[sub][sub][arg] =  $newName_{sub}^{sub}(arg)$ 
481 \newcommandx{\cmdtxttoargabr}[2][2=]
482   {\usrtxt{#1}{\oargabr}[#2]}

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\cmdtxtparabr ... to do!
    • \cmdtxtparabr{cmdName};
      \cmdName[sub][sub][ext1]{par}[ext2] =  $\text{cmdName}_{\text{sub}}^{\text{sub}} \text{ext1}[\text{par}]\text{ext2}$ 
    • \cmdtxtparabr{cmdName}[newName];
      \cmdName[sub][sub][ext1]{par}[ext2] =  $\text{newName}_{\text{sub}}^{\text{sub}} \text{ext1}[\text{par}]\text{ext2}$ 
483 \newcommandx{\cmdtxtparabr}[2][2=]
484   {\usrtxt{#1}{-}{parabr}[#2]}

\cmdtxtoparabr ... to do!
    • \cmdtxtoparabr{cmdName};
      \cmdName[sub][sub][par] =  $\text{cmdName}_{\text{sub}}^{\text{sub}}[\text{par}]$ 
    • \cmdtxtoparabr{cmdName}[newName];
      \cmdName[sub][sub][par] =  $\text{newName}_{\text{sub}}^{\text{sub}}[\text{par}]$ 
485 \newcommandx{\cmdtxtoparabr}[2][2=]
486   {\usrtxt{#1}{-}{oparabr}[#2]}

487 %%*****%

\txtname, ... to do!
    • \txtname{Name}[sub][sup][Ext] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}$ 
    • \txtargname{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}$ 
    • \txtparname{Name}[sub][sup][Ext1]{Par}[Ext2] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}[\text{PAR}]\text{EXT2}$ 
488 %% Style for Names
489 \cmdtxtall{name}\newcommand{\txtstyname}{\normalfont\mdseries\scshape\sffamily}

\cmdtxtname ... to do!
    • \cmdtxtname{cmdName};
      \cmdName[sub][sub][ext] =  $\text{CMDNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT}$ 
    • \cmdtxtname{cmdName}[newName];
      \cmdName[sub][sub][ext] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT}$ 
490 \newcommandx{\cmdtxtname}[2][2=]
491   {\usrtxt{#1}{-}{name}[#2]}

\cmdtxtargname ... to do!
    • \cmdtxtargname{cmdName};
      \cmdName[sub][sub][ext1]{arg}[ext2] =  $\text{CMDNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT1}(\text{ARG})\text{EXT2}$ 
    • \cmdtxtargname{cmdName}[newName];
      \cmdName[sub][sub][ext1]{arg}[ext2] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT1}(\text{ARG})\text{EXT2}$ 
492 \newcommandx{\cmdtxtargname}[2][2=]
493   {\usrtxt{#1}{-}{argname}[#2]}

\cmdtxtoargname ... to do!
    • \cmdtxtoargname{cmdName};
      \cmdName[sub][sub][arg] =  $\text{CMDNAME}_{\text{SUB}}^{\text{SUB}}(\text{ARG})$ 
    • \cmdtxtoargname{cmdName}[newName];
      \cmdName[sub][sub][arg] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}(\text{ARG})$ 
494 \newcommandx{\cmdtxtoargname}[2][2=]
495   {\usrtxt{#1}{-}{oargname}[#2]}

\cmdtxtparname ... to do!
    • \cmdtxtparname{cmdName};
      \cmdName[sub][sub][ext1]{par}[ext2] =  $\text{CMDNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT1}[\text{PAR}]\text{EXT2}$ 
    • \cmdtxtparname{cmdName}[newName];
      \cmdName[sub][sub][ext1]{par}[ext2] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT1}[\text{PAR}]\text{EXT2}$ 
496 \newcommandx{\cmdtxtparname}[2][2=]
497   {\usrtxt{#1}{-}{parname}[#2]}

```

```

\cmdtxtoparname ... to do!
    • \cmdtxtoparname{cmdName};
      \cmdName[sub][sub][par] = CMDNAMESUB[PAR]
    • \cmdtxtoparname{cmdName}[newName];
      \cmdName[sub][sub][par] = NEWNAMESUB[PAR]
498 \newcommandx{\cmdtxtoparname}[2][2=]
499   {\usrtxt{#1}{-}{oparname}{#2}}

\txtcom, ... ... to do!
    • \txtcom{Name}[sub][sup][Ext] = NAMESUBEXT
    • \txtargcom{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUBEXT1(ARG)EXT2
    • \txtparcom{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUBEXT1[PAR]EXT2
500 %% Style for Complexities
501 \cmdtxtall{com}\newcommand{\txtstycom}{\normalfont\mdseries\scshape\rmfamily}

\cmdtxtcom ... to do!
    • \cmdtxtcom{cmdName};
      \cmdName[sub][sub][ext] = CMDNAMESUBEXT
    • \cmdtxtcom{cmdName}[newName];
      \cmdName[sub][sub][ext] = NEWNAMESUBEXT
502 \newcommandx{\cmdtxtcom}[2][2=]
503   {\usrtxt{#1}{-}{com}{#2}}

\cmdtxtargcom ... to do!
    • \cmdtxtargcom{cmdName};
      \cmdName[sub][sub][ext1]{arg}[ext2] = CMDNAMESUBEXT1(ARG)EXT2
    • \cmdtxtargcom{cmdName}[newName];
      \cmdName[sub][sub][ext1]{arg}[ext2] = NEWNAMESUBEXT1(ARG)EXT2
504 \newcommandx{\cmdtxtargcom}[2][2=]
505   {\usrtxt{#1}{-}{argcom}{#2}}

\cmdtxtoargcom ... to do!
    • \cmdtxtoargcom{cmdName};
      \cmdName[sub][sub][arg] = CMDNAMESUB(ARG)
    • \cmdtxtoargcom{cmdName}[newName];
      \cmdName[sub][sub][arg] = NEWNAMESUB(ARG)
506 \newcommandx{\cmdtxtoargcom}[2][2=]
507   {\usrtxt{#1}{-}{oargcom}{#2}}

\cmdtxtparcom ... to do!
    • \cmdtxtparcom{cmdName};
      \cmdName[sub][sub][ext1]{par}[ext2] = CMDNAMESUBEXT1[PAR]EXT2
    • \cmdtxtparcom{cmdName}[newName];
      \cmdName[sub][sub][ext1]{par}[ext2] = NEWNAMESUBEXT1[PAR]EXT2
508 \newcommandx{\cmdtxtparcom}[2][2=]
509   {\usrtxt{#1}{-}{parcom}{#2}}

\cmdtxtoparcom ... to do!
    • \cmdtxtoparcom{cmdName};
      \cmdName[sub][sub][par] = CMDNAMESUB[PAR]
    • \cmdtxtoparcom{cmdName}[newName];
      \cmdName[sub][sub][par] = NEWNAMESUB[PAR]
510 \newcommandx{\cmdtxtoparcom}[2][2=]
511   {\usrtxt{#1}{-}{oparcom}{#2}}

512 \fi
513 %%*****%

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```

514 %*****%
515 %** Math Macro Generators *****%
516 %*****%
517 \ifmthgen@

```

\mthname, ... to do!

- \mthname{NAME}[sub][sup][Ext] =  $\mathcal{NAME}_{sub}^{sup}Ext$
- \mthargname{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$
- \mthargname\*{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$
- \mthparname{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$
- \mthparname\*{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$

518 % Style for Names

519 \cmdmthall{name}\newcommand{\mthstname}{\mathcal}

\Aname, ... to do!

$A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z$

520 \seqoflatupp{Name}{mthname}

\cmdmthname ... to do!

- \cmdmthname{CMDNAME};  
\CMDNAMEName[sub][sub][ext] =  $\mathcal{CMDNAME}_{sub}^{sub}ext$
- \cmdmthname{cmdName}{NEWNAME};  
\cmdNameName[sub][sub][ext] =  $\mathcal{NEWNAME}_{sub}^{sub}ext$

521 \newcommandx{\cmdmthname}[2][2=]

522 {\usrmth{#1}{Name}{name}[#2]}

\cmdmthargname ... to do!

- \cmdmthargname{CMDNAME};  
\CMDNAMEName[sub][sub][ext1]{arg}[ext2] =  $\mathcal{CMDNAME}_{sub}^{sub}ext1(arg)ext2$
- \cmdmthargname{cmdName}{NEWNAME};  
\cmdNameName[sub][sub][ext1]{arg}[ext2] =  $\mathcal{NEWNAME}_{sub}^{sub}ext1(arg)ext2$

523 \newcommandx{\cmdmthargname}[2][2=]

524 {\usrmth{#1}{Name}{argname}[#2]}

\cmdmthoargname ... to do!

- \cmdmthoargname{CMDNAME};  
\CMDNAMEName[sub][sub][arg] =  $\mathcal{CMDNAME}_{sub}^{sub}(arg)$
- \cmdmthoargname{cmdName}{NEWNAME};  
\cmdNameName[sub][sub][arg] =  $\mathcal{NEWNAME}_{sub}^{sub}(arg)$

525 \newcommandx{\cmdmthoargname}[2][2=]

526 {\usrmth{#1}{Name}{oargname}[#2]}

\cmdmthparname ... to do!

- \cmdmthparname{CMDNAME};  
\CMDNAMEName[sub][sub][ext1]{par}[ext2] =  $\mathcal{CMDNAME}_{sub}^{sub}ext1[par]ext2$
- \cmdmthparname{cmdName}{NEWNAME};  
\cmdNameName[sub][sub][ext1]{par}[ext2] =  $\mathcal{NEWNAME}_{sub}^{sub}ext1[par]ext2$

527 \newcommandx{\cmdmthparname}[2][2=]

528 {\usrmth{#1}{Name}{parname}[#2]}

\cmdmthoparname ... to do!

- \cmdmthoparname{CMDNAME};  
\CMDNAMEName[sub][sub][par] =  $\mathcal{CMDNAME}_{sub}^{sub}[par]$
- \cmdmthoparname{cmdName}{NEWNAME};  
\cmdNameName[sub][sub][par] =  $\mathcal{NEWNAME}_{sub}^{sub}[par]$

```

529 \newcommandx{\cmdmthoparname}[2][2=]
530   {\usrmth{#1}{Name}{oparname}[#2]}

\mthfam, ... ... to do!


- \mthfam{NAME}[sub][sup][Ext] =  $\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sup}Ext$
- \mthargfam{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$
- \mthargfam*{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$
- \mthparfam{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$
- \mthparfam*{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$


531 %% Style for Families
532 \cmdmthall{fam}\newcommand{\mthstyfam}{\mathscr}

\AFam, ... ... to do!
 $\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \mathcal{E}, \mathcal{F}, \mathcal{G}, \mathcal{H}, \mathcal{I}, \mathcal{J}, \mathcal{K}, \mathcal{L}, \mathcal{M}, \mathcal{N}, \mathcal{O}, \mathcal{P}, \mathcal{Q}, \mathcal{R}, \mathcal{S}, \mathcal{T}, \mathcal{U}, \mathcal{V}, \mathcal{W}, \mathcal{X}, \mathcal{Y}, \mathcal{Z}$ 
533 \seqoflatupp{Fam}{mthfam}

\cmdmthfam ... to do!


- \cmdmthfam{CMDNAME};  

\CMDNAMEFam[sub][sub][ext] =  $\mathcal{C}\mathcal{M}\mathcal{D}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}ext$
- \cmdmthfam{cmdName}{NEWNAME};  

\cmdNameFam[sub][sub][ext] =  $\mathcal{N}\mathcal{E}\mathcal{W}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}ext$


534 \newcommandx{\cmdmthfam}[2][2=]
535   {\usrmth{#1}{Fam}{fam}[#2]}

\cmdmthargfam ... to do!


- \cmdmthargfam{CMDNAME};  

\CMDNAMEFam[sub][sub][ext1]{arg}[ext2] =  $\mathcal{C}\mathcal{M}\mathcal{D}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}ext1(arg)ext2$
- \cmdmthargfam{cmdName}{NEWNAME};  

\cmdNameFam[sub][sub][ext1]{arg}[ext2] =  $\mathcal{N}\mathcal{E}\mathcal{W}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}ext1(arg)ext2$


536 \newcommandx{\cmdmthargfam}[2][2=]
537   {\usrmth{#1}{Fam}{argfam}[#2]}

\cmdmthoargfam ... to do!


- \cmdmthoargfam{CMDNAME};  

\CMDNAMEFam[sub][sub][arg] =  $\mathcal{C}\mathcal{M}\mathcal{D}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}(arg)$
- \cmdmthoargfam{cmdFam}{NEWNAME};  

\cmdFamFam[sub][sub][arg] =  $\mathcal{N}\mathcal{E}\mathcal{W}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}(arg)$


538 \newcommandx{\cmdmthoargfam}[2][2=]
539   {\usrmth{#1}{Fam}{oargfam}[#2]}

\cmdmthparfam ... to do!


- \cmdmthparfam{CMDNAME};  

\CMDNAMEFam[sub][sub][ext1]{par}[ext2] =  $\mathcal{C}\mathcal{M}\mathcal{D}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}ext1[par]ext2$
- \cmdmthparfam{cmdName}{NEWNAME};  

\cmdNameFam[sub][sub][ext1]{par}[ext2] =  $\mathcal{N}\mathcal{E}\mathcal{W}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}ext1[par]ext2$


540 \newcommandx{\cmdmthparfam}[2][2=]
541   {\usrmth{#1}{Fam}{parfam}[#2]}

\cmdmthoparfam ... to do!


- \cmdmthoparfam{CMDNAME};  

\CMDNAMEFam[sub][sub][par] =  $\mathcal{C}\mathcal{M}\mathcal{D}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}[par]$
- \cmdmthoparfam{cmdFam}{NEWNAME};  

\cmdFamFam[sub][sub][par] =  $\mathcal{N}\mathcal{E}\mathcal{W}\mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}_{sub}^{sub}[par]$


542 \newcommandx{\cmdmthoparfam}[2][2=]
543   {\usrmth{#1}{Fam}{oparfam}[#2]}

```

```

\mthcls, ... ... to do!
    • \mthcls{NAME}[sub][sup][Ext] =  $\mathcal{NAME}_{sub}^{sup}Ext$ 
    • \mthargcls{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$ 
    • \mthargcls*{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$ 
    • \mthparcls{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$ 
    • \mthparcls*{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$ 
544 %% Style for Classes
545 \cmdmthall{cls}\newcommand{\mthstycls}{\matheus}

\ACls, ... ... to do!
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
546 \seqoflatupp{Cls}{mthcls}

\cmdmthcls ... to do!
    • \cmdmthcls{CMDNAME};
      \CMDNAMECls[sub][sub][ext] =  $\mathcal{CMDNAME}_{sub}^{sub}ext$ 
    • \cmdmthcls{cmdName}[NEWNAME];
      \cmdNameCls[sub][sub][ext] =  $\mathcal{NEWNAME}_{sub}^{sub}ext$ 
547 \newcommandx{\cmdmthcls}[2][2=]
548   {\usrmth{#1}{Cls}{cls}[#2]}

\cmdmthargcls ... to do!
    • \cmdmthargcls{CMDNAME};
      \CMDNAMECls[sub][sub][ext1]{arg}[ext2] =  $\mathcal{CMDNAME}_{sub}^{sub}ext1(arg)ext2$ 
    • \cmdmthargcls{cmdName}[NEWNAME];
      \cmdNameCls[sub][sub][ext1]{arg}[ext2] =  $\mathcal{NEWNAME}_{sub}^{sub}ext1(arg)ext2$ 
549 \newcommandx{\cmdmthargcls}[2][2=]
550   {\usrmth{#1}{Cls}{argcls}[#2]}

\cmdmthoargcls ... to do!
    • \cmdmthoargcls{CMDNAME};
      \CMDNAMECls[sub][sub][arg] =  $\mathcal{CMDNAME}_{sub}^{sub}(arg)$ 
    • \cmdmthoargcls{cmdCls}[NEWNAME];
      \cmdClsCls[sub][sub][arg] =  $\mathcal{NEWNAME}_{sub}^{sub}(arg)$ 
551 \newcommandx{\cmdmthoargcls}[2][2=]
552   {\usrmth{#1}{Cls}{oargcls}[#2]}

\cmdmthparcls ... to do!
    • \cmdmthparcls{CMDNAME};
      \CMDNAMECls[sub][sub][ext1]{par}[ext2] =  $\mathcal{CMDNAME}_{sub}^{sub}ext1[par]ext2$ 
    • \cmdmthparcls{cmdName}[NEWNAME];
      \cmdNameCls[sub][sub][ext1]{par}[ext2] =  $\mathcal{NEWNAME}_{sub}^{sub}ext1[par]ext2$ 
553 \newcommandx{\cmdmthparcls}[2][2=]
554   {\usrmth{#1}{Cls}{parcls}[#2]}

\cmdmthoparcls ... to do!
    • \cmdmthoparcls{CMDNAME};
      \CMDNAMECls[sub][sub][par] =  $\mathcal{CMDNAME}_{sub}^{sub}[par]$ 
    • \cmdmthoparcls{cmdCls}[NEWNAME];
      \cmdClsCls[sub][sub][par] =  $\mathcal{NEWNAME}_{sub}^{sub}[par]$ 
555 \newcommandx{\cmdmthoparcls}[2][2=]
556   {\usrmth{#1}{Cls}{oparcls}[#2]}

\mthsig, ... ... to do!
    • \mthsig{Name}[sub][sup][Ext] =  $\mathcal{ame}_{sub}^{sup}Ext$ 

```

- $\backslash\mathrm{mthargsig}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}$
- $\backslash\mathrm{mthargsig}^*\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}$
- $\backslash\mathrm{mthparsig}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\right]\mathrm{Ext2}$
- $\backslash\mathrm{mthparsig}^*\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\right]\mathrm{Ext2}$

557 %% Style for Signatures

558  $\backslash\mathrm{cmdmthall}\{\mathrm{sig}\}\backslash\mathrm{newcommand}\{\mathrm{mthstysig}\}\{\mathrm{mathpzc}\}$

$\backslash\mathrm{aSig}$ , ... ... to do!

$a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$   
 $\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \mathcal{E}, \mathcal{F}, \mathcal{G}, \mathcal{H}, \mathcal{I}, \mathcal{J}, \mathcal{K}, \mathcal{L}, \mathcal{M}, \mathcal{N}, \mathcal{O}, \mathcal{P}, \mathcal{Q}, \mathcal{R}, \mathcal{S}, \mathcal{T}, \mathcal{U}, \mathcal{V}, \mathcal{W}, \mathcal{X}, \mathcal{Y}, \mathcal{Z}$   
 $\alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$

559  $\backslash\mathrm{seqoflatlet}\{\mathrm{Sig}\}\{\mathrm{mthsig}\}\backslash\mathrm{seqofgrklow}\{\mathrm{Sig}\}\{\mathrm{mthsig}\}$

$\backslash\mathrm{cmdmthsig}$  ... to do!

- $\backslash\mathrm{cmdmthsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$
- $\backslash\mathrm{cmdmthsig}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathcal{N}\mathrm{ew}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

560  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthsig}\}[2][2=]$

561  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Sig}\}\{\mathrm{sig}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthargsig}$  ... to do!

- $\backslash\mathrm{cmdmthargsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$
- $\backslash\mathrm{cmdmthargsig}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathcal{N}\mathrm{ew}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

562  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthargsig}\}[2][2=]$

563  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Sig}\}\{\mathrm{argsig}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthoargsig}$  ... to do!

- $\backslash\mathrm{cmdmthoargsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$
- $\backslash\mathrm{cmdmthoargsig}\{\mathrm{cmdSig}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdSigSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathcal{N}\mathrm{ew}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

564  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthoargsig}\}[2][2=]$

565  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Sig}\}\{\mathrm{oargsig}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthparsig}$  ... to do!

- $\backslash\mathrm{cmdmthparsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$
- $\backslash\mathrm{cmdmthparsig}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathcal{N}\mathrm{ew}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

566  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthparsig}\}[2][2=]$

567  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Sig}\}\{\mathrm{parsig}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthoparsig}$  ... to do!

- $\backslash\mathrm{cmdmthoparsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$
- $\backslash\mathrm{cmdmthoparsig}\{\mathrm{cmdSig}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdSigSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathcal{N}\mathrm{ew}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

568  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthoparsig}\}[2][2=]$

569  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Sig}\}\{\mathrm{oparsig}\}\{\#2\}\}$

$\backslash\mathrm{mthstr}$ , ... ... to do!

- $\backslash\mathrm{mthstr}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$
- $\backslash\mathrm{mthargstr}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}$

- $\backslash\mathrm{mthargstr}\{Name\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathfrak{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$
- $\backslash\mathrm{mthparstr}\{Name\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathfrak{Name}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$
- $\backslash\mathrm{mthparstr}\{Name\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathfrak{Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$

570 %% Style for Structures

571  $\backslash\mathrm{cmdmthall}\{\mathrm{str}\}\backslash\mathrm{newcommand}\{\backslash\mathrm{mthstyststr}\}\{\mathrm{mathfrakak}\}$

$\backslash\mathrm{aStr}, \dots$  ... to do!

$\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \chi, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$

572  $\backslash\mathrm{seqoflatlet}\{\mathrm{Str}\}\{\mathrm{mthstr}\}\backslash\mathrm{seqofgrklow}\{\mathrm{Str}\}\{\mathrm{mthstr}\}$

$\backslash\mathrm{cmdmthstr}$  ... to do!

- $\backslash\mathrm{cmdmthstr}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmd}\mathfrak{Name}_{sub}^{sub}ext$
- $\backslash\mathrm{cmdmthstr}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathfrak{New}\mathfrak{Name}_{sub}^{sub}ext$

573  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthstr}\}[2][2=]$

574  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Str}\}\{\mathrm{str}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthargstr}$  ... to do!

- $\backslash\mathrm{cmdmthargstr}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{cmd}\mathfrak{Name}_{sub}^{sub}ext1(arg)ext2$
- $\backslash\mathrm{cmdmthargstr}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathfrak{New}\mathfrak{Name}_{sub}^{sub}ext1(arg)ext2$

575  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthargstr}\}[2][2=]$

576  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Str}\}\{\mathrm{argstr}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthoargstr}$  ... to do!

- $\backslash\mathrm{cmdmthoargstr}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{cmd}\mathfrak{Name}_{sub}^{sub}(arg)$
- $\backslash\mathrm{cmdmthoargstr}\{\mathrm{cmdStr}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdStrStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathfrak{New}\mathfrak{Name}_{sub}^{sub}(arg)$

577  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthoargstr}\}[2][2=]$

578  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Str}\}\{\mathrm{oargstr}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthparstr}$  ... to do!

- $\backslash\mathrm{cmdmthparstr}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{cmd}\mathfrak{Name}_{sub}^{sub}ext1[par]ext2$
- $\backslash\mathrm{cmdmthparstr}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathfrak{New}\mathfrak{Name}_{sub}^{sub}ext1[par]ext2$

579  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthparstr}\}[2][2=]$

580  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Str}\}\{\mathrm{parstr}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthoparstr}$  ... to do!

- $\backslash\mathrm{cmdmthoparstr}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{cmd}\mathfrak{Name}_{sub}^{sub}[par]$
- $\backslash\mathrm{cmdmthoparstr}\{\mathrm{cmdStr}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdStrStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathfrak{New}\mathfrak{Name}_{sub}^{sub}[par]$

581  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthoparstr}\}[2][2=]$

582  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Str}\}\{\mathrm{oparstr}\}\{\#2\}\}$

$\backslash\mathrm{mthset}, \dots$  ... to do!

- $\backslash\mathrm{mthset}\{Name\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathrm{Name}_{sub}^{sup}Ext$
- $\backslash\mathrm{mthargset}\{Name\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathrm{Name}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$
- $\backslash\mathrm{mthargset}\{Name\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathrm{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$



- $\backslash\mathrm{mthparset}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\right]\mathrm{Ext2}$
- $\backslash\mathrm{mthparset}^*\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}]\mathrm{Ext2}$

583 %% Style for Sets

584  $\backslash\mathrm{cmdmthall}\{\mathrm{set}\}\backslash\mathrm{newcommand}\{\backslash\mathrm{mthstyset}\}\{\mathrm{mathrm}\}$

$\backslash\mathrm{aSet}, \dots$  ... to do!

a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z  
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z  
 $\alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$   
 $\mathrm{A}, \mathrm{B}, \mathrm{I}, \Delta, \mathrm{E}, \mathrm{E}, \mathrm{Z}, \mathrm{H}, \Theta, \Theta, \mathrm{I}, \mathrm{K}, \mathrm{K}, \Lambda, \mathrm{M}, \mathrm{N}, \Xi, \mathrm{O}, \Pi, \mathrm{II}, \mathrm{P}, \mathrm{P}, \Sigma, \Sigma, \mathrm{T}, \Upsilon, \Phi, \Phi, \mathrm{X}, \Psi, \Omega$   
585  $\backslash\mathrm{seqoflet}\{\mathrm{Set}\}\{\mathrm{mthset}\}$

$\backslash\mathrm{cmdmthset}$  ... to do!

- $\backslash\mathrm{cmdmthset}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$
- $\backslash\mathrm{cmdmthset}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

586  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthset}\}[2][2=]$   
587  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{set}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthargset}$  ... to do!

- $\backslash\mathrm{cmdmthargset}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$
- $\backslash\mathrm{cmdmthargset}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

588  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthargset}\}[2][2=]$   
589  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{argset}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthoargset}$  ... to do!

- $\backslash\mathrm{cmdmthoargset}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$
- $\backslash\mathrm{cmdmthoargset}\{\mathrm{cmdSet}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdSetSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

590  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthoargset}\}[2][2=]$   
591  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{oargset}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthparset}$  ... to do!

- $\backslash\mathrm{cmdmthparset}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$
- $\backslash\mathrm{cmdmthparset}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

592  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthparset}\}[2][2=]$   
593  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{parset}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthoparset}$  ... to do!

- $\backslash\mathrm{cmdmthoparset}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$
- $\backslash\mathrm{cmdmthoparset}\{\mathrm{cmdSet}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdSetSet}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

594  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthoparset}\}[2][2=]$   
595  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{oparset}\}\{\#2\}\}$

$\backslash\mathrm{cmdmthsetext}$  ... to do!

596  $\backslash\mathrm{newcommandx}\{\backslash\mathrm{cmdmthsetext}\}[3][2=, 3=]$   
597  $\{\backslash\mathrm{cmdmthset}\{\#1\}\{\#2\}\backslash\mathrm{caselower}[q]\{\#1\}\%$   
598  $\backslash\mathrm{usrmthlet}\{\mathrm{thestring}\}\{\mathrm{Sym}\}\{\mathrm{sym}\}$   
599  $[\backslash\mathrm{defval}\{\#3\}\{\backslash\mathrm{defval}\{\backslash\mathrm{empchk}\{\#2\}\{\backslash\mathrm{lowercase}\{\#2\}\}\}\{\mathrm{thestring}\}\}\%$   
600  $\backslash\mathrm{usrmthlet}\{\mathrm{thestring}\}\{\mathrm{Elm}\}\{\mathrm{elm}\}$   
601  $[\backslash\mathrm{defval}\{\#3\}\{\backslash\mathrm{defval}\{\backslash\mathrm{empchk}\{\#2\}\{\backslash\mathrm{lowercase}\{\#2\}\}\}\{\mathrm{thestring}\}\}\}$

