

# 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 v0.31 of the fmocdmac package, last revised 2025/04/21.

```

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 graphs
83 \newif\ifgrp@ \grp@false
84 \DeclareOption{grp}{\grp@true\txtgen@true\mthgen@true}
85 \DeclareOption{nogrp}{\grp@false}
86
87 %% Macros for games
88 \newif\ifgam@ \gam@false
89 \DeclareOption{gam}{\gam@true\txtgen@true\mthgen@true}
90 \DeclareOption{nogam}{\gam@false}
91
92 %% Macros for logics
93 \newif\iflog@ \log@false
94 \DeclareOption{log}{\log@true\txtgen@true\mthgen@true}
95 \DeclareOption{nolog}{\log@false}
96
97 %% Macros for automata

```

```

98 \newif\ifaut@ \aut@false
99 \DeclareOption{aut}{\aut@true\txtgen@true\mthgen@true}
100 \DeclareOption{noaut}{\aut@false}
101
102
103 %% Format-related tricks
104 \newif\iffrm@ \frm@false
105 \DeclareOption{frm}{\frm@true}
106 \DeclareOption{nofrm}{\frm@false}
107
108
109 %% Figure-related tricks
110 \newif\iffig@ \fig@false
111 \DeclareOption{fig}{\fig@true}
112 \DeclareOption{nofig}{\fig@false}
113
114 %% Wrapfig package
115 \newif\ifwrpfig@ \wrpfig@true
116 \DeclareOption{nowrpfig}{\wrpfig@false}
117
118
119 %% Table-related tricks
120 \newif\iftab@ \tab@false
121 \DeclareOption{tab}{\tab@true}
122 \DeclareOption{notab}{\tab@false}
123
124
125 %% Algorithm-related tricks
126 \newif\ifalg@ \alg@false
127 \DeclareOption{alg}{\alg@true}
128 \DeclareOption{noalg}{\alg@false}
129

```

### Option-processing code:

```

130
131 \DeclareOption*{\PackageWarning{fmodcmac}{Unknown~'\CurrentOption'}}%
132
133 \ExecuteOptions{aux,txtgen,mthgen,txt,mth,com,grp,gam,log,aut}%
134
135 \ProcessOptions\relax%
136
137 \ifcsdef{if@twocolumn}{\newif\if@twocolumn}
138

```

### Package main body:

```

139
140 %%*****
141 %%** Auxiliary Alphabet Letters *****
142 %%*****

```

$\omicron$  Auxiliary Greek lowercase letter: ... to do!

```

143 \csdef{omicron}{o}

```

$\Alpha$  Auxiliary Greek uppercase letters: ... to do!

```

... 144 \csdef{Alpha}{A} \csdef{Beta}{B} \csdef{Epsilon}{E} \csdef{varEpsilon}{E}
145 \csdef{Zeta}{Z} \csdef{Eta}{H} \csdef{Iota}{I} \csdef{Kappa}{K}
146 \csdef{varKappa}{K} \csdef{Mu}{M} \csdef{Nu}{N} \csdef{Omicron}{O}
147 \csdef{Rho}{P} \csdef{varRho}{P} \csdef{Tau}{T} \csdef{Chi}{X}
148 %%*****
149 %%*****
150 %%** Tools *****
151 %%*****

```

**\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”

```
152 \newrobustcmd{\empchk}[2]
153   {\if&#1&\else#2\fi}
```

**\defval Default value:** `\defval{<A>}{<B>}` evaluates to Argument  $\langle B \rangle$ , if Argument  $\langle A \rangle$  is empty, and to Argument  $\langle A \rangle$  itself, otherwise.

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

```
154 \newrobustcmd{\defval}[2]
155   {\if&#1&#2\else#1\fi}
```

```
156 %%*****%
```

**\arglef Left extension:** `\arglef{<A>}{<B>}` evaluates to the concatenation  $\langle AB \rangle$  of the two arguments, if Argument  $\langle B \rangle$  is non-empty, and to the empty string, otherwise.

- `\arglef{A}{}{}` = “”
- `\arglef{A}{B}` = “AB”

```
157 \newrobustcmd{\arglef}[2]
158   {\empchk{#2}{#1#2}}
```

**\argrig Right extension:** `\argrig{<A>}{<B>}` evaluates to the concatenation  $\langle AB \rangle$  of the two arguments, if Argument  $\langle A \rangle$  is non-empty, and to the empty string, otherwise.

- `\argrig{}{B}` = “”
- `\argrig{A}{B}` = “AB”

```
159 \newrobustcmd{\argrig}[2]
160   {\empchk{#1}{#1#2}}
```

**\argmid Middle extension:** `\argmid{<A>}{<B>}{<C>}` evaluates to the concatenation  $\langle ABC \rangle$  of the three arguments, if Argument  $\langle B \rangle$  is non-empty, and to the empty string, otherwise.

- `\argmid{A}{}{C}` = “”
- `\argmid{A}{B}{C}` = “ABC”

```
161 \newrobustcmd{\argmid}[3]
162   {\empchk{#2}{#1#2#3}}
```

**\argsep Separators:** `\argsep{<A>}{<B>}{<C>}` evaluates to Argument  $\langle C \rangle$ , if Argument  $\langle A \rangle$  is empty, to Argument  $\langle A \rangle$ , if Argument  $\langle C \rangle$  is empty, and to the concatenation  $\langle ABC \rangle$ , otherwise.

- `\argsep{}{B}{C}` = “C”
- `\argsep{A}{B}{}{}` = “A”
- `\argsep{A}{}{C}` = “AC”
- `\argsep{A}{B}{C}` = “ABC”

```
163 \newrobustcmd{\argsep}[3]
164   {\if&#1&#3\else#1\arglef{#2}{#3}\fi}
```

```
165 %%*****%
```

**\ifstarvar Command star variants:** `\ifstarvar{<A>}{<B>}` ... to do!

```
166 \newrobustcmd{\ifstarvar}
167   {\@ifstar}
```

**\ifexclavar Command exclamation variants:** `\ifexclavar{<A>}{<B>}` ... to do!

```
168 \newrobustcmd{\ifexclavar}[1]
169   {\@ifnextchar!\@firstoftwo{#1}}}
```

```

\ifquestvar Command questionmark variants: \ifquestvar{⟨A⟩}{⟨B⟩} ... to do!
170 \newrobustcmd{\ifquestvar}[1]
171   {\@ifnextchar?{\@firstoftwo{#1}}}

172 %%*****%

\varcmd Variadic commands: \varcmd{⟨A⟩}{⟨B⟩}{⟨C⟩}{⟨D⟩}{⟨E⟩}{⟨F⟩} ... to do!
173 \newrobustcmd{\varcmd}[6]
174   {\expandafter\newcommand\csname gobble#1arg\endcsname[2]
175     {\csname check#1arg\endcsname%
176       {\argsep{##1}{#4\allowbreak}{\empchk{##2}{##2}}}}}%
177   \expandafter\newcommand\csname check#1arg\endcsname[1]
178     {\csname @ifnextchar\endcsname%
179       \bgroup{\csname gobble#1arg\endcsname{##1}{#2{##1#5}#6}}}%
180   \expandafter\newcommand\csname#1\endcsname[1]
181     {\csname check#1arg\endcsname{#3##1}}}

182 %%*****%

\seqoftag Sequence of tags: \seqoftag{⟨A⟩}{⟨B⟩}{⟨C⟩} ... to do!
183 \newrobustcmd{\seqoftag}[3]
184   {\@for\itr:={#1}\do%
185     {\expandafter\csedef{\itr#2}%
186       {\noexpand\csname #3\endcsname{\itr}}}}

\seqofcmd Sequence of commands: \seqofcmd{⟨A⟩}{⟨B⟩}{⟨C⟩} ... to do!
187 \newrobustcmd{\seqofcmd}[3]
188   {\@for\itr:={#1}\do%
189     {\expandafter\csedef{\itr#2}%
190       {\noexpand\csname #3\endcsname{\csname \itr\endcsname}}}}

191 %%*****%

\seqoflatlow Sequence of Latin lowercase letters: \seqoflatlow{⟨A⟩}{⟨B⟩} ... to do!
192 \newrobustcmd{\seqoflatlow}
193   {\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!
194 \newrobustcmd{\seqoflatupp}
195   {\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!
196 \newrobustcmd{\seqoflatlet}[2]
197   {\seqoflatlow{#1}{#2}\seqoflatupp{#1}{#2}}

198 %%*****%

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

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

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