```

\mthrel, ... ... to do!
    • \mthrel{Name}[sub][sup][Ext] = NamesubsubExt
    • \mthargrel{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsubExt1(ArgExEx)Ext2
    • \mthargrel*{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsubExt1(ArgExEx)Ext2
    • \mthparrel{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsubExt1[ParExEx]Ext2
    • \mthparrel*{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsubExt1[ParExEx]Ext2
602 %% Style for Relations
603 \cmdmthall{rel}\newcommand{\mthstyrel}{\mathit}

\arel, ... ... to do!
a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, L, T, U, V, W, X, Y, Z
α, β, γ, δ, ε, ζ, η, θ, ϑ, ι, κ, λ, μ, ν, ξ, ο, π, ϖ, ρ, ϑ, σ, ς, τ, υ, φ, ϕ, χ, ψ, ω
A, B, Γ, Δ, E, E, Z, H, Θ, Θ, I, K, K, Λ, M, N, Ξ, O, Π, Π, P, P, Σ, Σ, T, Υ, Φ, Φ, X, Ψ, Ω
604 \seqoflet{Rel}{mthrel}

\cmdmthrel ... to do!
    • \cmdmthrel{cmdName};
      \cmdNameRel[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthrel{cmdName}[NewName];
      \cmdNameRel[sub][sub][ext] = NewNamesubsubext
605 \newcommandx{\cmdmthrel}[2][2=]
606   {\usrmth{#1}{Rel}{rel}{#2}}

\cmdmthargrel ... to do!
    • \cmdmthargrel{cmdName};
      \cmdNameRel[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
    • \cmdmthargrel{cmdName}[NewName];
      \cmdNameRel[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
607 \newcommandx{\cmdmthargrel}[2][2=]
608   {\usrmth{#1}{Rel}{argrel}{#2}}

\cmdmthoargrel ... to do!
    • \cmdmthoargrel{cmdName};
      \cmdNameRel[sub][sub][arg] = cmdNamesubsub(arg)
    • \cmdmthoargrel{cmdRel}[NewName];
      \cmdRelRel[sub][sub][arg] = NewNamesubsub(arg)
609 \newcommandx{\cmdmthoargrel}[2][2=]
610   {\usrmth{#1}{Rel}{oargrel}{#2}}

\cmdmthparrel ... to do!
    • \cmdmthparrel{cmdName};
      \cmdNameRel[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparrel{cmdName}[NewName];
      \cmdNameRel[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
611 \newcommandx{\cmdmthparrel}[2][2=]
612   {\usrmth{#1}{Rel}{parrel}{#2}}

\cmdmthoparrel ... to do!
    • \cmdmthoparrel{cmdName};
      \cmdNameRel[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparrel{cmdRel}[NewName];
      \cmdRelRel[sub][sub][par] = NewNamesubsub[par]
613 \newcommandx{\cmdmthoparrel}[2][2=]
614   {\usrmth{#1}{Rel}{oparrel}{#2}}

```

```

\mthfun, ... ... to do!
    • \mthfun{Name}[sub][sup][Ext] = NamesupsubExt
    • \mthargfun{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesupsubExt1(ArgExEx)Ext2
    • \mthargfun*{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesupsubExt1(ArgExEx)Ext2
    • \mthparfun{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesupsubExt1[ParExEx]Ext2
    • \mthparfun*{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesupsubExt1[ParExEx]Ext2
615 %% Style for Functions
616 \cmdmthall{fun}\newcommand{\mthstyfun}{\mathsf}

\afun, ... ... to do!
a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
α, β, γ, δ, ε, ζ, η, θ, ι, κ, λ, μ, ν, ξ, ο, π, ρ, ϱ, σ, ς, τ, υ, φ, ϕ, χ, ψ, ω
Α, Β, Γ, Δ, Ε, Ζ, Η, Θ, Ι, Κ, Λ, Μ, Ν, Ξ, Ο, Π, Ψ, Ρ, Σ, Τ, Υ, Φ, Ψ, Χ, Ψ, Ω
617 \seqoflet{Fun}{mthfun}

\cmdmthfun ... to do!
    • \cmdmthfun{cmdName};
      \cmdNameFun[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthfun{cmdName}[NewName];
      \cmdNameFun[sub][sub][ext] = NewNamesubsubext
618 \newcommandx{\cmdmthfun}[2][2=]
619 {\usrmth{#1}{Fun}{fun}{#2}}

\cmdmthargfun ... to do!
    • \cmdmthargfun{cmdName};
      \cmdNameFun[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
    • \cmdmthargfun{cmdName}[NewName];
      \cmdNameFun[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
620 \newcommandx{\cmdmthargfun}[2][2=]
621 {\usrmth{#1}{Fun}{argfun}{#2}}

\cmdmthoargfun ... to do!
    • \cmdmthoargfun{cmdName};
      \cmdNameFun[sub][sub][arg] = cmdNamesubsub(arg)
    • \cmdmthoargfun{cmdFun}[NewName];
      \cmdFunFun[sub][sub][arg] = NewNamesubsub(arg)
622 \newcommandx{\cmdmthoargfun}[2][2=]
623 {\usrmth{#1}{Fun}{oargfun}{#2}}

\cmdmthparfun ... to do!
    • \cmdmthparfun{cmdName};
      \cmdNameFun[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparfun{cmdName}[NewName];
      \cmdNameFun[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
624 \newcommandx{\cmdmthparfun}[2][2=]
625 {\usrmth{#1}{Fun}{parfun}{#2}}

\cmdmthoparfun ... to do!
    • \cmdmthoparfun{cmdName};
      \cmdNameFun[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparfun{cmdFun}[NewName];
      \cmdFunFun[sub][sub][par] = NewNamesubsub[par]
626 \newcommandx{\cmdmthoparfun}[2][2=]
627 {\usrmth{#1}{Fun}{oparfun}{#2}}

```

```

\mthsym, ... ... to do!
    • \mthsym{Name}[sub][sup][Ext] = NamesubsupExt
    • \mthargsym{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsupExt1(ArgExEx)Ext2
    • \mthargsym*{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsupExt1(ArgExEx)Ext2
    • \mthparsym{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsupExt1[ParExEx]Ext2
    • \mthparsym*{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsupExt1[ParExEx]Ext2
628 %% Style for Symbols
629 \cmdmthall{sym}\newcommand{\mthstysym}{\mathtt}

\asym, ... ... to do!
a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
α, β, γ, δ, ε, ζ, η, θ, ι, κ, λ, μ, ν, ξ, ο, π, ρ, ϱ, σ, ς, τ, υ, φ, ϕ, χ, ψ, ω
Α, Β, Γ, Δ, Ε, Ζ, Η, Θ, Ο, Ι, Κ, Λ, Μ, Ν, Ξ, Ο, Π, ΙΙ, Ρ, Σ, Ϛ, Τ, Υ, Φ, Ψ, Ω
630 \seqoflet{Sym}{mthsym}

\cmdmthsym ... to do!
    • \cmdmthsym{cmdName};
      \cmdNameSym[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthsym{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext] = NewNamesubsubext
631 \newcommandx{\cmdmthsym}[2][2=]
632   {\usrmth{#1}{Sym}{sym}[#2]}

\cmdmthargsym ... to do!
    • \cmdmthargsym{cmdName};
      \cmdNameSym[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
    • \cmdmthargsym{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
633 \newcommandx{\cmdmthargsym}[2][2=]
634   {\usrmth{#1}{Sym}{argsym}[#2]}

\cmdmthoargsym ... to do!
    • \cmdmthoargsym{cmdName};
      \cmdNameSym[sub][sub][arg] = cmdNamesubsub(arg)
    • \cmdmthoargsym{cmdSym}[NewName];
      \cmdSymSym[sub][sub][arg] = NewNamesubsub(arg)
635 \newcommandx{\cmdmthoargsym}[2][2=]
636   {\usrmth{#1}{Sym}{oargsym}[#2]}

\cmdmthparsym ... to do!
    • \cmdmthparsym{cmdName};
      \cmdNameSym[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparsym{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
637 \newcommandx{\cmdmthparsym}[2][2=]
638   {\usrmth{#1}{Sym}{parsym}[#2]}

\cmdmthoparsym ... to do!
    • \cmdmthoparsym{cmdName};
      \cmdNameSym[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparsym{cmdSym}[NewName];
      \cmdSymSym[sub][sub][par] = NewNamesubsub[par]
639 \newcommandx{\cmdmthoparsym}[2][2=]
640   {\usrmth{#1}{Sym}{oparsym}[#2]}

```

```

\mthelm, ... ... to do!
    • \mthelm{Name}[sub][sup][Ext] = NamesubsubExt
    • \mthargelm{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsubExt1(ArgExEx)Ext2
    • \mthargelm*{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsubExt1(ArgExEx)Ext2
    • \mthparelm{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsubExt1[ParExEx]Ext2
    • \mthparelm*{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsubExt1[ParExEx]Ext2
641 %% Style for Elements
642 \cmdmthall{elm}\newcommand{\mthstyelm}{\mathnormal}

\aelm, ... ... to do!
a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
α, β, γ, δ, ε, ζ, η, θ, ϑ, ι, κ, λ, μ, ν, ξ, ο, π, ϖ, ρ, ϑ, σ, ς, τ, υ, φ, ϕ, χ, ψ, ω
Α, Β, Γ, Δ, Ε, Ζ, Η, Θ, Ι, Κ, Λ, Μ, Ν, Ξ, Ο, Π, ϒ, Φ, Ψ, Ω
643 \seqoflet{Elm}{mthelm}

\cmdmthelm ... to do!
    • \cmdmthelm{cmdName};
      \cmdNameElm[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthelm{cmdName}[NewName];
      \cmdNameElm[sub][sub][ext] = NewNamesubsubext
644 \newcommandx{\cmdmthelm}[2][2=]
645 {\usrmth{#1}{Elm}{elm}{#2}}

\cmdmthargelm ... to do!
    • \cmdmthargelm{cmdName};
      \cmdNameElm[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
    • \cmdmthargelm{cmdName}[NewName];
      \cmdNameElm[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
646 \newcommandx{\cmdmthargelm}[2][2=]
647 {\usrmth{#1}{Elm}{argelm}{#2}}

\cmdmthoargelm ... to do!
    • \cmdmthoargelm{cmdName};
      \cmdNameElm[sub][sub][arg] = cmdNamesubsub(arg)
    • \cmdmthoargelm{cmdElm}[NewName];
      \cmdElmElm[sub][sub][arg] = NewNamesubsub(arg)
648 \newcommandx{\cmdmthoargelm}[2][2=]
649 {\usrmth{#1}{Elm}{oargelm}{#2}}

\cmdmthparelm ... to do!
    • \cmdmthparelm{cmdName};
      \cmdNameElm[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparelm{cmdName}[NewName];
      \cmdNameElm[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
650 \newcommandx{\cmdmthparelm}[2][2=]
651 {\usrmth{#1}{Elm}{parelm}{#2}}

\cmdmthoparelm ... to do!
    • \cmdmthoparelm{cmdName};
      \cmdNameElm[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparelm{cmdElm}[NewName];
      \cmdElmElm[sub][sub][par] = NewNamesubsub[par]
652 \newcommandx{\cmdmthoparelm}[2][2=]
653 {\usrmth{#1}{Elm}{oparelm}{#2}}

```

654 %%\*\*\*\*\*%

\cmdmthsymelm ... to do!

- \cmdmthsymelm{cmdName};  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{ext}] = \text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext}$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{ext}] = \text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext}$
- \cmdmthsymelm{cmdName}[NewName];  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{ext}] = \text{NewName}_{\text{sub}}^{\text{sub}}\text{ext}$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{ext}] = \text{NewName}_{\text{sub}}^{\text{sub}}\text{ext}$

655 \newcommandx{\cmdmthsymelm}[2][2=]  
656 {\cmdmthsym{#1}[#2]}%  
657 \cmdmthelm{#1}[#2]}

\cmdmthargsymelm ... to do!

- \cmdmthargsymelm{cmdName};  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{ext1}][\text{arg}][\text{ext2}] = \text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{ext1}][\text{arg}][\text{ext2}] = \text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$
- \cmdmthargsymelm{cmdName}[NewName];  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{ext1}][\text{arg}][\text{ext2}] = \text{NewName}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{ext1}][\text{arg}][\text{ext2}] = \text{NewName}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$

658 \newcommandx{\cmdmthargsymelm}[2][2=]  
659 {\cmdmthargsym{#1}[#2]}%  
660 \cmdmthargelm{#1}[#2]}

\cmdmthoargsymelm ... to do!

- \cmdmthoargsymelm{cmdName};  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{arg}] = \text{cmdName}_{\text{sub}}^{\text{sub}}(\text{arg})$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{arg}] = \text{cmdName}_{\text{sub}}^{\text{sub}}(\text{arg})$
- \cmdmthoargsymelm{cmdName}[NewName];  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{arg}] = \text{NewName}_{\text{sub}}^{\text{sub}}(\text{arg})$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{arg}] = \text{NewName}_{\text{sub}}^{\text{sub}}(\text{arg})$

661 \newcommandx{\cmdmthoargsymelm}[2][2=]  
662 {\cmdmthoargsym{#1}[#2]}%  
663 \cmdmthoargelm{#1}[#2]}

\cmdmthparsymelm ... to do!

- \cmdmthparsymelm{cmdName};  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{ext1}][\text{par}][\text{ext2}] = \text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext1}[\text{par}]\text{ext2}$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{ext1}][\text{par}][\text{ext2}] = \text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext1}[\text{par}]\text{ext2}$
- \cmdmthparsymelm{cmdName}[NewName];  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{ext1}][\text{par}][\text{ext2}] = \text{NewName}_{\text{sub}}^{\text{sub}}\text{ext1}[\text{par}]\text{ext2}$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{ext1}][\text{par}][\text{ext2}] = \text{NewName}_{\text{sub}}^{\text{sub}}\text{ext1}[\text{par}]\text{ext2}$

664 \newcommandx{\cmdmthparsymelm}[2][2=]  
665 {\cmdmthparsym{#1}[#2]}%  
666 \cmdmthparelm{#1}[#2]}

\cmdmthoparsymelm ... to do!

- \cmdmthoparsymelm{cmdName};  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{par}] = \text{cmdName}_{\text{sub}}^{\text{sub}}[\text{par}]$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{par}] = \text{cmdName}_{\text{sub}}^{\text{sub}}[\text{par}]$
- \cmdmthoparsymelm{cmdName}[NewName];  
 $\text{cmdNameSym}[\text{sub}][\text{sub}][\text{par}] = \text{NewName}_{\text{sub}}^{\text{sub}}[\text{par}]$   
 $\text{cmdNameElm}[\text{sub}][\text{sub}][\text{par}] = \text{NewName}_{\text{sub}}^{\text{sub}}[\text{par}]$

667 \newcommandx{\cmdmthoparsymelm}[2][2=]  
668 {\cmdmthoparsym{#1}[#2]}%  
669 \cmdmthoparelm{#1}[#2]}

670 %%\*\*\*\*\*%

\mthluop, ... ... to do!

- $\backslash\mathrm{mthluop}\{\backslash\mathrm{oplus}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \oplus_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext}$
- $\backslash\mathrm{mthlbop}\{\backslash\mathrm{oplus}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \oplus_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext}$

```
671 %% Style for \LaTeX Operators
672 \cmdmth{luop}\newcommand{\mthstyluop}[1]{\textstyle\mathop{\#1}}
673 \cmdmth{lbop}\newcommand{\mthstylbop}[1]{\textstyle\mathbin{\#1}}
```

$\backslash\mathrm{cmdmthluop}$ , ... ... to do!

- $\backslash\mathrm{cmdmthluop}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameUOp}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$
- $\backslash\mathrm{cmdmthluop}\{\mathrm{cmdName}\}[\backslash\mathrm{oplus}];$   
 $\backslash\mathrm{cmdNameUOp}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \oplus_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$
- $\backslash\mathrm{cmdmthlbop}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameBOp}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$
- $\backslash\mathrm{cmdmthlbop}\{\mathrm{cmdName}\}[\backslash\mathrm{oplus}];$   
 $\backslash\mathrm{cmdNameBOp}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \oplus_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$

```
674 \newcommandx{\cmdmthluop}[2][2=]
675   {\usrmth{\#1}\{UOp\}\{luop\}\{#2\}}
676 \newcommandx{\cmdmthlbop}[2][2=]
677   {\usrmth{\#1}\{BOp\}\{lbop\}\{#2\}}
```

$\backslash\mathrm{mthlrel}$  ... to do!

- $\backslash\mathrm{mthlrel}\{\backslash\mathrm{preceq}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \preceq_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext}$

```
678 %% Style for \LaTeX Relations
679 \cmdmth{lrel}\newcommand{\mthstylrel}{\mathrel}
```

$\backslash\mathrm{cmdmthlrel}$  ... to do!

- $\backslash\mathrm{cmdmthlrel}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameRel}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$
- $\backslash\mathrm{cmdmthlrel}\{\mathrm{cmdName}\}[\backslash\mathrm{preceq}];$   
 $\backslash\mathrm{cmdNameRel}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \preceq_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$

```
680 \newcommandx{\cmdmthlrel}[2][2=]
681   {\usrmth{\#1}\{Rel\}\{lrel\}\{#2\}}
```

```
682 %%*****%
```

$\backslash\mathrm{mthsnt}$ , ... ... to do!

- $\backslash\mathrm{mthsnt}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext}$
- $\backslash\mathrm{mthargsnt}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}$
- $\backslash\mathrm{mthargsnt}^*\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}$
- $\backslash\mathrm{mthparsnt}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext1}[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}] \mathrm{Ext2}$
- $\backslash\mathrm{mthparsnt}^*\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}} \mathrm{Ext1}[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}] \mathrm{Ext2}$

```
683 %% Style for Sentences
684 \cmdmthall{snt}\newcommand{\mthstysnt}{\mathsf}
```

$\backslash\mathrm{aSnt}$ , ... ... to do!

a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z  
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z  
 $\alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$   
A, B,  $\Gamma$ ,  $\Delta$ , E, E, Z, H,  $\Theta$ ,  $\Theta$ , I, K, K,  $\Lambda$ , M, N,  $\Xi$ , O,  $\Pi$ ,  $\Pi$ , P, P,  $\Sigma$ ,  $\Sigma$ , T,  $\Upsilon$ ,  $\Phi$ ,  $\Phi$ , X,  $\Psi$ ,  $\Omega$

```
685 \seqoflet{Snt}{mthsnt}
```

$\backslash\mathrm{cmdmthsnt}$  ... to do!

- $\backslash\mathrm{cmdmthsnt}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSnt}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$
- $\backslash\mathrm{cmdmthsnt}\{\mathrm{cmdName}\}[\mathrm{NewName}];$   
 $\backslash\mathrm{cmdNameSnt}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}} \mathrm{ext}$

```

686 \newcommandx{\cmdmthsnt}[2][2=]
687   {\usrmth{#1}{Snt}{snt}{#2}}

\cmdmthargsnt ... to do!
  • \cmdmthargsnt{cmdName};
    \cmdNameSnt[sub][sub][ext1]{arg}[ext2] = cmdNamesubext1(arg)ext2
  • \cmdmthargsnt{cmdName}[NewName];
    \cmdNameSnt[sub][sub][ext1]{arg}[ext2] = NewNamesubext1(arg)ext2
688 \newcommandx{\cmdmthargsnt}[2][2=]
689   {\usrmth{#1}{Snt}{argsnt}{#2}}

\cmdmthoargsnt ... to do!
  • \cmdmthoargsnt{cmdName};
    \cmdNameSnt[sub][sub][arg] = cmdNamesub(arg)
  • \cmdmthoargsnt{cmdName}[NewName];
    \cmdNameSnt[sub][sub][arg] = NewNamesub(arg)
690 \newcommandx{\cmdmthoargsnt}[2][2=]
691   {\usrmth{#1}{Snt}{oargsnt}{#2}}