```

```

209 %*****%

\seqoflow Sequence of lowercase letters: \seqoflow{<A>}{<B>} ... to do!
210 \newrobustcmd{\seqoflow}[2]
211   {\seqoflatlow{#1}{#2}\seqofgrklow{#1}{#2}}

\seqofupp Sequence of uppercase letters: \seqofupp{<A>}{<B>} ... to do!
212 \newrobustcmd{\seqofupp}[2]
213   {\seqoflatupp{#1}{#2}\seqofgrkupp{#1}{#2}}

\seqoflet Sequence of all letters: \seqoflet{<A>}{<B>} ... to do!
214 \newrobustcmd{\seqoflet}[2]
215   {\seqoflow{#1}{#2}\seqofupp{#1}{#2}}

216 %*****%
217 %*****%
218 %** Auxiliary Packages *****%
219 %*****%
220 \ifaux@
221
222 \ifamsdef@
223   % AMS Packages
224   \RequirePackage{mathtools}
225   \RequirePackage{amssymb}
226   \RequirePackage{stmaryrd}
227   \interdisplaylinepenalty=2500
228 \fi
229
230 \ifamsthm@
231   % AMS Theorem Tools
232   \RequirePackage{amsthm}
233 \fi
234
235 \ifthmtls@
236   % Extended Theorem Tools
237   \RequirePackage{thmtools}
238   \RequirePackage{thm-restate}
239 \fi
240
241 \ifenmtls@
242   % Enumeration Tools
243   \RequirePackage{paralist}
244 \fi
245
246 \ifhypref@
247   % Hyper References
248   \RequirePackage{hyperref}
249   \hypersetup {
250     pdfsubject      = {},
251     pdfkeywords     = {},
252     pdfproducer     = {},
253     pdfcreator      = {},
254     pdfpagemode     = {UseNone},
255     pdfstartview    = {FitH},
256     urlcolor        = {blue},
257     colorlinks
258   }
259 \fi
260
261 \iffnttls@
262   % Font Tools
263   \RequirePackage[final]{microtype}
264 \fi

```

```

265
266 \ifcrv@
267   % Camera-Ready Version
268
269   %%...
270
271 \else
272   % Draft Version
273
274   %%...
275
276 \ifchgbar@
277   % Change Bars
278   \RequirePackage{changebar}
279 \fi
280
281 \iflinnum@
282   % Line Numbers
283   \if@twocolumn
284     \RequirePackage[switch, columnwise, mathlines]{lineno}\linenumbers
285   \else
286     \RequirePackage[columnwise, mathlines]{lineno}\linenumbers
287   \fi
288 \fi
289
290   %%...
291
292 \fi
293
294 \fi
295 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
296 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
297 %** Auxiliary Font Declarations %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
298 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

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

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

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

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

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

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

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

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

```

303 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
304 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
305 %** Text Meta Commands %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
306 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

`\newtxt` ... to do!

- `\newtxt[\rmfamily]{Name}[sub][sup][Ext] = “NamesubsupExt”`
- `\newtxt[\sffamily]{Name}[sub][sup][Ext] = “NamesubsupExt”`
- `\newtxt[\ttfamily]{Name}[sub][sup][Ext] = “NamesubsupExt”`
- `\newtxt![\rmfamily]{Name}[sub][sup][Ext] = “NamesubsupExt”`
- `\newtxt![\sffamily]{Name}[sub][sup][Ext] = “NamesubsupExt”`
- `\newtxt![\ttfamily]{Name}[sub][sup][Ext] = “NamesubsupExt”`

```

307 \DeclareRobustCommand{\newtxt}
308   {\ifexclavar{\@snewtxt}{\@newtxt}}
309 \DeclareRobustCommandx{\@newtxt}[5][1=, 3=, 4=, 5=]
310   {\text{\#1\#2\txtsubsup{\#1}{\#3}{\#4}{\#5}\xspace}}
311 \DeclareRobustCommandx{\@snewtxt}[5][1=, 3=, 4=, 5=]
312   {\#1\#2\txtsubsup{\#1}{\#3}{\#4}{\#5}\normalfont\xspace}}

```

\newtxtsty ... to do!

- \newtxtsty{\rmfamily}{Name}[sub][sup][Ext] = “Name<sup>sub</sup>Ext”
- \newtxtsty{\rmfamily}[\sffamily]{Name}[sub][sup][Ext] = “Name<sup>sub</sup>Ext”
- \newtxtsty{\rmfamily}[\ttfamily]{Name}[sub][sup][Ext] = “Name<sup>sub</sup>Ext”
- \newtxtsty!\rmfamily}{Name}[sub][sup][Ext] = “Name<sup>sub</sup>Ext”
- \newtxtsty!\rmfamily}[\sffamily]{Name}[sub][sup][Ext] = “Name<sup>sub</sup>Ext”
- \newtxtsty!\rmfamily}[\ttfamily]{Name}[sub][sup][Ext] = “Name<sup>sub</sup>Ext”

```

313 \DeclareRobustCommand{\newtxtsty}
314   {\ifexclavar{\@snewtxtsty}{\@newtxtsty}}
315 \DeclareRobustCommandx{\@newtxtsty}[2][2=]
316   {\newtxt[\defval{\#2}{\#1}]}
317 \DeclareRobustCommandx{\@snewtxtsty}[2][2=]
318   {\newtxt![\defval{\#2}{\#1}]}

```

\newtxtarg ... to do!

- \newtxtarg{\rmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtarg[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtarg[\ttfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtarg!\rmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtarg!\rmfamily}[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtarg!\rmfamily}[\ttfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”

```

319 \DeclareRobustCommand{\newtxtarg}
320   {\ifexclavar{\@snewtxtarg}{\@newtxtarg}}
321 \DeclareRobustCommandx{\@newtxtarg}[7][1=, 3=, 4=, 5=, 7=]
322   {\newtxt{\#1}{\#2}{\#3}{\#4}[\argmid{\#5}{\#6}{\#7}]}
323 \DeclareRobustCommandx{\@snewtxtarg}[7][1=, 3=, 4=, 5=, 7=]
324   {\newtxt!\#1}{\#2}{\#3}{\#4}[\argmid{\#5}{\#6}{\#7}]}

```

\newtxtargsty ... to do!

- \newtxtargsty{\rmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtargsty{\rmfamily}[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtargsty{\rmfamily}[\ttfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtargsty!\rmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtargsty!\rmfamily}[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”
- \newtxtargsty!\rmfamily}[\ttfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = “Name<sup>sub</sup>Ext1(Arg)Ext2”

```

325 \DeclareRobustCommand{\newtxtargsty}
326   {\ifexclavar{\@snewtxtargsty}{\@newtxtargsty}}
327 \DeclareRobustCommandx{\@newtxtargsty}[2][2=]
328   {\newtxtarg[\defval{\#2}{\#1}]}
329 \DeclareRobustCommandx{\@snewtxtargsty}[2][2=]
330   {\newtxtarg![\defval{\#2}{\#1}]}

```

\newtxtoarg ... to do!