\cmdmthparsnt ... to do!
  • \cmdmthparsnt{cmdName};
    \cmdNameSnt[sub][sub][ext1]{par}[ext2] = cmdNamesubext1[par]ext2
  • \cmdmthparsnt{cmdName}[NewName];
    \cmdNameSnt[sub][sub][ext1]{par}[ext2] = NewNamesubext1[par]ext2
692 \newcommandx{\cmdmthparsnt}[2][2=]
693   {\usrmth{#1}{Snt}{parsnt}{#2}}

\cmdmthoparsnt ... to do!
  • \cmdmthoparsnt{cmdName};
    \cmdNameSnt[sub][sub][par] = cmdNamesub[par]
  • \cmdmthoparsnt{cmdName}[NewName];
    \cmdNameSnt[sub][sub][par] = NewNamesub[par]
694 \newcommandx{\cmdmthoparsnt}[2][2=]
695   {\usrmth{#1}{Snt}{oparsnt}{#2}}

\mthfrm, ... ... to do!
  • \mthfrm{Name}[sub][sup][Ext] = NamesupExt
  • \mthargfrm{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = NamesupExt1(ArgExEx)Ext2
  • \mthargfrm*{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = NamesupExt1(ArgExEx)Ext2
  • \mthparfrm{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = NamesupExt1[ParExEx]Ext2
  • \mthparfrm*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = NamesupExt1[ParExEx]Ext2
696 %% Style for Formulae
697 \cmdmthall{frm}\newcommand{\mthstyfrm}{\mathit}

\afrm, ... ... to do!
a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
α, β, γ, δ, ε, ζ, η, θ, ϑ, ι, κ, λ, μ, ν, ξ, ο, π, ϖ, ρ, ϱ, σ, ς, τ, υ, φ, ϕ, χ, ψ, ω
A, B, Γ, Δ, E, E, Z, H, Θ, I, K, K, A, M, N, Ξ, O, Π, Π, P, P, Σ, Σ, T, Υ, Φ, Φ, X, Ψ, Ω
698 \seqoflet{Frm}{mthfrm}

\cmdmthfrm ... to do!
  • \cmdmthfrm{cmdName};
    \cmdNameFrm[sub][sub][ext] = cmdNamesubext
  • \cmdmthfrm{cmdName}[NewName];
    \cmdNameFrm[sub][sub][ext] = NewNamesubext

```



```

699 \newcommandx{\cmdmthfrm}[2][2=]
700   {\usrmth{#1}{Frm}{frm}{#2}}

\cmdmthargfrm ... to do!
  • \cmdmthargfrm{cmdName};
    \cmdNameFrm[sub][sub][ext1]{arg}[ext2] =  $\text{cmdName}_{sub}^{sub}ext1(arg)ext2$ 
  • \cmdmthargfrm{cmdName}[NewName];
    \cmdNameFrm[sub][sub][ext1]{arg}[ext2] =  $\text{NewName}_{sub}^{sub}ext1(arg)ext2$ 
701 \newcommandx{\cmdmthargfrm}[2][2=]
702   {\usrmth{#1}{Frm}{argfrm}{#2}}

\cmdmthoargfrm ... to do!
  • \cmdmthoargfrm{cmdName};
    \cmdNameFrm[sub][sub][arg] =  $\text{cmdName}_{sub}^{sub}(arg)$ 
  • \cmdmthoargfrm{cmdName}[NewName];
    \cmdNameFrm[sub][sub][arg] =  $\text{NewName}_{sub}^{sub}(arg)$ 
703 \newcommandx{\cmdmthoargfrm}[2][2=]
704   {\usrmth{#1}{Frm}{oargfrm}{#2}}

\cmdmthparfrm ... to do!
  • \cmdmthparfrm{cmdName};
    \cmdNameFrm[sub][sub][ext1]{par}[ext2] =  $\text{cmdName}_{sub}^{sub}ext1[par]ext2$ 
  • \cmdmthparfrm{cmdName}[NewName];
    \cmdNameFrm[sub][sub][ext1]{par}[ext2] =  $\text{NewName}_{sub}^{sub}ext1[par]ext2$ 
705 \newcommandx{\cmdmthparfrm}[2][2=]
706   {\usrmth{#1}{Frm}{parfrm}{#2}}

\cmdmthoparfrm ... to do!
  • \cmdmthoparfrm{cmdName};
    \cmdNameFrm[sub][sub][par] =  $\text{cmdName}_{sub}^{sub}[par]$ 
  • \cmdmthoparfrm{cmdName}[NewName];
    \cmdNameFrm[sub][sub][par] =  $\text{NewName}_{sub}^{sub}[par]$ 
707 \newcommandx{\cmdmthoparfrm}[2][2=]
708   {\usrmth{#1}{Frm}{oparfrm}{#2}}

709 %%*****%

\mthmat, ... ... to do!
  • \mthmat{Name}[sub][sup][Ext] =  $\text{Name}_{sub}^{sup}Ext$ 
  • \mthargmat{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\text{Name}_{sub}^{sup}Ext1\left(\text{Arg}^{Ex^{Ex}}\right)Ext2$ 
  • \mthargmat*{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\text{Name}_{sub}^{sup}Ext1\left(\text{Arg}^{Ex^{Ex}}\right)Ext2$ 
  • \mthparmat{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\text{Name}_{sub}^{sup}Ext1\left[\text{Par}^{Ex^{Ex}}\right]Ext2$ 
  • \mthparmat*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\text{Name}_{sub}^{sup}Ext1\left[\text{Par}^{Ex^{Ex}}\right]Ext2$ 
710 %% Style for Matrices
711 \cmdmthall{mat}\newcommand{\mthstymat}[1]{\boldsymbol{\mathsf{#1}}}

\mat, ... ... to do!
a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$ 
A, B, Γ, Δ, E, E, Z, H, Θ, Θ, I, K, K, Λ, M, N, Ξ, O, Π, Π, P, P, Σ, Σ, T, T, Φ, Φ, X, Ψ, Ω
712 \seqoflet{Mat}{mthmat}

\cmdmthmat ... to do!
  • \cmdmthmat{cmdName};
    \cmdNameMat[sub][sub][ext] =  $\text{cmdName}_{sub}^{sub}ext$ 

```

- $\backslash\text{cmdmthmat}\{\text{cmdName}\}[\text{NewName}]$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{ext}] = \text{NewName}_{sub}^{sub}ext$

```
713 \newcommandx{\cmdmthmat}[2][2=]
714   {\usrmth{\#1}\Mat}\mat{\#2}}
```

$\backslash\text{cmdmthargmat}$  ... to do!

- $\backslash\text{cmdmthargmat}\{\text{cmdName}\}$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{ext1}][\text{arg}][\text{ext2}] = \text{cmdName}_{sub}^{sub}ext1(arg)ext2$
- $\backslash\text{cmdmthargmat}\{\text{cmdName}\}[\text{NewName}]$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{ext1}][\text{arg}][\text{ext2}] = \text{NewName}_{sub}^{sub}ext1(arg)ext2$

```
715 \newcommandx{\cmdmthargmat}[2][2=]
716   {\usrmth{\#1}\Mat}\argmat{\#2}}
```

$\backslash\text{cmdmthoargmat}$  ... to do!

- $\backslash\text{cmdmthoargmat}\{\text{cmdName}\}$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{arg}] = \text{cmdName}_{sub}^{sub}(arg)$
- $\backslash\text{cmdmthoargmat}\{\text{cmdName}\}[\text{NewName}]$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{arg}] = \text{NewName}_{sub}^{sub}(arg)$

```
717 \newcommandx{\cmdmthoargmat}[2][2=]
718   {\usrmth{\#1}\Mat}\oargmat{\#2}}
```

$\backslash\text{cmdmthparmat}$  ... to do!

- $\backslash\text{cmdmthparmat}\{\text{cmdName}\}$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{ext1}][\text{par}][\text{ext2}] = \text{cmdName}_{sub}^{sub}ext1[par]ext2$
- $\backslash\text{cmdmthparmat}\{\text{cmdName}\}[\text{NewName}]$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{ext1}][\text{par}][\text{ext2}] = \text{NewName}_{sub}^{sub}ext1[par]ext2$

```
719 \newcommandx{\cmdmthparmat}[2][2=]
720   {\usrmth{\#1}\Mat}\parmat{\#2}}
```

$\backslash\text{cmdmthoparmat}$  ... to do!

- $\backslash\text{cmdmthoparmat}\{\text{cmdName}\}$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{par}] = \text{cmdName}_{sub}^{sub}[par]$
- $\backslash\text{cmdmthoparmat}\{\text{cmdName}\}[\text{NewName}]$ ;  
 $\backslash\text{cmdNameMat}[\text{sub}][\text{sub}][\text{par}] = \text{NewName}_{sub}^{sub}[par]$

```
721 \newcommandx{\cmdmthoparmat}[2][2=]
722   {\usrmth{\#1}\Mat}\oparmat{\#2}}
```

$\backslash\text{mthvec}$ , ... to do!

- $\backslash\text{mthvec}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{Name}_{sub}^{sup}Ext$
- $\backslash\text{mthargvec}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Arg}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\}][\text{Ext2}] = \text{Name}_{sub}^{sup}Ext1(\text{Arg}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\})Ext2$
- $\backslash\text{mthargvec}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Arg}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\}][\text{Ext2}] = \text{Name}_{sub}^{sup}Ext1(\text{Arg}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\})Ext2$
- $\backslash\text{mthparvec}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\}][\text{Ext2}] = \text{Name}_{sub}^{sup}Ext1[\text{Par}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\}]Ext2$
- $\backslash\text{mthparvec}*\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\}][\text{Ext2}] = \text{Name}_{sub}^{sup}Ext1[\text{Par}^{\text{Ex}^{\text{Ex}}}\{\text{Ex}\}]Ext2$

```
723 %% Style for Vectors
```

```
724 \cmdmthall{\vec}\newcommand{\mthstyvec}[1]{\boldsymbol{\mathit{\#1}}}
```

$\backslash\text{aVec}$ , ... to do!

$a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$   
 $A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z$   
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$   
 $A, B, \Gamma, \Delta, E, E, Z, H, \Theta, \Theta, I, K, K, \Lambda, M, N, \Xi, O, \Pi, \Pi, P, P, \Sigma, \Sigma, T, \Upsilon, \Phi, \Phi, X, \Psi, \Omega$

```
725 \seqoflet{\Vec}\mthvec}
```

$\backslash\text{cmdmthvec}$  ... to do!

- $\backslash\text{cmdmthvec}\{\text{cmdName}\}$ ;  
 $\backslash\text{cmdNameVec}[\text{sub}][\text{sub}][\text{ext}] = \text{cmdName}_{sub}^{sub}ext$

```

    • \cmdmthvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][ext] = NewNamesubsubext
726 \newcommandx{\cmdmthvec}[2][2=]
727   {\usrmth{#1}{Vec}{vec}[#2]}

\cmdmthargvec ... to do!
    • \cmdmthargvec{cmdName};
      \cmdNameVec[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
    • \cmdmthargvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
728 \newcommandx{\cmdmthargvec}[2][2=]
729   {\usrmth{#1}{Vec}{argvec}[#2]}

\cmdmthoargvec ... to do!
    • \cmdmthoargvec{cmdName};
      \cmdNameVec[sub][sub][arg] = cmdNamesubsub(arg)
    • \cmdmthoargvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][arg] = NewNamesubsub(arg)
730 \newcommandx{\cmdmthoargvec}[2][2=]
731   {\usrmth{#1}{Vec}{oargvec}[#2]}

\cmdmthparvec ... to do!
    • \cmdmthparvec{cmdName};
      \cmdNameVec[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
732 \newcommandx{\cmdmthparvec}[2][2=]
733   {\usrmth{#1}{Vec}{parvec}[#2]}

\cmdmthoparvec ... to do!
    • \cmdmthoparvec{cmdName};
      \cmdNameVec[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][par] = NewNamesubsub[par]
734 \newcommandx{\cmdmthoparvec}[2][2=]
735   {\usrmth{#1}{Vec}{oparvec}[#2]}

736 \fi
737 %*****%
738 %*****%
739 %** Elementary Macros for Text *****%
740 %*****%
741 \iftxt@
742 %** Latin Abbreviations *****%

\adhoc    • \adhoc = ad hoc
743 \cmdtxtabr{adhoc}[ad hoc]

\afortiori    • \afortiori = a fortiori
744 \cmdtxtabr{afortiori}[a fortiori]

\apriori    • \apriori = a priori
745 \cmdtxtabr{apriori}[a priori]

\aposteriori    • \aposteriori = a posteriori
746 \cmdtxtabr{aposteriori}[a posteriori]

\cf    • \cf = cf.
747 \cmdtxtabr{cf}[cf.]

```

`\dedicto`      • `\dedicto = de dicto`  
748 `\cmdtxtabr{dedicto}[de dicto]`

`\defacto`      • `\defacto = de facto`  
749 `\cmdtxtabr{defacto}[de facto]`

`\dere`          • `\dere = de re`  
750 `\cmdtxtabr{dere}[de re]`

`\divideetimpera`      • `\divideetimpera = divide et impera`  
751 `\cmdtxtabr{divideetimpera}[divide et impera]`

`\eg`            • `\eg = e.g.`  
752 `\cmdtxtabr{eg}[e.g.]`

`\ergo`          • `\ergo = ergo`  
753 `\cmdtxtabr{ergo}`

`\errata`        • `\errata = errata`  
754 `\cmdtxtabr{errata}`

`\erratum`      • `\erratum = erratum`  
755 `\cmdtxtabr{erratum}`

`\etal`          • `\etal = et al.`  
756 `\cmdtxtabr{etal}[et al.]`

`\etc`           • `\etc = etc.`  
757 `\cmdtxtabr{etc}[etc.]`

`\ie`            • `\ie = i.e.`  
758 `\cmdtxtabr{ie}[i.e.]`

`\mutatismutandis`      • `\mutatismutandis = mutatis mutandis`  
759 `\cmdtxtabr{mutatismutandis}[mutatis mutandis]`

`\percontra`      • `\percontra = per contra`  
760 `\cmdtxtabr{percontra}[per contra]`

`\primafacie`      • `\primafacie = prima facie`  
761 `\cmdtxtabr{primafacie}[prima facie]`

`\viceversa`      • `\viceversa = vice versa`  
762 `\cmdtxtabr{viceversa}[vice versa]`

`\vs`            • `\vs = vs.`  
763 `\cmdtxtabr{vs}[vs.]`

`\viz`           • `\viz = viz.`  
764 `\cmdtxtabr{viz}[viz.]`  
765 `%%*****%`

`\Afortiori`      • `\Afortiori = A fortiori`  
766 `\cmdtxtabr{Afortiori}[A fortiori]`

`\Apriori`        • `\Apriori = A priori`  
767 `\cmdtxtabr{Apriori}[A priori]`

$\backslash$ Aposteriori      •  $\backslash$ Aposteriori = *A posteriori*  
768 \cmdtxtabr{Aposteriori}[A posteriori]

$\backslash$ Dedicto      •  $\backslash$ Dedicto = *De dicto*  
769 \cmdtxtabr{Dedicto}[De dicto]

$\backslash$ Defacto      •  $\backslash$ Defacto = *De facto*  
770 \cmdtxtabr{Defacto}[De facto]

$\backslash$ Dere      •  $\backslash$ Dere = *De re*  
771 \cmdtxtabr{Dere}[De re]

$\backslash$ Divideetimperā      •  $\backslash$ Divideetimperā = *Divide et impera*  
772 \cmdtxtabr{Divideetimperā}[Divide et impera]

$\backslash$ Eg      •  $\backslash$ Eg = *E.g.*  
773 \cmdtxtabr{Eg}[E.g.]

$\backslash$ Errata      •  $\backslash$ Errata = *Errata*  
774 \cmdtxtabr{Errata}

$\backslash$ Erratum      •  $\backslash$ Erratum = *Erratum*  
775 \cmdtxtabr{Erratum}

$\backslash$ Mutatismutandis      •  $\backslash$ Mutatismutandis = *Mutatis mutandis*  
776 \cmdtxtabr{Mutatismutandis}[Mutatis mutandis]

$\backslash$ Percontra      •  $\backslash$ Percontra = *Per contra*  
777 \cmdtxtabr{Percontra}[Per contra]

$\backslash$ Prima facie      •  $\backslash$ Prima facie = *Prima facie*  
778 \cmdtxtabr{Prima facie}[Prima facie]

$\backslash$ Viceversa      •  $\backslash$ Viceversa = *Vice versa*  
779 \cmdtxtabr{Viceversa}[Vice versa]

780 %\*\* Italian Abbreviations \*\*\*\*\*%  
...  
781 %\*\*\*\*\*%  
...  
782 %\*\* French Abbreviations \*\*\*\*\*%

$\backslash$ naif      •  $\backslash$ naif = *naïf*  
783 \cmdtxtabr{naif}[na\{i}f]

$\backslash$ naive      •  $\backslash$ naive = *naïve*  
784 \cmdtxtabr{naive}[na\{i}ve]

$\backslash$ role      •  $\backslash$ role = *rôle*  
785 \cmdtxtabr{role}[r\^{o}le]

786 %\*\*\*\*\*%

$\backslash$ Role      •  $\backslash$ Role = *Rôle*  
787 \cmdtxtabr{Role}[R\^{o}le]

788 %\*\* English Abbreviations \*\*\*\*\*%

```

\aka      • \aka = a.k.a.
789 \cmdtxtabr{aka}[a.k.a.]

\contd    • \contd = contd.
790 \cmdtxtabr{contd}[contd.]

\iff      • \iff = iff
791 \cmdtxtabr{iff}

\iht      • \iht = i.h.t.
792 \cmdtxtabr{iht}[i.h.t.]

\stx      • \stx = s.t.
793 \cmdtxtabr{stx}[s.t.]

\resp     • \resp = resp.
794 \cmdtxtabr{resp}[resp.]

\wrt      • \wrt = w.r.t.
795 \cmdtxtabr{wrt}[w.r.t.]

\wlogx    • \wlogx = w.l.o.g.
796 \cmdtxtabr{wlogx}[w.l.o.g.]
797 %%*****%%

\Contd    • \Contd = Contd.
798 \cmdtxtabr{Contd}[Contd.]

\Wlogx    • \Wlogx = W.l.o.g.
799 \cmdtxtabr{Wlogx}[W.l.o.g.]

800 \fi
801 %%*****%%
802 %%*****%%
803 %%** Elementary Macros for Math *****%%
804 %%*****%%
805 \ifmth@
806 %%** General Notation *****%%

\defeq, \seteq ...
807 \DeclareRobustCommand{\defeq}
808   {\@ifstar%
809     {\mthlbop{\stackrel{\text{\textup{def}}}{=}}}%
810     {\mthlbop{\triangleq}}}
811 \DeclareRobustCommand{\seteq}
812   {\@ifstar{\mthlbop{\Coloneqq}}{\mthlbop{\coloneqq}}}
813 %%*****%%

\implies, ... ...
814 \DeclareRobustCommand{\implies}
815   {\mthlrel{\Rightarrow}}
816 \DeclareRobustCommand{\notimplies}
817   {\mthlrel{\not\Rightarrow}}

\implied, ... ...
818 \DeclareRobustCommand{\implied}
819   {\mthlrel{\Leftarrow}}
820 \DeclareRobustCommand{\notimplied}
821   {\mthlrel{\not\Leftarrow}}

```

```

\coimplies, ... ...
822 \DeclareRobustCommand{\coimplies}
823   {\mthlrel{\Leftrightarrow}}
824 \DeclareRobustCommand{\notcoimplies}
825   {\mthlrel{\not\!\Leftrightarrow}}

826 %%*****%

\cmodels, ... ...
827 \DeclareRobustCommand{\cmodels}
828   {\mthlrel{\models}}
829 \DeclareRobustCommand{\notcmodels}
830   {\mthlrel{\not\models}}

\cequiv, ... ...
831 \DeclareRobustCommand{\cequiv}
832   {\mthlrel{\equiv}}
833 \DeclareRobustCommand{\notcequiv}
834   {\mthlrel{\not\equiv}}

835 %%*****%

\denot ...
836 \DeclareRobustCommand{\denot}
837   {\@ifstar{\@denot}{\@denot[\left][\right]}}
838 \DeclareRobustCommandx{\@denot}[3][1=, 2=]
839   {\mth{\argmid{\#1\llbracket}{\#3}{\#2\rrbracket}}}

840 %%*****%

\dual, \adj, ... ...
841 \DeclareRobustCommand{\dual}[1]
842   {\mth{\overline{\#1}}}
843 \DeclareRobustCommand{\adj}[1]
844   {\mth{\mathring{\#1}}}
845 \DeclareRobustCommand{\der}[1]
846   {\mth{\widehat{\#1}}}
847 \DeclareRobustCommand{\trn}[1]
848   {\mth{\widetilde{\#1}}}

\vec ...
849 \DeclareRobustCommand{\vec}
850   {\@ifstar{\@svec}{\@vec}}
851 \DeclareRobustCommand{\@vec}[1]
852   {\mth{\mathaccent"017E{\#1}}}
853 \DeclareRobustCommand{\@svec}[1]
854   {\mth{\overline{\#1}}}

855 %%*****%

\enumeration, ... ...
856 \varcmd{enumeration}{\mth}{\{,\}{}}
857 \varcmd{enumerationx}{\mth}{\{;\}{}}

\sequence, ... ...
858 \DeclareRobustCommand{\sequence}
859   {\@ifstar{\@ssequence}{\@sequence}}
860 \varcmd{@sequence}{\mth}{\left[\{,\}{\right]}}
861 \varcmd{@ssequence}{\mth}{\left[\{,\}{\right]}}
862 \DeclareRobustCommand{\sequence1}
863   {\@ifstar{\@ssequence1}{\@sequence1}}
864 \varcmd{@sequence1}{\mth}{\left[\{,\}{\right.}\{}}
865 \varcmd{@ssequence1}{\mth}{\left[\{,\}{\right.}\{}}

```

```

866 \DeclareRobustCommand{\sequencer}
867   {\@ifstar{\@ssequencer}{\@sequencer}}
868 \varcmd{\sequencer}{\mth}{\left.}{,}{\right]}{}
869 \varcmd{\ssequencer}{\mth}{,}{,}{}
870 \DeclareRobustCommand{\sequencex}
871   {\@ifstar{\@ssequencex}{\@sequencex}}
872 \varcmd{\sequencex}{\mth}{\left[}{;}{\right]}{}
873 \varcmd{\ssequencex}{\mth}{[}{;}{]}{}
874 \DeclareRobustCommand{\sequencexl}
875   {\@ifstar{\@ssequencexl}{\@sequencexl}}
876 \varcmd{\sequencexl}{\mth}{\left[}{;}{\right.]}{}
877 \varcmd{\ssequencexl}{\mth}{[}{;}{]}{}
878 \DeclareRobustCommand{\sequencexr}
879   {\@ifstar{\@ssequencexr}{\@sequencexr}}
880 \varcmd{\sequencexr}{\mth}{\left.}{;}{\right]}{}
881 \varcmd{\ssequencexr}{\mth}{,}{;}{]}{}

```

\tuple, ... ..

```

882 \DeclareRobustCommand{\tuple}
883   {\@ifstar{\@stuple}{\@tuple}}
884 \varcmd{\tuple}{\mth}{\left\langle}{,}{\right\rangle}{}
885 \varcmd{\stuple}{\mth}{\langle}{,}{\rangle}{}
886 \DeclareRobustCommand{\tuplel}
887   {\@ifstar{\@stupl}{\@tuplel}}
888 \varcmd{\tuplel}{\mth}{\left\langle}{,}{\right.]}{}
889 \varcmd{\stupl}{\mth}{\langle}{,}{]}{}
890 \DeclareRobustCommand{\tupler}
891   {\@ifstar{\@stupler}{\@tupler}}
892 \varcmd{\tupler}{\mth}{\left.}{,}{\right\rangle}{}
893 \varcmd{\stupler}{\mth}{,}{,}{\rangle}{}
894 \DeclareRobustCommand{\tuplex}
895   {\@ifstar{\@stuplex}{\@tuplex}}
896 \varcmd{\tuplex}{\mth}{\left\langle}{;}{\right\rangle}{}
897 \varcmd{\stuplex}{\mth}{\langle}{;}{\rangle}{}
898 \DeclareRobustCommand{\tuplexl}
899   {\@ifstar{\@stuplexl}{\@tuplexl}}
900 \varcmd{\tuplexl}{\mth}{\left\langle}{;}{\right.]}{}
901 \varcmd{\stuplexl}{\mth}{\langle}{;}{]}{}
902 \DeclareRobustCommand{\tuplexr}
903   {\@ifstar{\@stuplexr}{\@tuplexr}}
904 \varcmd{\tuplexr}{\mth}{\left.}{;}{\right\rangle}{}
905 \varcmd{\stuplexr}{\mth}{,}{;}{\rangle}{}

906 %** Sets *****%

```

\set, ... ..

```

907 \DeclareRobustCommand{\set}
908   {\@ifstar{\@set}{\@set[\left][\middle][\right]}}
909 \DeclareRobustCommandx{\@set}[5][1=, 2=, 3=]
910   {\mth{\argmid{#1\lbrace}{\argsep{#4}{\, #2\vert\,}{#5}}{#3\rbrace}}}
911 \DeclareRobustCommand{\setl}
912   {\@ifstar{\@setl}{\@setl[\left][\right]}}
913 \DeclareRobustCommandx{\@setl}[3][1=, 2=]
914   {\mth{\argmid{#1\lbrace}{#3}{\, #2\vert\!}}}
915 \DeclareRobustCommand{\setr}
916   {\@ifstar{\@setr}{\@setr[\left.][\right]}}
917 \DeclareRobustCommandx{\@setr}[3][1=, 2=]
918   {\mth{\argmid{#1}{#3}{#2\rbrace}}}

```

\card ...

```

919 \DeclareRobustCommand{\card}
920   {\@ifstar{\@card}{\@card[\left][\right]}}
921 \DeclareRobustCommandx{\@card}[3][1=, 2=]
922   {\mth{\argmid{#1\lvert}{#3}{#2\rvert}}}

```



```

\pow ...
923 \DeclareRobustCommand{\pow}[1]
924   {\mth{2^{\defval{#1}{\cdot}}}}

925 %%** Relations *****%%

\emptyrel ...
926 \DeclareRobustCommand{\emptyrel}
927   {\mth{\varnothing}}

928 %%*****%%

\dom, \cod, ... ...
929 \usrmth{dom}{-}{argfun}
930 \usrmth{cod}{-}{argfun}
931 \usrmth{rng}{-}{argfun}
932 \usrmth{img}{-}{argfun}

933 %%*****%%

\prj ...
934 \DeclareRobustCommand{\prj}
935   {\mthargfun{prj}}

\rst ...
936 \DeclareRobustCommand{\rst}
937   {\mthlbop{\upharpoonright}}

\cmp ...
938 \DeclareRobustCommand{\cmp}
939   {\mthlbop{\circ}}

940 %%** Functions *****%%

\emptyfun ...
941 \DeclareRobustCommand{\emptyfun}
942   {\mth{\varnothing}}

943 %%*****%%

\pto, \pmapsto ...
944 \DeclareMathOperator{\pto}
945   {\ensuremath{\rightharpoonup}}
946 \DeclareMathOperator{\pmapsto}
947   {\ensuremath{\mathrel{\raisebox{0.5ex}{\footnotesize$\llcorner$}}}%
948     \kern-1.5ex\rightharpoonup}}

949 %%*****%%

\fix, \ifp, ... ...
950 \usrmth{fix}{-}{fun}
951 \usrmth{ifp}{-}{fun}
952 \usrmth{lfp}{-}{fun}
953 \usrmth{gfp}{-}{fun}

954 %%*****%%

\Aomega, \AOmega ...
955 \usrmth{Aomega}{-}{argset}[\omega]
956 \usrmth{AOmega}{-}{argset}[\Omega]

\Atheta, \ATheta ...
957 \usrmth{Atheta}{-}{argset}[\theta]
958 \usrmth{ATheta}{-}{argset}[\Theta]

```

```

\Aomicron, ... ...
    959 \usrmth{Aomicron}{\argset}{\omicron}
    960 \usrmth{A0micron}{\argset}{\0micron}

    961 %%** Numbers *****%

\SetB ...
    962 \DeclareRobustCommand{\SetB}
    963   {\mthset[mathbb]{B}}

\SetF ...
    964 \DeclareRobustCommand{\SetF}
    965   {\mthset[mathbb]{F}}

\SetN, ... ...
    966 \DeclareRobustCommand{\SetN}
    967   {\mthset[mathbb]{N}}
    968 \DeclareRobustCommand{\SetNI}[1] []
    969   {\SetN[\infty #1]}

\SetZ, ... ...
    970 \DeclareRobustCommand{\SetZ}
    971   {\mthset[mathbb]{Z}}
    972 \DeclareRobustCommand{\SetZI}[1] []
    973   {\SetZ[\pm\infty #1]}
    974 \DeclareRobustCommand{\SetZPI}[1] []
    975   {\SetZ[+\infty #1]}
    976 \DeclareRobustCommand{\SetZNI}[1] []
    977   {\SetZ[-\infty #1]}

\SetQ, ... ...
    978 \DeclareRobustCommand{\SetQ}
    979   {\mthset[mathbb]{Q}}
    980 \DeclareRobustCommand{\SetQI}[1] []
    981   {\SetQ[\pm\infty #1]}
    982 \DeclareRobustCommand{\SetQPI}[1] []
    983   {\SetQ[+\infty #1]}
    984 \DeclareRobustCommand{\SetQNI}[1] []
    985   {\SetQ[-\infty #1]}

\SetR, ... ...
    986 \DeclareRobustCommand{\SetR}
    987   {\mthset[mathbb]{R}}
    988 \DeclareRobustCommand{\SetRI}[1] []
    989   {\SetR[\pm\infty #1]}
    990 \DeclareRobustCommand{\SetRPI}[1] []
    991   {\SetR[+\infty #1]}
    992 \DeclareRobustCommand{\SetRNI}[1] []
    993   {\SetR[-\infty #1]}

\SetC, ... ...
    994 \DeclareRobustCommand{\SetC}
    995   {\mthset[mathbb]{C}}
    996 \DeclareRobustCommand{\SetCI}[1] []
    997   {\SetC[\infty #1]}

    998 %*****%

\num, ... ...
    999 \DeclareRobustCommand{\num}[1]
    1000   {\mth{[#1]}}
    1001 \DeclareRobustCommand{\numcc}[2]
    1002   {\mth{[\argsep{#1}{,}{#2}]}}

```

```

1003 \DeclareRobustCommand{\numco}[2]
1004   {\mth{\argsep{#1}{,}{#2}}}}
1005 \DeclareRobustCommand{\numoc}[2]
1006   {\mth{(\argsep{#1}{,}{#2})}}
1007 \DeclareRobustCommand{\numoo}[2]
1008   {\mth{(\argsep{#1}{,}{#2})}}

```

```

1009 %%*****%

```

\abs, \norm ...

```

1010 \DeclareRobustCommand{\abs}
1011   {\@ifstar{\@abs}{\@abs[\left][\right]}}
1012 \DeclareRobustCommandx{\@abs}[3][1=, 2=]
1013   {\mth{\argmid{#1\lvert}{#3}{#2\rvert}}}}
1014 \DeclareRobustCommand{\norm}
1015   {\@ifstar{\@norm}{\@norm[\left][\right]}}
1016 \DeclareRobustCommandx{\@norm}[3][1=, 2=]
1017   {\mth{\argmid{#1\lVert}{#3}{#2\rVert}}}}

```

\floor, \ceil ...

```

1018 \DeclareRobustCommand{\floor}
1019   {\@ifstar{\@ffloor}{\@ffloor[\left][\right]}}
1020 \DeclareRobustCommandx{\@ffloor}[3][1=, 2=]
1021   {\mth{\argmid{#1\lfloor}{#3}{#2\rfloor}}}}
1022 \DeclareRobustCommand{\ceil}
1023   {\@ifstar{\@ceil}{\@ceil[\left][\right]}}
1024 \DeclareRobustCommandx{\@ceil}[3][1=, 2=]
1025   {\mth{\argmid{#1\lceil}{#3}{#2\rceil}}}}

```

```

1026 %%*****%

```

\arg ...

```

1027 \usrmth{arg}{\fun}

```

\evn, \odd ...

```

1028 \usrmth{evn}{\fun}
1029 \usrmth{odd}{\fun}

```

\bst, ... ...

```

1030 \usrmth{bst}{\fun}
1031 \usrmth{argbst}{\fun}[arg\,bst]

```

\min, \max, ... ...

```

1032 \usrmth{min}{\fun}
1033 \usrmth{max}{\fun}
1034 \usrmth{argmin}{\fun}[arg\,min]
1035 \usrmth{argmax}{\fun}[arg\,max]

```

\inf, \sup ...

```

1036 \usrmth{inf}{\fun}
1037 \usrmth{sup}{\fun}

```

```

1038 %%** Sequences *****%

```

\emptyseq ...

```

1039 \DeclareRobustCommand{\emptyseq}
1040   {\mth{\varepsilon}}

```

\len ...

```

1041 \DeclareRobustCommand{\len}
1042   {\@ifstar{\@len}{\@len[\left][\right]}}
1043 \DeclareRobustCommandx{\@len}[3][1=, 2=]
1044   {\mth{\argmid{#1\lvert}{#3}{#2\rvert}}}}

```

```

\fst, \lst ...
1045 \usrmth{fst}{-}{argfun}
1046 \usrmth{lst}{-}{argfun}

1047 \fi
1048 %*****%
1049 %*****%
1050 %** Macros for Computational-Complexity Classes *****%
1051 %*****%
1052 \ifcom@

\defcomcls ... to do!
    • \defcomcls{CompClass};

      \CompClass[sub][sup][arg] = COMPCLASSSUB(ARG)

    • \defcomcls{CompClass}[NewClass];

      \CompClass[sub][sup][arg] = NEWCLASSSUB(ARG)

1053 \newcommandx{\defcomcls}[2][2=]
1054   {\csdef{#1}{\txtoargcom{\defval{#2}{#1}}}}

\defcomclsgrp ... to do!
    • \defcomclsgrp{CompClass};

      \CompClass[sub][sup][arg] = COMPCLASSSUB(ARG)
      \CoCompClass[sub][sup][arg] = COCOMPCLASSSUB(ARG)
      \CompClassE[sub][sup][arg] = COMPCLASS-EASYSUB(ARG)
      \CoCompClassE[sub][sup][arg] = COCOMPCLASS-EASYSUB(ARG)
      \CompClassH[sub][sup][arg] = COMPCLASS-HARDSUB(ARG)
      \CoCompClassH[sub][sup][arg] = COCOMPCLASS-HARDSUB(ARG)
      \CompClassC[sub][sup][arg] = COMPCLASS-COMPLETESUB(ARG)
      \CoCompClassC[sub][sup][arg] = COCOMPCLASS-COMPLETESUB(ARG)

      \DCompClass[sub][sup][arg] = DCOMPCLASSSUB(ARG)
      \CoDCompClass[sub][sup][arg] = CODCOMPCLASSSUB(ARG)
      \DCompClassE[sub][sup][arg] = DCOMPCLASS-EASYSUB(ARG)
      \CoDCompClassE[sub][sup][arg] = CODCOMPCLASS-EASYSUB(ARG)
      \DCompClassH[sub][sup][arg] = DCOMPCLASS-HARDSUB(ARG)
      \CoDCompClassH[sub][sup][arg] = CODCOMPCLASS-HARDSUB(ARG)
      \DCompClassC[sub][sup][arg] = DCOMPCLASS-COMPLETESUB(ARG)
      \CoDCompClassC[sub][sup][arg] = CODCOMPCLASS-COMPLETESUB(ARG)

      \NCompClass[sub][sup][arg] = NCOMPCLASSSUB(ARG)
      \CoNCompClass[sub][sup][arg] = CONCOMPCLASSSUB(ARG)
      \NCompClassE[sub][sup][arg] = NCOMPCLASS-EASYSUB(ARG)
      \CoNCompClassE[sub][sup][arg] = CONCOMPCLASS-EASYSUB(ARG)
      \NCompClassH[sub][sup][arg] = NCOMPCLASS-HARDSUB(ARG)
      \CoNCompClassH[sub][sup][arg] = CONCOMPCLASS-HARDSUB(ARG)
      \NCompClassC[sub][sup][arg] = NCOMPCLASS-COMPLETESUB(ARG)
      \CoNCompClassC[sub][sup][arg] = CONCOMPCLASS-COMPLETESUB(ARG)

      \UCompClass[sub][sup][arg] = UCOMPCLASSSUB(ARG)
      \CoUCompClass[sub][sup][arg] = COUCOMPCLASSSUB(ARG)
      \UCompClassE[sub][sup][arg] = UCOMPCLASS-EASYSUB(ARG)
      \CoUCompClassE[sub][sup][arg] = COUCOMPCLASS-EASYSUB(ARG)
      \UCompClassH[sub][sup][arg] = UCOMPCLASS-HARDSUB(ARG)
      \CoUCompClassH[sub][sup][arg] = COUCOMPCLASS-HARDSUB(ARG)
      \UCompClassC[sub][sup][arg] = UCOMPCLASS-COMPLETESUB(ARG)
      \CoUCompClassC[sub][sup][arg] = COUCOMPCLASS-COMPLETESUB(ARG)

      \ACompClass[sub][sup][arg] = ACOMPCLASSSUB(ARG)

```

```

\CoACompClass[sub][sup][arg] = CoACOMPCLASSSUB(ARG)
\ACompClassE[sub][sup][arg] = ACOMPCLASS-EASYSUB(ARG)
\CoACompClassE[sub][sup][arg] = CoACOMPCLASS-EASYSUB(ARG)
\ACompClassH[sub][sup][arg] = ACOMPCLASS-HARDSUB(ARG)
\CoACompClassH[sub][sup][arg] = CoACOMPCLASS-HARDSUB(ARG)
\ACompClassC[sub][sup][arg] = ACOMPCLASS-COMPLETESUB(ARG)
\CoACompClassC[sub][sup][arg] = CoACOMPCLASS-COMPLETESUB(ARG)
• \defcomclsggrp{CompClass}[NewClass];

\CompClass[sub][sup][arg] = NEWCLASSSUB(ARG)
\CoCompClass[sub][sup][arg] = CoNEWCLASSSUB(ARG)
\CompClassE[sub][sup][arg] = NEWCLASS-EASYSUB(ARG)
\CoCompClassE[sub][sup][arg] = CoNEWCLASS-EASYSUB(ARG)
\CompClassH[sub][sup][arg] = NEWCLASS-HARDSUB(ARG)
\CoCompClassH[sub][sup][arg] = CoNEWCLASS-HARDSUB(ARG)
\CompClassC[sub][sup][arg] = NEWCLASS-COMPLETESUB(ARG)
\CoCompClassC[sub][sup][arg] = CoNEWCLASS-COMPLETESUB(ARG)

\DCompClass[sub][sup][arg] = DNEWCLASSSUB(ARG)
\CoDCompClass[sub][sup][arg] = CoDNEWCLASSSUB(ARG)
\DCompClassE[sub][sup][arg] = DNEWCLASS-EASYSUB(ARG)
\CoDCompClassE[sub][sup][arg] = CoDNEWCLASS-EASYSUB(ARG)
\DCompClassH[sub][sup][arg] = DNEWCLASS-HARDSUB(ARG)
\CoDCompClassH[sub][sup][arg] = CoDNEWCLASS-HARDSUB(ARG)
\DCompClassC[sub][sup][arg] = DNEWCLASS-COMPLETESUB(ARG)
\CoDCompClassC[sub][sup][arg] = CoDNEWCLASS-COMPLETESUB(ARG)

\NCompClass[sub][sup][arg] = NNEWCLASSSUB(ARG)
\CoNCompClass[sub][sup][arg] = CoNNEWCLASSSUB(ARG)
\NCompClassE[sub][sup][arg] = NNEWCLASS-EASYSUB(ARG)
\CoNCompClassE[sub][sup][arg] = CoNNEWCLASS-EASYSUB(ARG)
\NCompClassH[sub][sup][arg] = NNEWCLASS-HARDSUB(ARG)
\CoNCompClassH[sub][sup][arg] = CoNNEWCLASS-HARDSUB(ARG)
\NCompClassC[sub][sup][arg] = NNEWCLASS-COMPLETESUB(ARG)
\CoNCompClassC[sub][sup][arg] = CoNNEWCLASS-COMPLETESUB(ARG)

\UCompClass[sub][sup][arg] = UNEWCLASSSUB(ARG)
\CoUCompClass[sub][sup][arg] = CoUNEWCLASSSUB(ARG)
\UCompClassE[sub][sup][arg] = UNEWCLASS-EASYSUB(ARG)
\CoUCompClassE[sub][sup][arg] = CoUNEWCLASS-EASYSUB(ARG)
\UCompClassH[sub][sup][arg] = UNEWCLASS-HARDSUB(ARG)
\CoUCompClassH[sub][sup][arg] = CoUNEWCLASS-HARDSUB(ARG)
\UCompClassC[sub][sup][arg] = UNEWCLASS-COMPLETESUB(ARG)
\CoUCompClassC[sub][sup][arg] = CoUNEWCLASS-COMPLETESUB(ARG)

\ACompClass[sub][sup][arg] = ANEWCLASSSUB(ARG)
\CoACompClass[sub][sup][arg] = CoANEWCLASSSUB(ARG)
\ACompClassE[sub][sup][arg] = ANEWCLASS-EASYSUB(ARG)
\CoACompClassE[sub][sup][arg] = CoANEWCLASS-EASYSUB(ARG)
\ACompClassH[sub][sup][arg] = ANEWCLASS-HARDSUB(ARG)
\CoACompClassH[sub][sup][arg] = CoANEWCLASS-HARDSUB(ARG)
\ACompClassC[sub][sup][arg] = ANEWCLASS-COMPLETESUB(ARG)
\CoACompClassC[sub][sup][arg] = CoANEWCLASS-COMPLETESUB(ARG)

1055 \newcommandx{\defcomclsggrp}[2][2=]
1056   {\defcomclsggrpsem{#1}{\defval{#2}{#1}}%
1057   \defcomclsggrpsem{#1}{\defval{#2}{#1}}[Co]}
1058 \newcommandx{\defcomclsgrpsem}[3][3=]
1059   {\defcomclsgrpred{#3#1}{#2}{#3}%
1060   \defcomclsgrpred{#3D#1}{#2}{#3D}%
1061   \defcomclsgrpred{#3N#1}{#2}{#3N}%
1062   \defcomclsgrpred{#3U#1}{#2}{#3U}%
1063   \defcomclsgrpred{#3A#1}{#2}{#3A}}
1064 \newcommandx{\defcomclsgrpred}[3][3=]
1065   {\defcomclsgrpcomd{#1}{#2}{#3}%

```

```

1066 \defcomclsgrpcmd{#1E}{#2}{#3}[-easy]%
1067 \defcomclsgrpcmd{#1H}{#2}{#3}[-hard]%
1068 \defcomclsgrpcmd{#1C}{#2}{#3}[-complete]]%
1069 \newcommandx{\defcomclsgrpcmd}[4][3=, 4=]
1070 {\csdef{#1}{\txttoargcom{#3#2#4}}}

\defcomhrc ... to do!
    • \defcomhrc{CompHierarchy};

      CompHierarchy[sub][sup][par] = COMPHIERARCHYSUB[PAR]

    • \defcomhrc{CompHierarchy}[NewHierarchy];

      CompHierarchy[sub][sup][par] = NEWHIERARCHYSUB[PAR]

1071 \newcommandx{\defcomhrc}[2][2=]
1072 {\csdef{#1}{\txttoparcom{\defval{#2}{#1}}}}

1073 %%*****%

```

\Easy, \Hard, ...