- \newtxtoarg{\rmfamily}{Name}[sub][sup][Arg] = “Name<sup>sub</sup>(Arg)”
- \newtxtoarg[\sffamily]{Name}[sub][sup][Arg] = “Name<sup>sub</sup>(Arg)”
- \newtxtoarg[\ttfamily]{Name}[sub][sup][Arg] = “Name<sup>sub</sup>(Arg)”
- \newtxtoarg!\rmfamily}{Name}[sub][sup][Arg] = “Name<sup>sub</sup>(Arg)”
- \newtxtoarg!\rmfamily}[\sffamily]{Name}[sub][sup][Arg] = “Name<sup>sub</sup>(Arg)”



- $\backslash\text{newtxtoarg}!\{\text{ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$

```

331 \DeclareRobustCommand{\newtxtoarg}
332   {\ifexclavar{\@snewtxtoarg}\@newtxtoarg}}
333 \DeclareRobustCommand{\@newtxtoarg}[5][1=, 3=, 4=, 5=]
334   {\newtxtarg[#1]{#2}[#3][#4][#5]}
335 \DeclareRobustCommand{\@snewtxtoarg}[5][1=, 3=, 4=, 5=]
336   {\newtxtarg![#1]{#2}[#3][#4][#5]}

```

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

- $\backslash\text{newtxtoargsty}\{\text{rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\backslash\text{newtxtoargsty}\{\text{rmfamily}\}\{\text{sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\backslash\text{newtxtoargsty}\{\text{rmfamily}\}\{\text{ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\backslash\text{newtxtoargsty}!\{\text{rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\backslash\text{newtxtoargsty}!\{\text{rmfamily}\}\{\text{sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$
- $\backslash\text{newtxtoargsty}!\{\text{rmfamily}\}\{\text{ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg})$

```

337 \DeclareRobustCommand{\newtxtoargsty}
338   {\ifexclavar{\@snewtxtoargsty}\@newtxtoargsty}}
339 \DeclareRobustCommand{\@newtxtoargsty}[2][2=]
340   {\newtxtoarg[\defval{#2}]{#1}}
341 \DeclareRobustCommand{\@snewtxtoargsty}[2][2=]
342   {\newtxtoarg!\defval{#2}]{#1}}

```

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

- $\backslash\text{newtxtpar}[\text{rmfamily}]\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtpar}[\text{sffamily}]\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtpar}[\text{ttfamily}]\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtpar}!\{\text{rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtpar}!\{\text{sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtpar}!\{\text{ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$

```

343 \DeclareRobustCommand{\newtxtpar}
344   {\ifexclavar{\@snewtxtpar}\@newtxtpar}}
345 \DeclareRobustCommand{\@newtxtpar}[7][1=, 3=, 4=, 5=, 7=]
346   {\newtxt[#1]{#2}[#3][#4][\argmid{#5}{#6}]{#7}}
347 \DeclareRobustCommand{\@snewtxtpar}[7][1=, 3=, 4=, 5=, 7=]
348   {\newtxt![#1]{#2}[#3][#4][\argmid{#5}{#6}]{#7}}

```

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

- $\backslash\text{newtxtparsty}\{\text{rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtparsty}\{\text{rmfamily}\}\{\text{sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtparsty}\{\text{rmfamily}\}\{\text{ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtparsty}!\{\text{rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtparsty}!\{\text{rmfamily}\}\{\text{sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$
- $\backslash\text{newtxtparsty}!\{\text{rmfamily}\}\{\text{ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$

```

349 \DeclareRobustCommand{\newtxtparsty}
350   {\ifexclavar{\@snewtxtparsty}\@newtxtparsty}}
351 \DeclareRobustCommand{\@newtxtparsty}[2][2=]
352   {\newtxtpar[\defval{#2}]{#1}}
353 \DeclareRobustCommand{\@snewtxtparsty}[2][2=]
354   {\newtxtpar!\defval{#2}]{#1}}

```

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

- $\backslash\text{newtxtopar}[\text{rmfamily}]\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\backslash\text{newtxtopar}[\text{sffamily}]\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\backslash\text{newtxtopar}[\text{ttfamily}]\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$
- $\backslash\text{newtxtopar}!\{\text{rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}]$

- $\text{\newtxtopar!}\{\text{\sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\newtxtopar!}\{\text{\ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$

```
355 \DeclareRobustCommand{\newtxtopar}
356   {\ifexclavar{\@snewtxtopar}\@newtxtopar}}
357 \DeclareRobustCommand{\@newtxtopar}[5][1=, 3=, 4=, 5=]
358   {\newtxtpar[#1]{#2}[#3][#4][#5]}
359 \DeclareRobustCommand{\@snewtxtopar}[5][1=, 3=, 4=, 5=]
360   {\newtxtpar! [#1]{#2}[#3][#4][#5]}
```

$\text{\newtxtoparsty}$  ... to do!