```

1074 \cmdtxtcom{Easy}
1075 \cmdtxtcom{Hard}
1076 \cmdtxtcom{Complete}

1077 %%*****%

\FPT    • \FPT[sub][sup][arg] = FPTSUB(ARG)
1078 \defcomcls{FPT}

1079 %%*****%

```

\Time, ...

- \Time[sub][sup][arg] = TIME<sup>SUB</sup>(ARG)
- \TimeE[sub][sup][arg] = TIME-EASY<sup>SUB</sup>(ARG)
- \TimeH[sub][sup][arg] = TIME-HARD<sup>SUB</sup>(ARG)
- \TimeC[sub][sup][arg] = TIME-COMPLETE<sup>SUB</sup>(ARG)
- \DTime[sub][sup][arg] = DTIME<sup>SUB</sup>(ARG)
- \DTimeE[sub][sup][arg] = DTIME-EASY<sup>SUB</sup>(ARG)
- \DTimeH[sub][sup][arg] = DTIME-HARD<sup>SUB</sup>(ARG)
- \DTimeC[sub][sup][arg] = DTIME-COMPLETE<sup>SUB</sup>(ARG)
- \NTime[sub][sup][arg] = NTIME<sup>SUB</sup>(ARG)
- \NTimeE[sub][sup][arg] = NTIME-EASY<sup>SUB</sup>(ARG)
- \NTimeH[sub][sup][arg] = NTIME-HARD<sup>SUB</sup>(ARG)
- \NTimeC[sub][sup][arg] = NTIME-COMPLETE<sup>SUB</sup>(ARG)
- \UTime[sub][sup][arg] = UTIME<sup>SUB</sup>(ARG)
- \UTimeE[sub][sup][arg] = UTIME-EASY<sup>SUB</sup>(ARG)
- \UTimeH[sub][sup][arg] = UTIME-HARD<sup>SUB</sup>(ARG)
- \UTimeC[sub][sup][arg] = UTIME-COMPLETE<sup>SUB</sup>(ARG)
- \ATime[sub][sup][arg] = ATIME<sup>SUB</sup>(ARG)
- \ATimeE[sub][sup][arg] = ATIME-EASY<sup>SUB</sup>(ARG)
- \ATimeH[sub][sup][arg] = ATIME-HARD<sup>SUB</sup>(ARG)
- \ATimeC[sub][sup][arg] = ATIME-COMPLETE<sup>SUB</sup>(ARG)

```

1080 \defcomclsgrp{Time}

```

\Space, ...

- \Space[sub][sup][arg] = SPACE<sup>SUB</sup>(ARG)
- \SpaceE[sub][sup][arg] = SPACE-EASY<sup>SUB</sup>(ARG)
- \SpaceH[sub][sup][arg] = SPACE-HARD<sup>SUB</sup>(ARG)
- \SpaceC[sub][sup][arg] = SPACE-COMPLETE<sup>SUB</sup>(ARG)
- \DSpace[sub][sup][arg] = DSPACE<sup>SUB</sup>(ARG)
- \DSpaceE[sub][sup][arg] = DSPACE-EASY<sup>SUB</sup>(ARG)
- \DSpaceH[sub][sup][arg] = DSPACE-HARD<sup>SUB</sup>(ARG)
- \DSpaceC[sub][sup][arg] = DSPACE-COMPLETE<sup>SUB</sup>(ARG)



\PTime, ...

- \PTime[sub][sup][arg] = PTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \PTimeE[sub][sup][arg] = PTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \PTimeH[sub][sup][arg] = PTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \PTimeC[sub][sup][arg] = PTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPTIME[sub][sup][arg] = DPTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPTIMEE[sub][sup][arg] = DPTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPTIMEH[sub][sup][arg] = DPTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPTIMEC[sub][sup][arg] = DPTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPTime[sub][sup][arg] = NPTime<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPTimeE[sub][sup][arg] = NPTime-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPTimeH[sub][sup][arg] = NPTime-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPTimeC[sub][sup][arg] = NPTime-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPTIME[sub][sup][arg] = UPTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPTIMEE[sub][sup][arg] = UPTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPTIMEH[sub][sup][arg] = UPTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPTIMEC[sub][sup][arg] = UPTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APTime[sub][sup][arg] = APTime<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APTimeE[sub][sup][arg] = APTime-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APTimeH[sub][sup][arg] = APTime-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APTimeC[sub][sup][arg] = APTime-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)

1084 \defcomclsgrp{PTime}

\PSpace, ...

- \PSpace[sub][sup][arg] = PSPACE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \PSpaceE[sub][sup][arg] = PSPACE-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \PSpaceH[sub][sup][arg] = PSPACE-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \PSpaceC[sub][sup][arg] = PSPACE-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPSpace[sub][sup][arg] = DPSpace<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPSpaceE[sub][sup][arg] = DPSpace-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPSpaceH[sub][sup][arg] = DPSpace-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DPSpaceC[sub][sup][arg] = DPSpace-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPSpace[sub][sup][arg] = NPSpace<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPSpaceE[sub][sup][arg] = NPSpace-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPSpaceH[sub][sup][arg] = NPSpace-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NPSpaceC[sub][sup][arg] = NPSpace-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPSpace[sub][sup][arg] = UPSPACE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPSpaceE[sub][sup][arg] = UPSPACE-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPSpaceH[sub][sup][arg] = UPSPACE-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UPSpaceC[sub][sup][arg] = UPSPACE-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APSpace[sub][sup][arg] = APSpace<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APSpaceE[sub][sup][arg] = APSpace-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APSpaceH[sub][sup][arg] = APSpace-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \APSpaceC[sub][sup][arg] = APSpace-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)

1085 \defcomclsgrp{PSpace}

\QPTIME, ...

- \QPTIME[sub][sup][arg] = QPTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \QPTIMEE[sub][sup][arg] = QPTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \QPTIMEH[sub][sup][arg] = QPTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \QPTIMEC[sub][sup][arg] = QPTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DQPTIME[sub][sup][arg] = DQPTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DQPTIMEE[sub][sup][arg] = DQPTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DQPTIMEH[sub][sup][arg] = DQPTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \DQPTIMEC[sub][sup][arg] = DQPTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NQPTIME[sub][sup][arg] = NQPTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NQPTIMEE[sub][sup][arg] = NQPTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NQPTIMEH[sub][sup][arg] = NQPTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \NQPTIMEC[sub][sup][arg] = NQPTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UQPTIME[sub][sup][arg] = UQPTIME<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UQPTIMEE[sub][sup][arg] = UQPTIME-EASY<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UQPTIMEH[sub][sup][arg] = UQPTIME-HARD<sub>SUB</sub><sup>SUP</sup>(ARG)
- \UQPTIMEC[sub][sup][arg] = UQPTIME-COMPLETE<sub>SUB</sub><sup>SUP</sup>(ARG)





- $\backslash\text{ExpSpace}[\text{sub}][\text{sup}][\text{arg}] = \text{NEXPSPACE}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{ExpSpaceE}[\text{sub}][\text{sup}][\text{arg}] = \text{NEXPSPACE-EASY}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{ExpSpaceH}[\text{sub}][\text{sup}][\text{arg}] = \text{NEXPSPACE-HARD}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{ExpSpaceC}[\text{sub}][\text{sup}][\text{arg}] = \text{NEXPSPACE-COMplete}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{UExpSpace}[\text{sub}][\text{sup}][\text{arg}] = \text{UEXPSPACE}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{UExpSpaceE}[\text{sub}][\text{sup}][\text{arg}] = \text{UEXPSPACE-EASY}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{UExpSpaceH}[\text{sub}][\text{sup}][\text{arg}] = \text{UEXPSPACE-HARD}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{UExpSpaceC}[\text{sub}][\text{sup}][\text{arg}] = \text{UEXPSPACE-COMplete}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{AExpSpace}[\text{sub}][\text{sup}][\text{arg}] = \text{AEXPSPACE}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{AExpSpaceE}[\text{sub}][\text{sup}][\text{arg}] = \text{AEXPSPACE-EASY}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{AExpSpaceH}[\text{sub}][\text{sup}][\text{arg}] = \text{AEXPSPACE-HARD}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$
- $\backslash\text{AExpSpaceC}[\text{sub}][\text{sup}][\text{arg}] = \text{AEXPSPACE-COMplete}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$

```

1089 \defcomclsggrp{ExpSpace}

1090 %*****%

\PH      • \PH[sub][sup][par] = PH_{SUB}^{SUP}[PAR]
1091 \defcomhrc{PH}

\WH      • \WH[sub][sup][par] = W_{SUB}^{SUP}[PAR]
1092 \defcomhrc{WH}[W]

\AH      • \AH[sub][sup][par] = A_{SUB}^{SUP}[PAR]
1093 \defcomhrc{AH}[A]

\DLH, \DBH      • \DLH[sub][sup][par] = \Delta_{SUB}^{SUP}[PAR]
                  • \DBH[sub][sup][par] = \Delta_{SUB}^{SUP}[PAR]
1094 \defcomhrc{DLH}[\{\mth{\Delta}\}]
1095 \defcomhrc{DBH}[\{\mth[mathbf]{\Delta}\}]

\ELH, \EBH      • \ELH[sub][sup][par] = \Sigma_{SUB}^{SUP}[PAR]
                  • \EBH[sub][sup][par] = \Sigma_{SUB}^{SUP}[PAR]
1096 \defcomhrc{ELH}[\{\mth{\Sigma}\}]
1097 \defcomhrc{EBH}[\{\mth[mathbf]{\Sigma}\}]

\ULH, \UBH      • \ULH[sub][sup][par] = \Pi_{SUB}^{SUP}[PAR]
                  • \UBH[sub][sup][par] = \Pi_{SUB}^{SUP}[PAR]
1098 \defcomhrc{ULH}[\{\mth{\Pi}\}]
1099 \defcomhrc{UBH}[\{\mth[mathbf]{\Pi}\}]

1100 \fi
1101 %*****%
1102 %*****%
1103 %** Macros for Games *****%
1104 %*****%
1105 \ifgam@
1106 %** Logic Games *****%

\SATG, ... ...
1107 % Satisfiability Games
1108 \cmdtxtoparname{SATG}[Sat]
1109
1110 % Validity Games
1111 \cmdtxtoparname{VALG}[Val]
1112
1113 % Evaluation Games
1114 \cmdtxtoparname{EVLG}[Evl]
1115
1116 % Synthesis Games
1117 \cmdtxtoparname{SYNG}[Syn]

```

```

1118
1119 %% Model-Checking Games
1120 \cmdtxttoparname{MCG}[MC]
1121
1122 %% Ehrenfeucht-Fraisse Games
1123 \cmdtxttoparname{EFG}[EF]

1124 %** Syntax *****%

```

\PlrSym, \OppSym ...

```

1125 \newcommand{\plrsym}{E}
1126 \cmdmthsym{Plr}[\plrsym]
1127 \newcommand{\oppsym}{A}
1128 \cmdmthsym{Opp}[\oppsym]

```

\ArenaName, ...

```

1129 \newcommand{\arenaname}{A}
1130 \usrmthlatupp{Arena}{Name}{name}[\arenaname]

```

\PosSet, ...

```

1131 \newcommand{\possym}{v}
1132 \newcommand{\posset}{Ps}
1133 \cmdmthsetext{Pos}[\posset][\possym]
1134 \cmdmthsymelm{ipos}[\possym_{I}]
1135 \cmdmthsymelm{fpos}[\possym_{F}]
1136 \cmdmthset{PPos}[\posset_{\PlrSym}]
1137 \cmdmthsymelm{ppos}[\possym_{\PlrSym}]
1138 \cmdmthset{OPos}[\posset_{\OppSym}]
1139 \cmdmthsymelm{opos}[\possym_{\OppSym}]

```

\PlrFun ...

```

1140 \newcommand{\plrfun}{pl}
1141 \cmdmthfun{plr}[\plrfun]

```

\MovRel ...

```

1142 \newcommand{\movrel}{Mv}
1143 \cmdmthrel{Mov}[\movrel]

```

\GameName, ...

```

1144 \newcommand{\gamename}{Game}
1145 \usrmthlatupp{Game}{Name}{name}[\gamename]

```

\WinSet ...

```

1146 \newcommand{\winset}{Wn}
1147 \cmdmthset{Win}[\winset]

```

\ObsSet, \obsFun ...

```

1148 \newcommand{\obsset}{Ob}
1149 \cmdmthset{Obs}[\obsset]
1150 \cmdmthfun{obs}

```

```

1151 %** Semantics *****%

```

\PthSet, \pthFun ...

```

1152 \newcommand{\pthsym}{pi}
1153 \newcommand{\pthset}{Pth}
1154 \cmdmthsetext{Pth}[\pthset][\pthsym]
1155 \cmdmthfun{pth}

```

\HstSet, ...

```

1156 \newcommand{\hstsym}{rho}
1157 \newcommand{\hstset}{Hst}
1158 \cmdmthsetext{Hst}[\hstset][\hstsym]

```

```

1159 \cmdmthset{PHst}[\hstset_{\PlrSym}]
1160 \cmdmthsymelm{phst}[\hstsym_{\PlrSym}]
1161 \cmdmthset{OHst}[\hstset_{\OppSym}]
1162 \cmdmthsymelm{ohst}[\hstsym_{\OppSym}]
1163 \cmdmthfun{hst}

\PlaySet, \playFun ...
1164 \newcommand{\playsym}{\pi}
1165 \newcommand{\playset}{\Play}
1166 \cmdmthsetext{Play}[\playset][\playsym]
1167 \cmdmthfun{play}

\StrSet, ... ...
1168 \newcommand{\strsym}{\sigma}
1169 \newcommand{\strset}{\Str}
1170 \cmdmthsetext{Str}[\strset][\strsym]
1171 \cmdmthset{PStr}[\strset_{\PlrSym}]
1172 \cmdmthsymelm{pstr}[\strsym_{\PlrSym}]
1173 \cmdmthset{OStr}[\strset_{\OppSym}]
1174 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]

\PrfSet, \prfFun ...
1175 \newcommand{\prfsym}{\xi}
1176 \newcommand{\prfset}{\Prf}
1177 \cmdmthsetext{Prf}[\prfset][\prfsym]

\preFun, \sucFun ...
1178 \newcommand{\prefun}{\pre}
1179 \cmdmthoargfun{pre}[\prefun]
1180 \newcommand{\sucfun}{\suc}
1181 \cmdmthoargfun{suc}[\sucfun]

\entFun, \escFun ...
1182 \newcommand{\entfun}{\ent}
1183 \cmdmthoargfun{ent}[\entfun]
1184 \newcommand{\escfun}{\esc}
1185 \cmdmthoargfun{esc}[\escfun]

\intFun, \outFun ...
1186 \newcommand{\intfun}{\int}
1187 \cmdmthoargfun{int}[\intfun]
1188 \newcommand{\outfun}{\out}
1189 \cmdmthoargfun{out}[\outfun]

\atrFun, \rchFun ...
1190 \newcommand{\atrfun}{\atr}
1191 \cmdmthoargfun{atr}[\atrfun]
1192 \newcommand{\rchfun}{\rch}
1193 \cmdmthoargfun{rch}[\rchfun]

\liftFun ...
1194 \newcommand{\liftfun}{\lift}
1195 \cmdmthoargfun{lift}[\liftfun]

\solFun ...
1196 \newcommand{\solfun}{\sol}
1197 \cmdmthoargfun{sol}[\solfun]

1198 %** Qualitative Games on Graph *****%

```

```

\BG, ... ...
1199 %% Buchi Games
1200 \cmdtxttoparname{BG}
1201
1202 %% Co-Buchi Games
1203 \cmdtxttoparname{CG}
1204
1205 %% Parity Games
1206 \cmdtxttoparname{PG}
1207
1208 %% Rabin Games
1209 \cmdtxttoparname{RG}
1210
1211 %% Streett Games
1212 \cmdtxttoparname{SG}
1213
1214 %% Muller Games
1215 \cmdtxttoparname{MG}

1216 %** Syntax *****%%

\EvnSym, \OddSym ...
1217 \newcommand{\evnsym}{0}
1218 \cmdmthsym{Evnsym}[\evnsym]
1219 \newcommand{\oddsym}{1}
1220 \cmdmthsym{Oddsym}[\oddsym]

\PrtSet, \prtFun ...
1221 \newcommand{\prtsym}{p}
1222 \newcommand{\prtset}{Pr}
1223 \cmdmthsetext{Prt}[\prtset][\prtsym]
1224 \cmdmthfun{prt}[pr]

1225 %** Semantics *****%%
...
1226 %** Quantitative Games on Graph *****%%

\EG, ... ...
1227 %% Energy Games
1228 \cmdtxttoparname{EG}
1229
1230 %% Mean-Payoff Games
1231 \cmdtxttoparname{MPG}
1232
1233 %% Discounted-Payoff Games
1234 \cmdtxttoparname{DPG}

1235 %** Syntax *****%%

\MaxSym, \MinSym ...
1236 \newcommand{\maxsym}{\oplus}
1237 \cmdmthsym{Max}[\maxsym]
1238 \newcommand{\minsym}{\boxminus}
1239 \cmdmthsym{Min}[\minsym]

\WghSet, \wghFun ...
1240 \newcommand{\wghsym}{w}
1241 \newcommand{\wghset}{Wg}
1242 \cmdmthsetext{Wgh}[\wghset][\wghsym]
1243 \cmdmthfun{wgh}[wg]

1244 %** Semantics *****%%

```

```

...
1245 \fi
1246 %*****
1247 %*****
1248 %** Macros for Logics *****
1249 %*****
1250 \iflog@
1251 %** Propositional Logics *****

\BF, \QBF, ... ...
1252 % Boolean Formulae
1253 \cmdtxttoparname{BF}
1254
1255 % Quantified Boolean Formulae
1256 \DeclareRobustCommand{\QBF}
1257   {\textname{Q}\BF}
1258 \DeclareRobustCommand{\EBF}
1259   {\ensuremath{\exists}\BF}
1260 \DeclareRobustCommand{\UBF}
1261   {\ensuremath{\forall}\BF}

1262 %** Syntax *****

\LogSig, ... ...
1263 \newcommand{\logsig}{L}
1264 \usrmthlatupp{Log}{Sig}{sig}[\logsig]

\Tt, \Ff ...
1265 \newcommand{\ttsym}{\top}
1266 \usrmth{Tt}{\}{sym}[\ttsym]
1267 \newcommand{\ffsym}{\bot}
1268 \usrmth{Ff}{\}{sym}[\ffsym]

\LNeg, \LNot ...
1269 \newcommand{\lnegsym}{\neg}
1270 \usrmth{LNeg}{\}{luop}[\lnegsym]
1271 \newcommand{\lnotsym}{\sim}
1272 \usrmth{LNot}{\}{luop}[\lnotsym]

\LCon, \LDis ...
1273 \newcommand{\lconsym}{\land}
1274 \usrmth{LCon}{\}{lbop}[\lconsym]
1275 \newcommand{\ldissym}{\lor}
1276 \usrmth{LDis}{\}{lbop}[\ldissym]

\LImp, \LCoi ...
1277 \newcommand{\limpsym}{\rightarrow}
1278 \usrmth{LImp}{\}{lbop}[\limpsym]
1279 \newcommand{\lcoisym}{\leftrightarrow}
1280 \usrmth{LCoi}{\}{lbop}[\lcoisym]

\LExs, \LAll ...
1281 \newcommand{\lexssym}{\exists}
1282 \usrmth{LExs}{\}{luop}[\lexssym]
1283 \newcommand{\lallsym}{\forall}
1284 \usrmth{LAll}{\}{luop}[\lallsym]

\APSet, ... ...
1285 \newcommand{\apsym}{p}
1286 \newcommand{\apset}{AP}
1287 \cmdmthsetext{AP}[\apset] [\apsym]
1288 \cmdmthfun{ap}\usrmth{ap}{\}{argfun}

```

```

\sub ...
1289 \usrmth{sub}{-}{argfun}

\Cnt, \Qnt, \Sym ...
1290 \usrmth{Cnt}{-}{sym}[C]
1291 \usrmth{Qnt}{-}{sym}[Q]
1292 \usrmth{Sym}{-}{sym}[\odot]

\QAE, \QEA ...
1293 \usrmth{QAE}{-}{sym}[\forall\exists]
1294 \usrmth{QEA}{-}{sym}[\exists\forall]

\QntSet, ... ...
1295 \newcommand{\qntsym}{\wp}
1296 \newcommand{\qntset}{Qn}
1297 \cmdmthsetext{Qnt}[\qntset][\qntsym]

\free, \bound ...
1298 \usrmth{free}{-}{argfun}
1299 \usrmth{bound}{-}{argfun}

\dep, \alt ...
1300 \usrmth{dep}{-}{argfun}
1301 \usrmth{alt}{-}{argfun}

\cnf, \dnf, ... ...
1302 \cmdtxtabr{cnf}
1303 \cmdtxtabr{dnf}
1304 \cmdtxtabr{pnf}
1305 \cmdtxtabr{nnf}

1306 %** Semantics *****%

\LogStr, ... ...
1307 \newcommand{\logstr}{L}
1308 \usrmthlatupp{Log}{Str}{str}[\logstr]

\ValSet, ... ...
1309 \newcommand{\valsym}{\xi}
1310 \newcommand{\valset}{Val}
1311 \cmdmthsetext{Val}[\valset][\valsym]

\AsgSet, ... ...
1312 \newcommand{\asgsym}{\chi}
1313 \newcommand{\asgset}{Asg}
1314 \cmdmthsetext{Asg}[\asgset][\asgsym]

1315 %** First-Order Logics I *****%

\FOL, ... ...
1316 % First-Order Logic
1317 \cmdtxtoparname{FOL}[Fol]
1318 \cmdtxtoparname{FO}[FO]
1319
1320 % Monadic First-Order Logic
1321 \DeclareRobustCommand{\MFOL}
1322   {\{\txname{M}\}\FOL}
1323 \DeclareRobustCommand{\MFO}
1324   {\{\txname{M}\}\FO}

1325 %** Syntax *****%

```

```

\VarSig, ... ...
1326 \newcommand{\varsig}{V}
1327 \usrmthlatupp{Var}{Sig}{sig}[\varsig]
1328 \newcommand{\varsym}{x}
1329 \newcommand{\varset}{Vr}
1330 \cmdmthsetext{Var}[\varset][\varsym]
1331 \usrmth{var}{}{argfun}[vr]
1332 \cmdmthfun{dim}[dm]\usrmth{dim}{}{argfun}[dm]

\ConSig, ... ...
1333 \newcommand{\consig}{C}
1334 \usrmthlatupp{Con}{Sig}{sig}[\consig]
1335 \newcommand{\consym}{c}
1336 \newcommand{\conset}{Cn}
1337 \cmdmthsetext{Con}[\conset][\consym]
1338 \usrmth{con}{}{argfun}[cn]

\FunSig, ... ...
1339 \newcommand{\funsig}{F}
1340 \usrmthlatupp{Fun}{Sig}{sig}[\funsig]
1341 \newcommand{\funsym}{f}
1342 \newcommand{\funset}{Fn}
1343 \cmdmthsetext{Fun}[\funset][\funsym]
1344 \usrmth{fun}{}{argfun}[fn]
1345 \cmdmthfun{art}[ar]\usrmth{art}{}{argfun}[ar]

\TerSig, ... ...
1346 \newcommand{\tersig}{T}
1347 \usrmthlatupp{Ter}{Sig}{sig}[\tersig]
1348 \newcommand{\tersym}{t}
1349 \newcommand{\terset}{Tr}
1350 \cmdmthsetext{Ter}[\terset][\tersym]
1351 \usrmth{ter}{}{argfun}

\RelSig, ... ...
1352 \newcommand{\relsig}{R}
1353 \usrmthlatupp{Rel}{Sig}{sig}[\relsig]
1354 \newcommand{\relsym}{r}
1355 \newcommand{\relset}{Rl}
1356 \cmdmthsetext{Rel}[\relset][\relsym]
1357 \usrmth{rel}{}{argfun}[rl]

\skm ...
1358 \usrmth{skm}{}{argfun}

1359 %** Semantics *****%

\ConStr, ... ...
1360 \newcommand{\constr}{C}
1361 \usrmthlatupp{Con}{Str}{str}[\constr]

\FunStr, ... ...
1362 \newcommand{\funstr}{F}
1363 \usrmthlatupp{Fun}{Str}{str}[\funstr]

\TerStr, ... ...
1364 \newcommand{\terstr}{T}
1365 \usrmthlatupp{Ter}{Str}{str}[\terstr]

\RelStr, ... ...
1366 \newcommand{\relstr}{R}
1367 \usrmthlatupp{Rel}{Str}{str}[\relstr]

```



```

1368 %** First-Order Logics II *****%%
\DF, \IF, ... ...
1369 % Dependence-Friendly Logic
1370 \cmdtxtoparname{DF}
1371
1372 % Independence-Friendly Logic
1373 \cmdtxtoparname{IF}
1374
1375 % Dependence/Independence-Friendly Logic
1376 \cmdtxtoparname{DIF}
1377
1378 % Dependence Logic
1379 \cmdtxtoparname{DL}
1380
1381 % Team Logic
1382 \cmdtxtoparname{TL}
1383
1384 % Alternating Dependence-Friendly Logic
1385 \cmdtxtoparname{ADF}
1386
1387 % Alternating Independence-Friendly Logic
1388 \cmdtxtoparname{AIF}
1389
1390 % Alternating Dependence/Independence-Friendly Logic
1391 \cmdtxtoparname{ADIF}
...
1392 %** Syntax *****%%

\LEExs, \LAA11 ...
1393 \newcommand{\leexssym}{\Sigma}
1394 \usrmth{LEExs}{\luop}{\leexssym}
1395 \newcommand{\laallsym}{\Pi}
1396 \usrmth{LAA11}{\luop}{\laallsym}

1397 %** Semantics *****%%
...
1398 %** Second-Order Logics I *****%%

\SOL, ... ...
1399 % Second-Order Logic
1400 \cmdtxtoparname{SOL}[Sol]
1401 \cmdtxtoparname{SO}
1402
1403 % Weak Second-Order Logic
1404 \DeclareRobustCommand{\WSOL}
1405   {\{\txtname{W}\}\SOL}
1406 \DeclareRobustCommand{\WSO}
1407   {\{\txtname{W}\}\SO}
1408
1409 % coWeak Second-Order Logic
1410 \DeclareRobustCommand{\coWSOL}
1411   {\{\txtname{coW}\}\SOL}
1412 \DeclareRobustCommand{\coWSO}
1413   {\{\txtname{coW}\}\SO}
1414
1415 % Monadic Second-Order Logic
1416 \DeclareRobustCommand{\MSOL}
1417   {\{\txtname{M}\}\SOL}
1418 \DeclareRobustCommand{\MSO}
1419   {\{\txtname{M}\}\SO}

```

```

1420
1421 % Weak Monadic Second-Order Logic
1422 \DeclareRobustCommand{\WMSOL}
1423   {\txtname{W}}\MSOL}
1424 \DeclareRobustCommand{\WMSO}
1425   {\txtname{W}}\MSO}
1426
1427 % coWeak Monadic Second-Order Logic
1428 \DeclareRobustCommand{\coWMSOL}
1429   {\txtname{coW}}\MSOL}
1430 \DeclareRobustCommand{\coWMSO}
1431   {\txtname{coW}}\MSO}

1432 %** Syntax *****%

\FVarSet, ... ...
1433 \newcommand{\fvarsym}{x}
1434 \newcommand{\fvarset}{FVr}
1435 \cmdmthsettext{FVar}[\fvarset][\fvarsym]

\SVarSet, ... ...
1436 \newcommand{\svarsym}{X}
1437 \newcommand{\svarset}{SVr}
1438 \cmdmthsettext{SVar}[\svarset][\svarsym]

1439 %** Semantics *****%
...
1440 %** Second-Order Logics II *****%

\TL, \PL, ... ...
1441 % Tree Logic
1442 \cmdtxttoparname{TL}
1443
1444 % Weak Tree Logic
1445 \DeclareRobustCommand{\WTL}
1446   {\txtname{W}}\TL}
1447
1448 % coWeak Tree Logic
1449 \DeclareRobustCommand{\coWTL}
1450   {\txtname{coW}}\TL}
1451
1452 % Monadic Tree Logic
1453 \DeclareRobustCommand{\MTL}
1454   {\txtname{M}}\TL}
1455
1456 % Weak Monadic Tree Logic
1457 \DeclareRobustCommand{\WMTL}
1458   {\txtname{W}}\MTL}
1459
1460 % coWeak Monadic Tree Logic
1461 \DeclareRobustCommand{\coWMTL}
1462   {\txtname{coW}}\MTL}
1463
1464 % Path Logic
1465 \cmdtxttoparname{PL}
1466
1467 % Weak Path Logic
1468 \DeclareRobustCommand{\WPL}
1469   {\txtname{W}}\PL}
1470
1471 % coWeak Path Logic
1472 \DeclareRobustCommand{\coWPL}
1473   {\txtname{coW}}\PL}

```

```

1474
1475 % Monadic Path Logic
1476 \DeclareRobustCommand{\MPL}
1477   {\txtname{M}}\PL}
1478
1479 % Weak Monadic Path Logic
1480 \DeclareRobustCommand{\WMPL}
1481   {\txtname{W}}\MPL}
1482
1483 % coWeak Monadic Path Logic
1484 \DeclareRobustCommand{\coWMPL}
1485   {\txtname{coW}}\MPL}
1486 %** Syntax *****%
...
1487 %** Semantics *****%
...
1488 %** Modal Logics I *****%

```

\ML, \GML, ...

```

1489 % Modal Logic
1490 \cmdtxttoparname{ML}
1491
1492 % Graded Modal Logic
1493 \DeclareRobustCommand{\GML}
1494   {\txtname{G}}\ML}
1495
1496 % Quantified Modal Logic
1497 \DeclareRobustCommand{\QML}
1498   {\txtname{Q}}\ML}
1499 \DeclareRobustCommand{\EML}
1500   {\ensuremath{\exists}\ML}
1501 \DeclareRobustCommand{\UML}
1502   {\ensuremath{\forall}\ML}
1503 %** Syntax *****%

```

\Opr ...

```

1504 \usrmth{Opr}{\sym}[Op]

```

\DMod, \BMod ...

```

1505 \usrmth{DMod}{\sym}[\Diamond]
1506 \usrmth{BMod}{\sym}[\Box]

```

\Exs, \All ...

```

1507 \DeclareRobustCommand{\Exs}
1508   {\@ifstar{\@sexs}{\@exs}}
1509 \DeclareRobustCommand{\@sexs}[1]
1510   {\mth{\DMod}[#1]}
1511 \DeclareRobustCommand{\@exs}[1]
1512   {\mth{\defval{\argmid{\langle}{#1}{\rangle}}{\DMod}}}
1513 \DeclareRobustCommand{\All}
1514   {\@ifstar{\@sall}{\@all}}
1515 \DeclareRobustCommand{\@sall}[1]
1516   {\mth{\BMod}[#1]}
1517 \DeclareRobustCommand{\@all}[1]
1518   {\mth{\defval{\argmid{\left}[#1]{\right}}{\BMod}}}
1519 %** Semantics *****%

```

\KrpStr, ...

```

1520 \newcommand{\krpstr}{K}
1521 \usrmthlatupp{Krp}{Str}{str}[\krpstr]

```

```

\WrlSet, ... ...
1522 \newcommand{\wrlsym}{w}
1523 \newcommand{\wrlset}{W}
1524 \cmdmthsetext{Wrl}[\wrlset][\wrlsym]
1525 \cmdmthsymelm{iwrl}[\wrlsym_{I}]

\AccRel, \TrnRel ...
1526 \newcommand{\accsym}{R}
1527 \cmdmthrel{Acc}[\accsym]
1528 \cmdmthrel{Trn}[\accsym]

\labFun ...
1529 \newcommand{\labsym}{\lambda}
1530 \cmdmthfun{lab}[\labsym]

\PthSet, \pthFun ...
1531 \providecommand{\pthsym}{\pi}
1532 \providecommand{\pthset}{Pth}
1533 \cmdmthsetext{Pth}[\pthset][\pthsym]
1534 \cmdmthfun{pth}

1535 %** Modal Logics II *****%

\MC, \GMC, ... ...
1536 % Mu Calculus
1537 \cmdtxtoparname{MC}[\ensuremath{\mu}-Calculus]
1538
1539 % Graded Mu Calculus
1540 \DeclareRobustCommand{\GMC}
1541   {\{\txtname{G}\}\MC}
1542
1543 % Quantified Mu Calculus
1544 \DeclareRobustCommand{\QMC}
1545   {\{\txtname{Q}\}\MC}
1546 \DeclareRobustCommand{\EMC}
1547   {\ensuremath{\exists}\MC}
1548 \DeclareRobustCommand{\UMC}
1549   {\ensuremath{\forall}\MC}
1550
1551 % Alternation-Free Mu Calculus
1552 \DeclareRobustCommand{\AFMC}
1553   {\{\txtname{AF}\}\MC}
1554
1555 % Alternation-Free Graded Mu Calculus
1556 \DeclareRobustCommand{\AFGMC}
1557   {\{\txtname{AF}\}\GMC}
1558
1559 % Quantified Alternation-Free Mu Calculus
1560 \DeclareRobustCommand{\QAFMC}
1561   {\{\txtname{Q}\}\AFMC}
1562 \DeclareRobustCommand{\EAFMC}
1563   {\ensuremath{\exists}\AFMC}
1564 \DeclareRobustCommand{\UAFMC}
1565   {\ensuremath{\forall}\AFMC}
1566

1567 %** Syntax *****%

...

1568 %** Semantics *****%

...

1569 %** Temporal Logics I *****%

```

```

\PTL, \LTL, ... ...
1570 % Propositional Temporal Logic
1571 \cmdtxttoparname{PTL}
1572
1573 % Quantified Propositional Temporal Logic
1574 \DeclareRobustCommand{\QPTL}
1575   {\{\txtrname{Q}\}\PTL}
1576 \DeclareRobustCommand{\EPTL}
1577   {\ensuremath{\exists}\PTL}
1578 \DeclareRobustCommand{\UPTL}
1579   {\ensuremath{\forall}\PTL}
1580
1581 % Linear Temporal Logic
1582 \cmdtxttoparname{LTL}
1583
1584 % Quantified Linear Temporal Logic
1585 \DeclareRobustCommand{\QLTL}
1586   {\{\txtrname{Q}\}\LTL}
1587 \DeclareRobustCommand{\ELTL}
1588   {\ensuremath{\exists}\LTL}
1589 \DeclareRobustCommand{\ULTL}
1590   {\ensuremath{\forall}\LTL}
1591 %** Syntax *****%%

\X, ... ...
1592 \usrmth{X}{-}{sym}[X\,,]
1593 \usrmth{F}{-}{sym}[F\,,]
1594 \usrmth{G}{-}{sym}[G\,,]
1595 \usrmth{U}{-}{sym}[\,,U\,,]
1596 \usrmth{R}{-}{sym}[\,,R\,,]

\Y, ... ...
1597 \usrmth{Y}{-}{sym}[G\,,]
1598 \usrmth{P}{-}{sym}[P\,,]\let\SavePildcrow\P
1599 \usrmth{H}{-}{sym}[H\,,]\let\SaveDoubleAcute\H
1600 \usrmth{S}{-}{sym}[\,,S\,,]\let\SaveSectionSymbol\S
1601 \usrmth{B}{-}{sym}[\,,B\,,]

1602 %** Semantics *****%%

...

1603 %** Temporal Logics II *****%%

\PDL, \CTL, ... ...
1604
1605 % Propositional Dynamic Logic
1606 \cmdtxttoparname{PDL}
1607
1608 % Computation Tree Logic
1609 \cmdtxttoparname{CTL}
1610
1611 % Weak Computation Tree Logic
1612 \DeclareRobustCommand{\WCTL}
1613   {\{\txtrname{W}\}\CTL}
1614
1615 % Quantified Computation Tree Logic
1616 \DeclareRobustCommand{\QCTL}
1617   {\{\txtrname{Q}\}\CTL}
1618 \DeclareRobustCommand{\ECTL}
1619   {\ensuremath{\exists}\CTL}
1620 \DeclareRobustCommand{\UCTL}
1621   {\ensuremath{\forall}\CTL}

```

```

1622
1623 % Improved Computation Tree Logic
1624 \cmdtxttoparname{CTLP}[CTL$^{+}$]
1625
1626 % Weak Improved Computation Tree Logic
1627 \DeclareRobustCommand{\WCTLP}
1628   {\{\txtrname{W}\}\CTLP}
1629
1630 % Quantified Improved Computation Tree Logic
1631 \DeclareRobustCommand{\QCTLP}
1632   {\{\txtrname{Q}\}\CTLP}
1633 \DeclareRobustCommand{\ECTLP}
1634   {\ensuremath{\exists}\CTLP}
1635 \DeclareRobustCommand{\UCTLP}
1636   {\ensuremath{\forall}\CTLP}
1637
1638 % Full Computation Tree Logic
1639 \cmdtxttoparname{CTLS}[CTL*]
1640
1641 % Weak Full Computation Tree Logic
1642 \DeclareRobustCommand{\WCTLS}
1643   {\{\txtrname{W}\}\CTLS}
1644
1645 % Quantified Full Computation Tree Logic
1646 \DeclareRobustCommand{\QCTLS}
1647   {\{\txtrname{Q}\}\CTLS}
1648 \DeclareRobustCommand{\ECTLS}
1649   {\ensuremath{\exists}\CTLS}
1650 \DeclareRobustCommand{\UCTLS}
1651   {\ensuremath{\forall}\CTLS}
1652 %** Syntax *****%

\E, \A ...
1653 \usrmth{E}{-}{sym}
1654 \usrmth{A}{-}{sym}

1655 %** Semantics *****%
...
1656 %** Strategic Logics I *****%

\ATL, ... ...
1657 % Alternating Temporal Logic
1658 \cmdtxttoparname{ATL}
1659
1660 % Weak Alternating Tree Logic
1661 \DeclareRobustCommand{\WATL}
1662   {\{\txtrname{W}\}\ATL}
1663
1664 % Quantified Alternating Temporal Logic
1665 \DeclareRobustCommand{\QATL}
1666   {\{\txtrname{Q}\}\ATL}
1667 \DeclareRobustCommand{\EATL}
1668   {\ensuremath{\exists}\ATL}
1669 \DeclareRobustCommand{\UATL}
1670   {\ensuremath{\forall}\ATL}
1671
1672 % Improved Alternating Temporal Logic
1673 \cmdtxttoparname{ATLP}[ATL$^{+}$]
1674
1675 % Weak Improved Alternating Tree Logic
1676 \DeclareRobustCommand{\WATLP}
1677   {\{\txtrname{W}\}\ATLP}

```

```

1678
1679 % Quantified Improved Alternating Temporal Logic
1680 \DeclareRobustCommand{\QATLP}
1681   {\textrm{Q}}\ATLP}
1682 \DeclareRobustCommand{\EATLP}
1683   {\ensuremath{\exists}\ATLP}
1684 \DeclareRobustCommand{\UATLP}
1685   {\ensuremath{\forall}\ATLP}
1686
1687 % Full Alternating Temporal Logic
1688 \cmdtxtopname{ATLS}[ATL*]
1689
1690 % Weak Full Alternating Tree Logic
1691 \DeclareRobustCommand{\WATLS}
1692   {\textrm{W}}\ATLS}
1693
1694 % Quantified Full Alternating Temporal Logic
1695 \DeclareRobustCommand{\QATLS}
1696   {\textrm{Q}}\ATLS}
1697 \DeclareRobustCommand{\EATLS}
1698   {\ensuremath{\exists}\ATLS}
1699 \DeclareRobustCommand{\UATLS}
1700   {\ensuremath{\forall}\ATLS}
1701 %** Syntax *****%%

\EExs, \AA11 ...
1702 \DeclareRobustCommand{\EExs}[1]
1703   {\mth{\argmid{\langle!\rangle}{\defval{#1}{\emptyset}}{\rangle!\rangle}}
1704 \DeclareRobustCommand{\AA11}[1]
1705   {\mth{\argmid{\left[\left[{\defval{#1}{\emptyset}}{\right]\right]}}}
1706 %** Semantics *****%%

\CGS ...
1707 \cmdtxtname{CGS}

\CGSStr, ... ...
1708 \newcommand{\cgsstr}{G}
1709 \usrmthlatupp{CGS}{Str}{str}[\cgsstr]

\AgnSet, ... ...
1710 \newcommand{\agnsym}{a}
1711 \newcommand{\agnset}{Ag}
1712 \cmdmthsetext{Agn}[\agnset][\agnsym]

\PosSet, ... ...
1713 \providecommand{\possym}{v}
1714 \providecommand{\posset}{Ps}
1715 \cmdmthsetext{Pos}[\posset][\possym]
1716 \cmdmthsymelm{ipos}[\possym_{I}]
1717 \cmdmthsymelm{fpos}[\possym_{F}]
1718 \cmdmthset{PPos}[\posset_{PlrSym}]
1719 \cmdmthsymelm{ppos}[\possym_{PlrSym}]
1720 \cmdmthset{OPos}[\posset_{OppSym}]
1721 \cmdmthsymelm{opos}[\possym_{OppSym}]

\SttSet, ... ...
1722 \newcommand{\sttsym}{s}
1723 \newcommand{\sttset}{St}
1724 \cmdmthsetext{Stt}[\sttset][\sttsym]
1725 \cmdmthset{IStt}[\sttset_{I}]
1726 \cmdmthsymelm{istt}[\sttsym_{I}]
1727 \cmdmthset{FStt}[\sttset_{F}]
1728 \cmdmthsymelm{fstt}[\sttsym_{F}]

```

```

\ActSet, ... ...
1729 \newcommand{\actsym}{c}
1730 \newcommand{\actset}{Ac}
1731 \cmdmthsettext{Act}[\actset][\actsym]

\DecSet, ... ...
1732 \newcommand{\decsym}{d}
1733 \newcommand{\decset}{Dc}
1734 \cmdmthsettext{Dec}[\decset][\decsym]

\movFun ...
1735 \newcommand{\movsym}{\tau}
1736 \cmdmthfun{mov}[\movsym]

\HstSet, ... ...
1737 \providecommand{\hstsym}{\rho}
1738 \providecommand{\hstset}{Hst}
1739 \cmdmthsettext{Hst}[\hstset][\hstsym]
1740 \cmdmthset{PHst}[\hstset_{\PlrSym}]
1741 \cmdmthsymelm{phst}[\hstsym_{\PlrSym}]
1742 \cmdmthset{OHst}[\hstset_{\OppSym}]
1743 \cmdmthsymelm{ohst}[\hstsym_{\OppSym}]
1744 \cmdmthfun{hst}

\PlaySet, \playFun ...
1745 \providecommand{\playsym}{\pi}
1746 \providecommand{\playset}{Play}
1747 \cmdmthsettext{Play}[\playset][\playsym]
1748 \cmdmthfun{play}

\StrSet, ... ...
1749 \providecommand{\strsym}{\sigma}
1750 \providecommand{\strset}{Str}
1751 \cmdmthsettext{Str}[\strset][\strsym]
1752 \cmdmthset{PStr}[\strset_{\PlrSym}]
1753 \cmdmthsymelm{pstr}[\strsym_{\PlrSym}]
1754 \cmdmthset{OStr}[\strset_{\OppSym}]
1755 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]

\PrfSet, \prfFun ...
1756 \providecommand{\prfsym}{\xi}
1757 \providecommand{\prfset}{Prf}
1758 \cmdmthsettext{Prf}[\prfset][\prfsym]

1759 %** Strategic Logics II *****%

\SL, ... ...
1760 % Strategy Logic
1761 \cmdtxttoparname{SL}
1762
1763 \DeclareRobustCommand{\ESL}
1764   {\ensuremath{\exists}\SL}
1765 \DeclareRobustCommand{\USL}
1766   {\ensuremath{\forall}\SL}
1767
1768 \DeclareRobustCommand{\FSL}
1769   {\{\textname{F}\}\SL}
1770
1771 \DeclareRobustCommand{\EFSL}
1772   {\ensuremath{\exists}\FSL}
1773 \DeclareRobustCommand{\UFSL}
1774   {\ensuremath{\forall}\FSL}
1775

```



```

1776 % One-Goal Strategy Logic
1777 \DeclareRobustCommandx{\OGSL}[3][1=, 2=, 3=]
1778   {\SL[#1][#2][lg\arglef{,}{#3}]}
1779
1780 \DeclareRobustCommand{\EOGSL}
1781   {\ensuremath{\exists}\OGSL}
1782 \DeclareRobustCommand{\UOGSL}
1783   {\ensuremath{\forall}\OGSL}
1784
1785 \DeclareRobustCommand{\FOGSL}
1786   {\{\textname{F}\}\OGSL}
1787
1788 \DeclareRobustCommand{\EFOGSL}
1789   {\ensuremath{\exists}\FOGSL}
1790 \DeclareRobustCommand{\UFOGSL}
1791   {\ensuremath{\forall}\FOGSL}
1792
1793 % Conjunctive-Goal Strategy Logic
1794 \DeclareRobustCommandx{\CGSL}[3][1=, 2=, 3=]
1795   {\SL[#1][#2][cg\arglef{,}{#3}]}
1796
1797 \DeclareRobustCommand{\ECGSL}
1798   {\ensuremath{\exists}\CGSL}
1799 \DeclareRobustCommand{\UCGSL}
1800   {\ensuremath{\forall}\CGSL}
1801
1802 \DeclareRobustCommand{\FCGSL}
1803   {\{\textname{F}\}\CGSL}
1804
1805 \DeclareRobustCommand{\EFCGSL}
1806   {\ensuremath{\exists}\FCGSL}
1807 \DeclareRobustCommand{\UFCGSL}
1808   {\ensuremath{\forall}\FCGSL}
1809
1810 % Disjunctive-Goal Strategy Logic
1811 \DeclareRobustCommandx{\DGS}[3][1=, 2=, 3=]
1812   {\SL[#1][#2][dg\arglef{,}{#3}]}
1813
1814 \DeclareRobustCommand{\EDGS}
1815   {\ensuremath{\exists}\DGS}
1816 \DeclareRobustCommand{\UDGS}
1817   {\ensuremath{\forall}\DGS}
1818
1819 \DeclareRobustCommand{\FDGS}
1820   {\{\textname{F}\}\DGS}
1821
1822 \DeclareRobustCommand{\EFDGS}
1823   {\ensuremath{\exists}\FDGS}
1824 \DeclareRobustCommand{\UFDGS}
1825   {\ensuremath{\forall}\FDGS}
1826
1827 % Alternating-Goal Strategy Logic
1828 \DeclareRobustCommandx{\AGSL}[3][1=, 2=, 3=]
1829   {\SL[#1][#2][ag\arglef{,}{#3}]}
1830
1831 \DeclareRobustCommand{\EAGSL}
1832   {\ensuremath{\exists}\AGSL}
1833 \DeclareRobustCommand{\UAGSL}
1834   {\ensuremath{\forall}\AGSL}
1835
1836 \DeclareRobustCommand{\FAGSL}
1837   {\{\textname{F}\}\AGSL}
1838

```

```

1839 \DeclareRobustCommand{\EFAGSL}
1840   {\ensuremath{\exists}\FAGSL}
1841 \DeclareRobustCommand{\UFAGSL}
1842   {\ensuremath{\forall}\FAGSL}
1843
1844 % Extended-Goal Strategy Logic
1845 \DeclareRobustCommandx{\EGSL}[3][1=, 2=, 3=]
1846   {\SL[#1][#2][eg\arglef{,}{#3}]}
1847
1848 \DeclareRobustCommand{\EEGSL}
1849   {\ensuremath{\exists}\EGSL}
1850 \DeclareRobustCommand{\UEGSL}
1851   {\ensuremath{\forall}\EGSL}
1852
1853 \DeclareRobustCommand{\FEGSL}
1854   {\{\txtname{F}\}\xGSL}
1855
1856 \DeclareRobustCommand{\EFEGSL}
1857   {\ensuremath{\exists}\FEGSL}
1858 \DeclareRobustCommand{\UFEGSL}
1859   {\ensuremath{\forall}\FEGSL}
1860
1861 % Boolean-Goal Strategy Logic
1862 \DeclareRobustCommandx{\BGSL}[3][1=, 2=, 3=]
1863   {\SL[#1][#2][bg\arglef{,}{#3}]}
1864
1865 \DeclareRobustCommand{\EBGSL}
1866   {\ensuremath{\exists}\BGSL}
1867 \DeclareRobustCommand{\UBGSL}
1868   {\ensuremath{\forall}\BGSL}
1869
1870 \DeclareRobustCommand{\FBGSL}
1871   {\{\txtname{F}\}\xGSL}
1872
1873 \DeclareRobustCommand{\EFBGSL}
1874   {\ensuremath{\exists}\FBGSL}
1875 \DeclareRobustCommand{\UFBGSL}
1876   {\ensuremath{\forall}\FBGSL}
1877
1878 % Nested-Goal Strategy Logic
1879 \DeclareRobustCommandx{\NGSL}[3][1=, 2=, 3=]
1880   {\SL[#1][#2][ng\arglef{,}{#3}]}
1881
1882 \DeclareRobustCommand{\ENGSL}
1883   {\ensuremath{\exists}\NGSL}
1884 \DeclareRobustCommand{\UNGSL}
1885   {\ensuremath{\forall}\NGSL}
1886
1887 \DeclareRobustCommand{\FNGSL}
1888   {\{\txtname{F}\}\xGSL}
1889
1890 \DeclareRobustCommand{\EFNGSL}
1891   {\ensuremath{\exists}\FNGSL}
1892 \DeclareRobustCommand{\UFNGSL}
1893   {\ensuremath{\forall}\FNGSL}
1894
1895 % Undefined-Goal Strategy Logic
1896 \DeclareRobustCommandx{\XGSL}[3][1=, 2=, 3=]
1897   {\SL[#1][#2][xg\arglef{,}{#3}]}
1898
1899 \DeclareRobustCommand{\EXGSL}
1900   {\ensuremath{\exists}\XGSL}
1901 \DeclareRobustCommand{\UXGSL}

```