- $\text{\newtxtoparsty}\{\text{\rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\newtxtoparsty}\{\text{\rmfamily}\}\{\text{\sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\newtxtoparsty}\{\text{\rmfamily}\}\{\text{\ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\newtxtoparsty!}\{\text{\rmfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\newtxtoparsty!}\{\text{\rmfamily}\}\{\text{\sffamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\newtxtoparsty!}\{\text{\rmfamily}\}\{\text{\ttfamily}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$

```
361 \DeclareRobustCommand{\newtxtoparsty}
362   {\ifexclavar{\@snewtxtoparsty}\@newtxtoparsty}}
363 \DeclareRobustCommand{\@newtxtoparsty}[2][2=]
364   {\newtxtopar[\defval{#2}]{#1}}
365 \DeclareRobustCommand{\@snewtxtoparsty}[2][2=]
366   {\newtxtopar! [\defval{#2}]{#1}}
```

$\text{\txtsubsup}$  ... to do!

- $\text{\txtsubsup}\{\text{sub}\} = \text{"sub"}; \text{\txtsubsup}\{\text{sup}\} = \text{"sup"}; \text{\txtsubsup}\{\text{sub}\}\{\text{sup}\} = \text{"sub}_{\text{sub}}^{\text{sup}}"$
- $\text{\txtsubsup}\{\text{\sffamily}\}\{\text{Aa}\}\{\text{Bb}\} = \text{"Bb}_{\text{Aa}}"$
- $\text{\txtsubsup}\{\text{\ttfamily}\}\{\text{Aa}\}\{\text{Bb}\} = \text{"Bb}_{\text{Aa}}"$

```
367 \DeclareRobustCommand{\txtsubsup}[3]{}
368   {\ensuremath{\empchk{#2}\_{\text{\text{#1#2}}}\empchk{#3}\_{\text{\text{#1#3}}}}}}
369 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

$\text{\txt}$  ... to do!

- $\text{\txt}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext}"$
- $\text{\txt}\{\text{\scshape}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}"$
- $\text{\txt}\{\text{\bfseries}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext}"$
- $\text{\txt!}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext}"$
- $\text{\txt!}\{\text{\scshape}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}"$
- $\text{\txt!}\{\text{\bfseries}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext}"$

```
370 \DeclareRobustCommand{\txt}
371   {\ifexclavar{\newtxtsty}\@newtxtsty}\@newtxtsty}
```

$\text{\txtarg}$  ... to do!

- $\text{\txtarg}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}"$
- $\text{\txtarg}\{\text{\scshape}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}"$
- $\text{\txtarg}\{\text{\bfseries}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}"$
- $\text{\txtarg!}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}"$
- $\text{\txtarg!}\{\text{\scshape}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}"$
- $\text{\txtarg!}\{\text{\bfseries}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}"$

```
372 \DeclareRobustCommand{\txtarg}
373   {\ifexclavar{\newtxtargsty}\@newtxtargsty}\@newtxtargsty}
```

$\text{\txtoarg}$  ... to do!

- $\text{\txtoarg}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{"Name}_{\text{sub}}^{\text{sup}}(\text{Arg})"$
- $\text{\txtoarg}\{\text{\scshape}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}(\text{ARG})"$

- $\text{\texttt{\textbackslash txtoarg}}\{\text{\texttt{\textbackslash bfseries}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{"Name}_{\text{sub}}^{\text{sup}}(\text{Arg})"$
- $\text{\texttt{\textbackslash txtoarg}}!\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{"Name}_{\text{sub}}^{\text{sup}}(\text{Arg})"$
- $\text{\texttt{\textbackslash txtoarg}}!\{\text{\texttt{\textbackslash scshape}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}(\text{ARG})"$
- $\text{\texttt{\textbackslash txtoarg}}!\{\text{\texttt{\textbackslash bfseries}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{"Name}_{\text{sub}}^{\text{sup}}(\text{Arg})"$