```

1902 {\ensuremath{\forall}\XGSL}
1903
1904 \DeclareRobustCommand{\FXGSL}
1905 {\{\txtrname{F}\}\XGSL}
1906
1907 \DeclareRobustCommand{\EFXGSL}
1908 {\ensuremath{\exists}\FXGSL}
1909 \DeclareRobustCommand{\UFXGSL}
1910 {\ensuremath{\forall}\FXGSL}

1911 %** Syntax *****%%

\BndSet, ... ...
1912 \newcommand{\bndsym}{\flat}
1913 \newcommand{\bndset}{\Bn}
1914 \cmdmthsetext{Bnd}[\bndset][\bndsym]
1915 \usrmth{bnd}{\}{argfun}

\psn ...
1916 \usrmth{psn}{\}{argfun}

1917 %** Semantics *****%%

\nxtFun ...
1918 \newcommand{\nxtfun}{nxt}
1919 \cmdmthfun{nxt}[\nxtfun]

1920 \fi
1921 %*****%%
1922 %*****%%
1923 %** Macros for Automata *****%%
1924 %*****%%
1925 \ifaut@
1926 %** Finite Word Automata *****%%

\DFA, ... ...
1927 \cmdtxtoparname{DFA}\cmdtxtoparname{NFA}\cmdtxtoparname{UFA}\cmdtxtoparname{AFA}
1928
1929 \cmdtxtoparname{DWA}\cmdtxtoparname{NWA}\cmdtxtoparname{UWA}\cmdtxtoparname{AWA}
1930
1931 \cmdtxtoparname{DFW}\cmdtxtoparname{NFW}\cmdtxtoparname{UFW}\cmdtxtoparname{AFW}
1932 \cmdtxtoparname{DWW}\cmdtxtoparname{NWW}\cmdtxtoparname{UWW}\cmdtxtoparname{AWW}
1933 \cmdtxtoparname{DBW}\cmdtxtoparname{NBW}\cmdtxtoparname{UBW}\cmdtxtoparname{ABW}
1934 \cmdtxtoparname{DCW}\cmdtxtoparname{NCW}\cmdtxtoparname{UCW}\cmdtxtoparname{ACW}
1935 \cmdtxtoparname{DPW}\cmdtxtoparname{NPW}\cmdtxtoparname{UPW}\cmdtxtoparname{APW}
1936 \cmdtxtoparname{DRW}\cmdtxtoparname{NRW}\cmdtxtoparname{URW}\cmdtxtoparname{ARW}
1937 \cmdtxtoparname{DSW}\cmdtxtoparname{NSW}\cmdtxtoparname{USW}\cmdtxtoparname{ASW}
1938 \cmdtxtoparname{DMW}\cmdtxtoparname{NMW}\cmdtxtoparname{UMW}\cmdtxtoparname{AMW}

\GFG, ... ...
1939 \cmdtxtoparname{GFG}
1940
1941 \cmdtxtoparname{PD}
1942 \cmdtxtoparname{PN}
1943
1944 \cmdtxtoparname{LD}
1945 \cmdtxtoparname{LN}

1946 %** Syntax *****%%

\AutName, ... ...
1947 \newcommand{\autname}{A}
1948 \usrmthlatupp{Aut}{Name}{name}[\autname]
1949 \newcommand{\autset}{Aut}
1950 \cmdmthset{Aut}[\autset]

```

```

\WAutSet ...
1951 \newcommand{\wautset}{\WAut}
1952 \cmdmthset{WAut}[\wautset]

\SttSet, ... ...
1953 \def\sttsym{q}
1954 \def\sttset{Q}
1955 \cmdmthsetext{Stt}[\sttset][\sttsym]
1956 \cmdmthset{IStt}[\sttset_{I}]
1957 \cmdmthsymelm{istt}[\sttsym_{I}]
1958 \cmdmthset{FStt}[\sttset_{F}]
1959 \cmdmthsymelm{fstt}[\sttsym_{F}]

\SymSet, ... ...
1960 \newcommand{\symsym}{\sigma}
1961 \newcommand{\symset}{\Sigma}
1962 \cmdmthsetext{Sym}[\symset][\symsym]

\trnFun ...
1963 \newcommand{\trnsym}{\delta}
1964 \cmdmthfun{trn}[\trnsym]

1965 %** Semantics *****%%

\LangFun ...
1966 \newcommand{\langfun}{L}
1967 \cmdmthfun{Lang}[\langfun]

\WrdSet, ... ...
1968 \newcommand{\wrdsym}{w}
1969 \newcommand{\wrddset}{Wr}
1970 \cmdmthsetext{Wrd}[\wrddset][\wrdsym]

1971 %** Finite Tree Automata *****%%

\DTA, ... ...
1972 \cmdtxtoparname{DTA}\cmdtxtoparname{NTA}\cmdtxtoparname{UTA}\cmdtxtoparname{ATA}
1973
1974 \cmdtxtoparname{DFT}\cmdtxtoparname{NFT}\cmdtxtoparname{UFT}\cmdtxtoparname{AFT}
1975 \cmdtxtoparname{DWT}\cmdtxtoparname{NWT}\cmdtxtoparname{UWT}\cmdtxtoparname{AWT}
1976 \cmdtxtoparname{DBT}\cmdtxtoparname{NBT}\cmdtxtoparname{UBT}\cmdtxtoparname{ABT}
1977 \cmdtxtoparname{DCT}\cmdtxtoparname{NCT}\cmdtxtoparname{UCT}\cmdtxtoparname{ACT}
1978 \cmdtxtoparname{DPT}\cmdtxtoparname{NPT}\cmdtxtoparname{UPT}\cmdtxtoparname{APT}
1979 \cmdtxtoparname{DRT}\cmdtxtoparname{NRT}\cmdtxtoparname{URT}\cmdtxtoparname{ART}
1980 \cmdtxtoparname{DST}\cmdtxtoparname{NST}\cmdtxtoparname{UST}\cmdtxtoparname{AST}
1981 \cmdtxtoparname{DMT}\cmdtxtoparname{NMT}\cmdtxtoparname{UMT}\cmdtxtoparname{AMT}

1982 %** Syntax *****%%

\TAutSet ...
1983 \newcommand{\tautset}{\TAut}
1984 \cmdmthset{TAut}[\tautset]

\DirSet, ... ...
1985 \newcommand{\dirsym}{d}
1986 \newcommand{\dirset}{\Lambda}
1987 \cmdmthsetext{Dir}[\dirset][\dirsym]

1988 %** Semantics *****%%

\TreeSet, ... ...
1989 \newcommand{\treesym}{T}
1990 \newcommand{\treeset}{Tr}
1991 \cmdmthsetext{Tree}[\treeset][\treesym]

```

```

\wotFun ...
1992 \newcommand{\wotfun}{\wot}
1993 \cmdmthfun{\wot}{\wotfun}

1994 \fi
1995 %%*****%
1996 %%*****%
1997 %%** Format Tricks *****%
1998 %%*****%
1999 \iffirm@

... ..
2000 %%...

2001 \fi
2002 %%*****%
2003 %%*****%
2004 %%** Figure Tricks *****%
2005 %%*****%
2006 \iffig@

2007 \RequirePackage{tikz}
2008 \usetikzlibrary{arrows,graphs,matrix,patterns,shapes}

2009 \tikzstyle{every node} =
2010   [draw = none, fill = none, black, thin]
2011 \tikzstyle{every edge} +=
2012   [black, thick]

2013 \tikzstyle{noall} =
2014   [draw = none, fill = none]
2015 \tikzstyle{nodraw} =
2016   [draw = none, fill = white]
2017 \tikzstyle{nofill} =
2018   [draw = black, fill = none]

2019 \ifwrpfig@
2020   % Wrapfig Package
2021   \RequirePackage{wrapfig}
2022 \fi

2023 \fi
2024 %%*****%
2025 %%*****%
2026 %%** Table Tricks *****%
2027 %%*****%
2028 \iftab@

... ..
2029 %%...

2030 \fi
2031 %%*****%
2032 %%*****%
2033 %%** Algorithm Tricks *****%
2034 %%*****%
2035 \ifalg@

2036 \RequirePackage[ruled,vlined]{algorithm2e}
2037 \DontPrintSemicolon
2038 \SetInd{0.25em}{0.5em}
2039 \setlength{\algomargin}{1.25em}

\Signature ...
2040 \SetKw{Signature}{signature}

```

```

\Macro, ... ...
2041 \SetKwFor{Macro}{macro}{}{}
2042 \SetKwFor{Function}{function}{}{}
2043 \SetKwFor{Procedure}{procedure}{}{}

\Let ...
2044 \SetKwFor{Let}{let}{in}{}

\True, \False ...
2045 \SetKw{True}{true}
2046 \SetKw{False}{false}

\From, ... ...
2047 \SetKw{From}{from}
2048 \SetKw{To}{to}
2049 \SetKw{DownTo}{downto}

\GoTo, ... ...
2050 \SetKw{GoTo}{goto}
2051 \SetKw{Break}{break}
2052 \SetKw{Continue}{continue}

\MIf, ... ...
2053 \SetKwIF{MIf}{MElseIf}{MElse}{\#if}{\#then}{\#else \#if}{\#else}{\#endif}

\nlr ...
2054 \DeclareRobustCommand{\nlr}[1]
2055   {\addtocounter{AlgoLine}{1}%
2056   \nlset{\arabic{AlgoLine}-\addtocounter{AlgoLine}{#1}\arabic{AlgoLine}}}

2057 \fi
2058 %%*****%
2059 \endinput
2060 \</package>

```

## 2 Change History

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| v0.0  | General: First public release . . . . . 1          | v0.18 | General: Few new starred variants . . . . . 1                 |
| v0.1  | General: Algorithm tricks . . . . . 1              | v0.2  | General: Changes in ‘Auxiliary tricks’ . . . . . 1            |
| v0.10 | General: Small refinements . . . . . 1             | v0.3  | General: Few problems solved . . . . . 1                      |
| v0.11 | General: Few additions and corrections . . . . . 1 | v0.4  | General: Refactoring, corrections, and extensions . . . . . 1 |
| v0.12 | General: New starred variants . . . . . 1          | v0.5  | General: Figure tricks . . . . . 1                            |
| v0.13 | General: Further starred variants . . . . . 1      | v0.6  | General: Small refinements . . . . . 1                        |
| v0.14 | General: Few additions and corrections . . . . . 1 | v0.7  | General: Refinements, corrections, and extensions . . . . . 1 |
| v0.15 | General: Refactoring of dtx sources . . . . . 1    | v0.8  | General: Few refinements and corrections . . . 1              |
| v0.16 | General: Small refinements and few additions 1     | v0.9  | General: Small addition to ‘Algorithm tricks’ 1               |
| v0.17 | General: Few additions . . . . . 1                 |       |                                                               |

## 3 Index

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|                  |                                                                                                                              | \cmdmthparsym     | 637, 665                                                                                                                                              |  |  |
|                  |                                                                                                                              | \cmdmthparsymelm  | 664                                                                                                                                                   |  |  |
|                  |                                                                                                                              | \cmdmthparvec     | 732                                                                                                                                                   |  |  |
|                  |                                                                                                                              | \cmdmthrel        | 605, 1143, 1527, 1528                                                                                                                                 |  |  |
|                  |                                                                                                                              | \cmdmthset        | 586, 597, 1136,<br>1138, 1147, 1149, 1159,<br>1161, 1171, 1173, 1718,<br>1720, 1725, 1727, 1740,<br>1742, 1752, 1754, 1950,<br>1952, 1956, 1958, 1984 |  |  |
|                  |                                                                                                                              | \cmdmthsetext     | 596,<br>1133, 1154, 1158, 1166,<br>1170, 1177, 1223, 1242,<br>1287, 1297, 1311, 1314,                                                                 |  |  |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1330, 1337, 1343, 1350,<br>1356, 1435, 1438, 1524,<br>1533, 1712, 1715, 1724,<br>1731, 1734, 1739, 1747,<br>1751, 1758, 1914, 1955,<br>1962, 1970, 1987, 1991                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1933, 1934, 1935, 1936,<br>1937, 1938, 1939, 1941,<br>1942, 1944, 1945, 1972,<br>1974, 1975, 1976, 1977,<br>1978, 1979, 1980, 1981                                                                                                                                                                                                                                                                                                                                       | 833, 836, 841, 843, 845,<br>847, 849, 851, 853, 858,<br>862, 866, 870, 874, 878,<br>882, 886, 890, 894, 898,<br>902, 907, 911, 915, 919,<br>923, 926, 934, 936, 938,<br>941, 962, 964, 966, 968,<br>970, 972, 974, 976, 978,<br>980, 982, 984, 986, 988,<br>990, 992, 994, 996, 999,<br>1001, 1003, 1005, 1007,<br>1010, 1014, 1018, 1022,<br>1039, 1041, 1256, 1258,<br>1260, 1321, 1323, 1404,<br>1406, 1410, 1412, 1416,<br>1418, 1422, 1424, 1428,<br>1430, 1445, 1449, 1453,<br>1457, 1461, 1468, 1472,<br>1476, 1480, 1484, 1493,<br>1497, 1499, 1501, 1507,<br>1509, 1511, 1513, 1515,<br>1517, 1540, 1544, 1546,<br>1548, 1552, 1556, 1560,<br>1562, 1564, 1574, 1576,<br>1578, 1585, 1587, 1589,<br>1612, 1616, 1618, 1620,<br>1627, 1631, 1633, 1635,<br>1642, 1646, 1648, 1650,<br>1661, 1665, 1667, 1669,<br>1676, 1680, 1682, 1684,<br>1691, 1695, 1697, 1699,<br>1702, 1704, 1763, 1765,<br>1768, 1771, 1773, 1780,<br>1782, 1785, 1788, 1790,<br>1797, 1799, 1802, 1805,<br>1807, 1814, 1816, 1819,<br>1822, 1824, 1831, 1833,<br>1836, 1839, 1841, 1848,<br>1850, 1853, 1856, 1858,<br>1865, 1867, 1870, 1873,<br>1875, 1882, 1884, 1887,<br>1890, 1892, 1899, 1901,<br>1904, 1907, 1909, 2054 |
| \cmdmthsig ..... <a href="#">560</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \cmdtxtpar ..... <a href="#">335</a> , <a href="#">340</a>                                                                                                                                                                                                                                                                                                                                                                                                               | \DeclareRobustCommandx <a href="#">838</a> ,<br>909, 913, 917, 921, 1012,<br>1016, 1020, 1024, 1043,<br>1777, 1794, 1811, 1828,<br>1845, 1862, 1879, 1896                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| \cmdmthsnt ..... <a href="#">686</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \cmdtxtparabr ..... <a href="#">483</a>                                                                                                                                                                                                                                                                                                                                                                                                                                  | \decset ..... <a href="#">1733</a> , <a href="#">1734</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| \cmdmthstr ..... <a href="#">573</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \cmdtxtparcom ..... <a href="#">508</a>                                                                                                                                                                                                                                                                                                                                                                                                                                  | \DecSet, \... ..... <a href="#">1732</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| \cmdmthsym .....<br>. <a href="#">631</a> , <a href="#">656</a> , <a href="#">1126</a> , <a href="#">1128</a> ,<br><a href="#">1218</a> , <a href="#">1220</a> , <a href="#">1237</a> , <a href="#">1239</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \cmdtxtpardef ..... <a href="#">471</a>                                                                                                                                                                                                                                                                                                                                                                                                                                  | \decsym ..... <a href="#">1732</a> , <a href="#">1734</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| \cmdmthsymelm .. <a href="#">655</a> , <a href="#">1134</a> ,<br><a href="#">1135</a> , <a href="#">1137</a> , <a href="#">1139</a> , <a href="#">1160</a> ,<br><a href="#">1162</a> , <a href="#">1172</a> , <a href="#">1174</a> , <a href="#">1525</a> ,<br><a href="#">1716</a> , <a href="#">1717</a> , <a href="#">1719</a> , <a href="#">1721</a> ,<br><a href="#">1726</a> , <a href="#">1728</a> , <a href="#">1741</a> , <a href="#">1743</a> ,<br><a href="#">1753</a> , <a href="#">1755</a> , <a href="#">1957</a> , <a href="#">1959</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | \cmdtxtparname ..... <a href="#">496</a>                                                                                                                                                                                                                                                                                                                                                                                                                                 | \Dedicto ..... <a href="#">769</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| \cmdmthvec ..... <a href="#">726</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \cmodels, \... ..... <a href="#">827</a>                                                                                                                                                                                                                                                                                                                                                                                                                                 | \dedicto ..... <a href="#">748</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| \cmdtxt ..... <a href="#">329</a> , <a href="#">340</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | \cmp ..... <a href="#">938</a>                                                                                                                                                                                                                                                                                                                                                                                                                                           | \def ..... <a href="#">1953</a> , <a href="#">1954</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| \cmdtxtabr .....<br><a href="#">477</a> , <a href="#">743</a> , <a href="#">744</a> , <a href="#">745</a> , <a href="#">746</a> ,<br><a href="#">747</a> , <a href="#">748</a> , <a href="#">749</a> , <a href="#">750</a> , <a href="#">751</a> ,<br><a href="#">752</a> , <a href="#">753</a> , <a href="#">754</a> , <a href="#">755</a> , <a href="#">756</a> ,<br><a href="#">757</a> , <a href="#">758</a> , <a href="#">759</a> , <a href="#">760</a> , <a href="#">761</a> ,<br><a href="#">762</a> , <a href="#">763</a> , <a href="#">764</a> , <a href="#">766</a> , <a href="#">767</a> ,<br><a href="#">768</a> , <a href="#">769</a> , <a href="#">770</a> , <a href="#">771</a> , <a href="#">772</a> ,<br><a href="#">773</a> , <a href="#">774</a> , <a href="#">775</a> , <a href="#">776</a> , <a href="#">777</a> ,<br><a href="#">778</a> , <a href="#">779</a> , <a href="#">783</a> , <a href="#">784</a> , <a href="#">785</a> ,<br><a href="#">787</a> , <a href="#">789</a> , <a href="#">790</a> , <a href="#">791</a> , <a href="#">792</a> ,<br><a href="#">793</a> , <a href="#">794</a> , <a href="#">795</a> , <a href="#">796</a> , <a href="#">798</a> ,<br><a href="#">799</a> , <a href="#">1302</a> , <a href="#">1303</a> , <a href="#">1304</a> , <a href="#">1305</a> | \cnf, \dnf, \... ..... <a href="#">1302</a>                                                                                                                                                                                                                                                                                                                                                                                                                              | \Defacto ..... <a href="#">770</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| \cmdtxtall <a href="#">339</a> , <a href="#">464</a> , <a href="#">476</a> , <a href="#">489</a> , <a href="#">501</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | \Cnt, \Qnt, \Sym ..... <a href="#">1290</a>                                                                                                                                                                                                                                                                                                                                                                                                                              | \defacto ..... <a href="#">749</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| \cmdtxtarg ..... <a href="#">331</a> , <a href="#">340</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \coimplies, \... ..... <a href="#">822</a>                                                                                                                                                                                                                                                                                                                                                                                                                               | \defcomcls ..... <a href="#">1053</a> , <a href="#">1078</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| \cmdtxtargabr ..... <a href="#">479</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | \Coloneqq ..... <a href="#">812</a>                                                                                                                                                                                                                                                                                                                                                                                                                                      | \defcomclsgrp .....<br>..... <a href="#">1055</a> , <a href="#">1080</a> , <a href="#">1081</a> ,<br><a href="#">1082</a> , <a href="#">1083</a> , <a href="#">1084</a> , <a href="#">1085</a> ,<br><a href="#">1086</a> , <a href="#">1087</a> , <a href="#">1088</a> , <a href="#">1089</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| \cmdtxtargcom ..... <a href="#">504</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | \coloneqq ..... <a href="#">812</a>                                                                                                                                                                                                                                                                                                                                                                                                                                      | \defcomclsgrpcmd .... <a href="#">1065</a> ,<br><a href="#">1066</a> , <a href="#">1067</a> , <a href="#">1068</a> , <a href="#">1069</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| \cmdtxtargdef ..... <a href="#">467</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | \com@false ..... <a href="#">56</a> , <a href="#">77</a> , <a href="#">79</a>                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtargname ..... <a href="#">492</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \com@true ..... <a href="#">78</a>                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtcom <a href="#">502</a> , <a href="#">1074</a> , <a href="#">1075</a> , <a href="#">1076</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | \conset ..... <a href="#">1336</a> , <a href="#">1337</a>                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtdef ..... <a href="#">465</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \consig ..... <a href="#">1333</a> , <a href="#">1334</a>                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtname ..... <a href="#">490</a> , <a href="#">1707</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \ConSig, \... ..... <a href="#">1333</a>                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoarg ..... <a href="#">333</a> , <a href="#">340</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \constr ..... <a href="#">1360</a> , <a href="#">1361</a>                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoargabr ..... <a href="#">481</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \ConStr, \... ..... <a href="#">1360</a>                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoargcom ..... <a href="#">506</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \consym ..... <a href="#">1335</a> , <a href="#">1337</a>                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoargdef ..... <a href="#">469</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \Contd ..... <a href="#">798</a>                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoargname ..... <a href="#">494</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | \contd ..... <a href="#">790</a>                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtopar ..... <a href="#">337</a> , <a href="#">340</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \coW MPL ..... <a href="#">1484</a>                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoparabr ..... <a href="#">485</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \coWMSO ..... <a href="#">1430</a>                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtoparcom ..... <a href="#">510</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \coWMSOL ..... <a href="#">1428</a>                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtopardef ..... <a href="#">473</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \coWMTL ..... <a href="#">1461</a>                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \cmdtxtparname .....<br>..... <a href="#">498</a> , <a href="#">1108</a> , <a href="#">1111</a> ,<br><a href="#">1114</a> , <a href="#">1117</a> , <a href="#">1120</a> , <a href="#">1123</a> ,<br><a href="#">1200</a> , <a href="#">1203</a> , <a href="#">1206</a> , <a href="#">1209</a> ,<br><a href="#">1212</a> , <a href="#">1215</a> , <a href="#">1228</a> , <a href="#">1231</a> ,<br><a href="#">1234</a> , <a href="#">1253</a> , <a href="#">1317</a> , <a href="#">1318</a> ,<br><a href="#">1370</a> , <a href="#">1373</a> , <a href="#">1376</a> , <a href="#">1379</a> ,<br><a href="#">1382</a> , <a href="#">1385</a> , <a href="#">1388</a> , <a href="#">1391</a> ,<br><a href="#">1400</a> , <a href="#">1401</a> , <a href="#">1442</a> , <a href="#">1465</a> ,<br><a href="#">1490</a> , <a href="#">1537</a> , <a href="#">1571</a> , <a href="#">1582</a> ,<br><a href="#">1606</a> , <a href="#">1609</a> , <a href="#">1624</a> , <a href="#">1639</a> ,<br><a href="#">1658</a> , <a href="#">1673</a> , <a href="#">1688</a> , <a href="#">1761</a> ,<br><a href="#">1927</a> , <a href="#">1929</a> , <a href="#">1931</a> , <a href="#">1932</a> ,                                                                                                                        | \coWPL ..... <a href="#">1472</a>                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \coWSO ..... <a href="#">1412</a>                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \coWSOL ..... <a href="#">1410</a>                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \coWTL ..... <a href="#">1449</a>                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \crv@false ..... <a href="#">40</a>                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \crv@true ..... <a href="#">41</a>                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \csdef <a href="#">138</a> , <a href="#">139</a> , <a href="#">140</a> , <a href="#">141</a> , <a href="#">142</a> ,<br><a href="#">330</a> , <a href="#">332</a> , <a href="#">334</a> , <a href="#">336</a> , <a href="#">338</a> ,<br><a href="#">343</a> , <a href="#">417</a> , <a href="#">419</a> , <a href="#">422</a> , <a href="#">425</a> ,<br><a href="#">428</a> , <a href="#">434</a> , <a href="#">1054</a> , <a href="#">1070</a> , <a href="#">1072</a> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \csedef ..... <a href="#">172</a> , <a href="#">176</a>                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \csname ..... <a href="#">162</a> , <a href="#">163</a> ,<br><a href="#">164</a> , <a href="#">165</a> , <a href="#">166</a> , <a href="#">167</a> , <a href="#">168</a> ,<br><a href="#">173</a> , <a href="#">177</a> , <a href="#">330</a> , <a href="#">332</a> , <a href="#">334</a> ,<br><a href="#">336</a> , <a href="#">338</a> , <a href="#">343</a> , <a href="#">349</a> , <a href="#">436</a> , <a href="#">437</a>                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \CTLP ... <a href="#">1628</a> , <a href="#">1632</a> , <a href="#">1634</a> , <a href="#">1636</a>                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \CTLS ... <a href="#">1643</a> , <a href="#">1647</a> , <a href="#">1649</a> , <a href="#">1651</a>                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \CurrentOption ..... <a href="#">126</a>                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>D</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \DeclareMathAlphabet ....<br>..... <a href="#">285</a> , <a href="#">286</a> , <a href="#">287</a> , <a href="#">288</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \DeclareMathOperator <a href="#">944</a> , <a href="#">946</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| \DeclareRobustCommand <a href="#">807</a> ,<br><a href="#">811</a> , <a href="#">814</a> , <a href="#">816</a> , <a href="#">818</a> , <a href="#">820</a> ,<br><a href="#">822</a> , <a href="#">824</a> , <a href="#">827</a> , <a href="#">829</a> , <a href="#">831</a> ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <code>\defcomclsgprpred</code>   | 1059, 1060, 1061, 1062, 1063, 1064                                                                                                                                                                                                                                                                                                                                                               |
| <code>\defcomclsgprsem</code>    | 1056, 1057, 1058                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\defcomhrc</code>          | 1071, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099                                                                                                                                                                                                                                                                                                                                       |
| <code>\defeq, \seteq</code>      | 807                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\defval</code>             | 149, 296, 300, 304, 308, 312, 343, 351, 361, 363, 373, 375, 385, 387, 397, 399, 436, 437, 599, 601, 924, 1054, 1056, 1057, 1072, 1512, 1518, 1703, 1705                                                                                                                                                                                                                                          |
| <code>\Delta</code>              | 1094, 1095                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\delta</code>              | 1963                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\denot</code>              | 836                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\dep, \alt</code>          | 1300                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\der</code>                | 845                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\Dere</code>               | 771                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\dere</code>               | 750                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\DF, \IF, \...</code>      | 1369                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\DFA, \...</code>          | 1927                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\DGSL</code>               | 1811, 1815, 1817                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\Diamond</code>            | 1505                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\dirset</code>             | 1986, 1987                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\DirSet, \...</code>       | 1985                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\dirsym</code>             | 1985, 1987                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\Divideetimpera</code>     | 772                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\divideetimpera</code>     | 751                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\DLH, \DBH</code>          | 1094                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\DMod</code>               | 1510, 1512                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\DMod, \BMod</code>        | 1505                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\do</code>                 | 171, 175                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>\dom, \cod, \...</code>    | 929                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\DontPrintSemicolon</code> | 2037                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\DTA, \...</code>          | 1972                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\dual, \adj, \...</code>   | 841                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>E</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>\E, \A</code>              | 1653                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EAFMC</code>              | 1562                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EAGSL</code>              | 1831                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\Easy, \Hard, \...</code>  | 1074                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EATL</code>               | 1667                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EATLP</code>              | 1682                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EATLS</code>              | 1697                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EBF</code>                | 1258                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EBGSL</code>              | 1865                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ECGSL</code>              | 1797                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ECTL</code>               | 1618                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ECTLP</code>              | 1633                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ECTLS</code>              | 1648                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EDGSL</code>              | 1814                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EEGSL</code>              | 1848                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EExs, \AA11</code>        | 1702                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFAGSL</code>             | 1839                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFBGSL</code>             | 1873                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFCGSL</code>             | 1805                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFDGSL</code>             | 1822                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFEGL</code>              | 1856                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFNGSL</code>             | 1890                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFOGSL</code>             | 1788                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFSL</code>               | 1771                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EFXGSL</code>             | 1907                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\Eg</code>                 | 773                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\eg</code>                 | 752                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\EG, \...</code>           | 1227                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EGSL</code>               | 1845, 1849, 1851                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\ELH, \EBH</code>          | 1096                                                                                                                                                                                                                                                                                                                                                                                             |
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| <code>\ELTL</code>               | 1587                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\em</code>                 | 464, 476                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>\EMC</code>                | 1546                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EML</code>                | 1499                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\empchk</code>             | 147, 153, 155, 157, 163, 314, 401, 599, 601                                                                                                                                                                                                                                                                                                                                                      |
| <code>\emptyfun</code>           | 941                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\emptyrel</code>           | 926                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\emptyseq</code>           | 1039                                                                                                                                                                                                                                                                                                                                                                                             |
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| <code>\endcsname</code>          | 162, 163, 164, 165, 166, 167, 168, 173, 177, 330, 332, 334, 336, 338, 343, 349, 436, 437                                                                                                                                                                                                                                                                                                         |
| <code>\endinput</code>           | 2059                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ENGSL</code>              | 1882                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\enmtls@false</code>       | 29                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>\enmtls@true</code>        | 28                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>\ensuremath</code>         | 314, 349, 945, 947, 1259, 1261, 1500, 1502, 1537, 1547, 1549, 1563, 1565, 1577, 1579, 1588, 1590, 1619, 1621, 1634, 1636, 1649, 1651, 1668, 1670, 1683, 1685, 1698, 1700, 1764, 1766, 1772, 1774, 1781, 1783, 1789, 1791, 1798, 1800, 1806, 1808, 1815, 1817, 1823, 1825, 1832, 1834, 1840, 1842, 1849, 1851, 1857, 1859, 1866, 1868, 1874, 1876, 1883, 1885, 1891, 1893, 1900, 1902, 1908, 1910 |
| <code>\entfun</code>             | 1182, 1183                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\entFun, \escFun</code>    | 1182                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\enumeration, \...</code>  | 856                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\EOGSL</code>              | 1780                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\EPTL</code>               | 1576                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\equiv</code>              | 832, 834                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>\ergo</code>               | 753                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\Errata</code>             | 774                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\errata</code>             | 754                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\Erratum</code>            | 775                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\erratum</code>            | 755                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\escfun</code>             | 1184, 1185                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\ESL</code>                | 1763                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\etal</code>               | 756                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\etc</code>                | 757                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\evn, \odd</code>          | 1028                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\evnsym</code>             | 1217, 1218                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\EvnSym, \OddSym</code>    | 1217                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ExecuteOptions</code>     | 128                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\EXGSL</code>              | 1899                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\exists</code>             | 1259, 1281, 1293, 1294, 1500, 1547, 1563, 1577, 1588, 1619, 1634, 1649, 1668, 1683, 1698, 1764, 1772, 1781, 1789, 1798, 1806, 1815, 1823, 1832, 1840, 1849, 1857, 1866, 1874, 1883, 1891, 1900, 1908                                                                                                                                                                                             |
| <code>\expandafter</code>        | 162, 164, 167, 172, 176                                                                                                                                                                                                                                                                                                                                                                          |
| <code>\ExpSpace, \...</code>     | 1089                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\ExpTime, \...</code>      | 1088                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\Exs, \All</code>          | 1507                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>F</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>\FAGSL</code>              | 1836, 1840, 1842                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\FBGSL</code>              | 1870, 1874, 1876                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\FCGSL</code>              | 1802, 1806, 1808                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\FDGSL</code>              | 1819, 1823, 1825                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\FEGSL</code>              | 1853, 1857, 1859                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\ffsym</code>              | 1267, 1268                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\fi</code>                 | 148, 150, 159, 215, 220, 225, 230, 245, 250, 265, 273, 274, 278, 280, 512, 736, 800, 1047, 1100, 1245, 1920, 1994, 2001, 2022, 2023, 2030, 2057                                                                                                                                                                                                                                                  |
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| <code>\fig@true</code>           | 106                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\fix, \ifp, \...</code>    | 950                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\flat</code>               | 1912                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\floor, \ceil</code>       | 1018                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\FNGSL</code>              | 1887, 1891, 1893                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\fnttls@false</code>       | 37                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>\fnttls@true</code>        | 36                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>\FO</code>                 | 1324                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\FOGSL</code>              | 1785, 1789, 1791                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\FOL, \...</code>          | 1316                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\footnotesize</code>       | 947                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\forall</code>             | 1261, 1283, 1293, 1294, 1502, 1549, 1565, 1579, 1590, 1621, 1636, 1651, 1670, 1685, 1700, 1766, 1774, 1783, 1791, 1800, 1808, 1817, 1825, 1834, 1842, 1851, 1859, 1868, 1876, 1885, 1893, 1902, 1910                                                                                                                                                                                             |
| <code>\FPT</code>                | 1078                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\free, \bound</code>       | 1298                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\frm@false</code>          | 99, 101                                                                                                                                                                                                                                                                                                                                                                                          |
| <code>\frm@true</code>           | 100                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>\From, \...</code>         | 2047                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\FSL</code>                | 1768, 1772, 1774                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>\fst, \lst</code>          | 1045                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\funset</code>             | 1342, 1343                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\funsig</code>             | 1339, 1340                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\FunSig, \...</code>       | 1339                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\funstr</code>             | 1362, 1363                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\FunStr, \...</code>       | 1362                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>\funsym</code>             | 1341, 1343                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\fvarset</code>            | 1434, 1435                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\FVarSet, \...</code>      | 1433                                                                                                                                                                                                                                                                                                                                                                                             |

|                          |                                                       |                             |                                                                                                                                         |                  |                                                                                                                                                                                                                                                                                                                                                       |
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| \fvarsym                 | 1433, 1435                                            | \itr                        | 171, 172, 173, 175, 176, 177                                                                                                            | \lor             | 1275                                                                                                                                                                                                                                                                                                                                                  |
| \FXGSL                   | 1904, 1908, 1910                                      |                             |                                                                                                                                         | \lowercase       | 599, 601                                                                                                                                                                                                                                                                                                                                              |
| <b>G</b>                 |                                                       | <b>K</b>                    |                                                                                                                                         | \lVert           | 1017                                                                                                                                                                                                                                                                                                                                                  |
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| $\text{\tt tupler}$                  | 890                                 | $\backslash\text{UFXGSL}$                             | 1909                             |                                                             | <u>486, 491, 493, 495, 497,</u>     |
| $\text{\tt tuplex}$                  | 894                                 | $\backslash\text{ULH,}\mathbb{U}\backslash\text{UBH}$ | <u>1098</u>                      |                                                             | <u>499, 503, 505, 507, 509, 511</u> |
| $\text{\tt tuplexl}$                 | 898                                 | $\backslash\text{ULTL}$                               | 1589                             | $\backslash\text{UXGSL}$                                    | 1901                                |
| $\text{\tt tuplexr}$                 | 902                                 | $\backslash\text{UMC}$                                | 1548                             |                                                             |                                     |
| $\text{\tt txt}$                     | <u>316</u>                          | $\backslash\text{UML}$                                | 1501                             |                                                             | <b>V</b>                            |
| $\text{\tt txt@false}$               | 56, 66, 68                          | $\backslash\text{UNGSL}$                              | 1884                             | $\backslash\text{valset}$                                   | 1310, 1311                          |
| $\text{\tt txt@true}$                | 67                                  | $\backslash\text{UOGSL}$                              | 1782                             | $\backslash\text{ValSet,}\mathbb{U}\dots$                   | <u>1309</u>                         |
| $\text{\tt txtabr,}\mathbb{U}\dots$  | <u>475</u>                          | $\backslash\text{upharpoonright}$                     | 937                              | $\backslash\text{valsym}$                                   | 1309, 1311                          |
| $\text{\tt txtarg}$                  | <u>318</u>                          | $\backslash\text{upshape}$                            | 327                              | $\backslash\text{varcmd}$                                   | <u>161,</u>                         |
| $\text{\tt txtcom,}\mathbb{U}\dots$  | <u>500</u>                          | $\backslash\text{UPTL}$                               | 1578                             |                                                             | <u>856, 857, 860, 861, 864,</u>     |
| $\text{\tt txtdef,}\mathbb{U}\dots$  | <u>463</u>                          | $\backslash\text{usetikzlibrary}$                     | 2008                             |                                                             | <u>865, 868, 869, 872, 873,</u>     |
| $\text{\tt txtgen@false}$            | 53, 56                              | $\backslash\text{USL}$                                | 1765                             |                                                             | <u>876, 877, 880, 881, 884,</u>     |
| $\text{\tt txtgen@true}$             |                                     |                                                       |                                  |                                                             | <u>885, 888, 889, 892, 893,</u>     |
|                                      | 54, 67, 78, 84, 89, 94              | $\backslash\text{usrnth}$                             | <u>433, 441, 443,</u>            |                                                             | <u>896, 897, 900, 901, 904, 905</u> |
|                                      |                                     |                                                       | <u>445, 447, 449, 451, 453,</u>  | $\backslash\text{varepsilon}$                               | 1040                                |
| $\text{\tt txtname}$                 | 1257,                               |                                                       | <u>455, 457, 522, 524, 526,</u>  | $\backslash\text{varnothing}$                               | 927, 942                            |
|                                      | <u>1322, 1324, 1405, 1407,</u>      |                                                       | <u>528, 530, 535, 537, 539,</u>  | $\backslash\text{varset}$                                   | 1329, 1330                          |
|                                      | <u>1411, 1413, 1417, 1419,</u>      |                                                       | <u>541, 543, 548, 550, 552,</u>  | $\backslash\text{varsig}$                                   | 1326, 1327                          |
|                                      | <u>1423, 1425, 1429, 1431,</u>      |                                                       | <u>554, 556, 561, 563, 565,</u>  | $\backslash\text{VarSig,}\mathbb{U}\dots$                   | <u>1326</u>                         |
|                                      | <u>1446, 1450, 1454, 1458,</u>      |                                                       | <u>567, 569, 574, 576, 578,</u>  | $\backslash\text{varsym}$                                   | 1328, 1330                          |
|                                      | <u>1462, 1469, 1473, 1477,</u>      |                                                       | <u>580, 582, 587, 589, 591,</u>  | $\backslash\text{vec}$                                      | <u>849</u>                          |
|                                      | <u>1481, 1485, 1494, 1498,</u>      |                                                       | <u>593, 595, 606, 608, 610,</u>  | $\backslash\text{vert}$                                     | 910, 914                            |
|                                      | <u>1541, 1545, 1553, 1557,</u>      |                                                       | <u>612, 614, 619, 621, 623,</u>  | $\backslash\text{Viceversa}$                                | <u>779</u>                          |
|                                      | <u>1561, 1575, 1586, 1613,</u>      |                                                       | <u>625, 627, 632, 634, 636,</u>  | $\backslash\text{viceversa}$                                | <u>762</u>                          |
|                                      | <u>1617, 1628, 1632, 1643,</u>      |                                                       | <u>638, 640, 645, 647, 649,</u>  | $\backslash\text{viz}$                                      | <u>764</u>                          |
|                                      | <u>1647, 1662, 1666, 1677,</u>      |                                                       | <u>651, 653, 675, 677, 681,</u>  | $\backslash\text{vs}$                                       | <u>763</u>                          |
|                                      | <u>1681, 1692, 1696, 1769,</u>      |                                                       | <u>687, 689, 691, 693, 695,</u>  |                                                             |                                     |
|                                      | <u>1786, 1803, 1820, 1837,</u>      |                                                       | <u>700, 702, 704, 706, 708,</u>  |                                                             | <b>W</b>                            |
|                                      | <u>1854, 1871, 1888, 1905</u>       |                                                       | <u>714, 716, 718, 720, 722,</u>  | $\backslash\text{WATL}$                                     | 1661                                |
| $\text{\tt txtname,}\mathbb{U}\dots$ | <u>488</u>                          |                                                       | <u>727, 729, 731, 733, 735,</u>  | $\backslash\text{WATLP}$                                    | 1676                                |
| $\text{\tt txtoarg}$                 | <u>320</u>                          |                                                       | <u>929, 930, 931, 932, 950,</u>  | $\backslash\text{WATLS}$                                    | 1691                                |
| $\text{\tt txtoargcom}$              | 1054, 1070                          |                                                       | <u>951, 952, 953, 955, 956,</u>  | $\backslash\text{WAutSet}$                                  | <u>1951</u>                         |
| $\text{\tt txtopar}$                 | <u>324</u>                          |                                                       | <u>957, 958, 959, 960, 1027,</u> | $\backslash\text{Wautset}$                                  | 1951, 1952                          |
| $\text{\tt txtoparcom}$              | 1072                                |                                                       | <u>1028, 1029, 1030, 1031,</u>   | $\backslash\text{WCTL}$                                     | 1612                                |
| $\text{\tt txtpar}$                  | <u>322</u>                          |                                                       | <u>1032, 1033, 1034, 1035,</u>   | $\backslash\text{WCTLP}$                                    | 1627                                |
| $\text{\tt txtsty}$                  |                                     |                                                       | <u>1036, 1037, 1045, 1046,</u>   | $\backslash\text{WCTLs}$                                    | 1642                                |
|                                      | <u>317, 319, 321, 323, 325, 326</u> |                                                       | <u>1266, 1268, 1270, 1272,</u>   | $\backslash\text{wghset}$                                   | <u>1241, 1242</u>                   |
| $\text{\tt txtstyabr}$               | 476                                 |                                                       | <u>1274, 1276, 1278, 1280,</u>   | $\backslash\text{WghSet,}\mathbb{U}\backslash\text{wghFun}$ | <u>1240</u>                         |
| $\text{\tt txtstycom}$               | 501                                 |                                                       | <u>1282, 1284, 1288, 1289,</u>   | $\backslash\text{wghsym}$                                   | 1240, 1242                          |
| $\text{\tt txtstydef}$               | 464                                 |                                                       | <u>1290, 1291, 1292, 1293,</u>   | $\backslash\text{WH}$                                       | <u>1092</u>                         |
| $\text{\tt txtstyname}$              | 489                                 |                                                       | <u>1294, 1298, 1299, 1300,</u>   | $\backslash\text{widehat}$                                  | 846                                 |
| $\text{\tt txtsubsup}$               | <u>294, 313</u>                     |                                                       | <u>1301, 1331, 1332, 1338,</u>   | $\backslash\text{widetilde}$                                | 848                                 |
|                                      |                                     |                                                       | <u>1344, 1345, 1351, 1357,</u>   | $\backslash\text{WinSet}$                                   | <u>1146</u>                         |
| <b>U</b>                             |                                     |                                                       | <u>1358, 1394, 1396, 1504,</u>   | $\backslash\text{winset}$                                   | 1146, 1147                          |
| $\backslash\text{UAFMC}$             | 1564                                |                                                       | <u>1505, 1506, 1592, 1593,</u>   | $\backslash\text{Wlogx}$                                    | <u>799</u>                          |
| $\backslash\text{UAGSL}$             | 1833                                |                                                       | <u>1594, 1595, 1596, 1597,</u>   | $\backslash\text{wlogx}$                                    | <u>796</u>                          |
| $\backslash\text{UATL}$              | 1669                                |                                                       | <u>1598, 1599, 1600, 1601,</u>   | $\backslash\text{WMPL}$                                     | 1480                                |
| $\backslash\text{UATLP}$             | 1684                                |                                                       | <u></u>                          | $\backslash\text{WMSO}$                                     | 1424                                |
| $\backslash\text{UATLS}$             | 1699                                |                                                       | <u>1653, 1654, 1915, 1916</u>    | $\backslash\text{WMSOL}$                                    | 1422                                |
| $\backslash\text{UBF}$               | 1260                                | $\backslash\text{usrnthgrklet}$                       | <u>450</u>                       | $\backslash\text{WMTL}$                                     | 1457                                |
| $\backslash\text{UBGSL}$             | 1867                                | $\backslash\text{usrnthgrklow}$                       | <u>446</u>                       | $\backslash\text{wotFun}$                                   | <u>1992</u>                         |
| $\backslash\text{UCGSL}$             | 1799                                | $\backslash\text{usrnthgrkupp}$                       | <u>448</u>                       | $\backslash\text{wotfun}$                                   | 1992, 1993                          |
| $\backslash\text{UCTL}$              | 1620                                | $\backslash\text{usrnthlatlet}$                       | <u>444</u>                       | $\backslash\text{wp}$                                       | 1295                                |
| $\backslash\text{UCTLP}$             | 1635                                | $\backslash\text{usrnthlatlow}$                       | <u>440</u>                       | $\backslash\text{WPL}$                                      | 1468                                |
| $\backslash\text{UCTLS}$             | 1650                                | $\backslash\text{usrnthlatupp}$                       | <u>442,</u>                      | $\backslash\text{wordset}$                                  | 1969, 1970                          |
| $\backslash\text{UDGSL}$             | 1816                                |                                                       | <u>1130, 1145, 1264, 1308,</u>   | $\backslash\text{WrdSet,}\mathbb{U}\dots$                   | <u>1968</u>                         |
| $\backslash\text{UEGSL}$             | 1850                                |                                                       | <u>1327, 1334, 1340, 1347,</u>   | $\backslash\text{wrdsym}$                                   | 1968, 1970                          |
| $\backslash\text{UFAGSL}$            | 1841                                |                                                       | <u>1353, 1361, 1363, 1365,</u>   | $\backslash\text{wrlset}$                                   | 1523, 1524                          |
| $\backslash\text{UFBGSL}$            | 1875                                |                                                       | <u>1367, 1521, 1709, 1948</u>    | $\backslash\text{WrlSet,}\mathbb{U}\dots$                   | <u>1522</u>                         |
| $\backslash\text{UFCGSL}$            | 1807                                | $\backslash\text{usrnthlet}$                          | <u>456, 598, 600</u>             | $\backslash\text{wrlsym}$                                   | <u>1522, 1524, 1525</u>             |
| $\backslash\text{UFDGSL}$            | 1824                                | $\backslash\text{usrnthlow}$                          | 452                              |                                                             |                                     |

|               |            |         |                   |                        |
|---------------|------------|---------|-------------------|------------------------|
| \wrpfig@false | 111        | \WTL    | 1445              | 1854, 1871, 1888, 1905 |
| \wrpfig@true  | 110        |         |                   | \xi 1175, 1309, 1756   |
|               |            | X       |                   |                        |
| \wrt          | <u>795</u> | \X,□... | <u>1592</u>       | \xspace 294            |
| \WS0          | 1406       | \XGSL   | 1896, 1900, 1902  | Y                      |
| \WSOL         | 1404       | \xGSL   | 1803, 1820, 1837, | \Y,□... <u>1597</u>    |