```
374 \DeclareRobustCommand{\txtoarg}
375   {\ifexclavar{\newtxtoargsty!\txtsty}}{\newtxtoargsty{\txtsty}}}
```

$\text{\texttt{\textbackslash txtpar}}$  ... to do!

- $\text{\texttt{\textbackslash txtpar}}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}"$
- $\text{\texttt{\textbackslash txtpar}}\{\text{\texttt{\textbackslash scshape}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}[\text{PAR}]\text{EXT2}"$
- $\text{\texttt{\textbackslash txtpar}}\{\text{\texttt{\textbackslash bfseries}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}"$
- $\text{\texttt{\textbackslash txtpar}}!\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}"$
- $\text{\texttt{\textbackslash txtpar}}!\{\text{\texttt{\textbackslash scshape}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}[\text{PAR}]\text{EXT2}"$
- $\text{\texttt{\textbackslash txtpar}}!\{\text{\texttt{\textbackslash bfseries}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Par}][\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}"$

```
376 \DeclareRobustCommand{\txtpar}
377   {\ifexclavar{\newtxtparsty!\txtsty}}{\newtxtparsty{\txtsty}}}
```

$\text{\texttt{\textbackslash txtopar}}$  ... to do!

- $\text{\texttt{\textbackslash txtopar}}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\texttt{\textbackslash txtopar}}\{\text{\texttt{\textbackslash scshape}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}[\text{PAR}]"$
- $\text{\texttt{\textbackslash txtopar}}\{\text{\texttt{\textbackslash bfseries}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\texttt{\textbackslash txtopar}}!\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$
- $\text{\texttt{\textbackslash txtopar}}!\{\text{\texttt{\textbackslash scshape}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"NAME}_{\text{SUB}}^{\text{SUP}}[\text{PAR}]"$
- $\text{\texttt{\textbackslash txtopar}}!\{\text{\texttt{\textbackslash bfseries}}\}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"$

```
378 \DeclareRobustCommand{\txtopar}
379   {\ifexclavar{\newtxtoparsty!\txtsty}}{\newtxtoparsty{\txtsty}}}
```

$\text{\texttt{\textbackslash txtsty}}$  ... to do!

```
380 \DeclareRobustCommand{\txtsty}
381   {\mdseries\upshape\rmfamily}

382 %%*****%
```

$\text{\texttt{\textbackslash cmdtxt}}$  ... to do!

- $\text{\texttt{\textbackslash cmdtxt}}\{\text{NewCmd}\}; \text{\texttt{\textbackslash newcommand}}\{\text{txtstyNewCmd}\}\{\text{\texttt{\textbackslash scshape}}\text{\texttt{\textbackslash ttfamily}}\};$   
 $\text{\texttt{\textbackslash txtNewCmd}}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}$   
 $\text{\texttt{\textbackslash txtNewCmd}}!\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}$

```
383 \DeclareRobustCommand{\cmdtxt}[1]
384   {\csdef{txt#1}%
385     {\protect\ifexclavar%
386       {\newtxtsty!\csname txtsty#1\endcsname}}%
387     {\newtxtsty{\csname txtsty#1\endcsname}}}}
```

$\text{\texttt{\textbackslash cmdtxtarg}}$  ... to do!

- $\text{\texttt{\textbackslash cmdtxtarg}}\{\text{NewCmd}\}; \text{\texttt{\textbackslash newcommand}}\{\text{txtstyNewCmd}\}\{\text{\texttt{\textbackslash scshape}}\text{\texttt{\textbackslash ttfamily}}\};$   
 $\text{\texttt{\textbackslash txtargNewCmd}}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Arg}][\text{Ext2}] = \text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}$   
 $\text{\texttt{\textbackslash txtargNewCmd}}!\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}][\text{Arg}][\text{Ext2}] = \text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}$

```
388 \DeclareRobustCommand{\cmdtxtarg}[1]
389   {\csdef{txtarg#1}%
390     {\protect\ifexclavar%
391       {\newtxtargsty!\csname txtsty#1\endcsname}}%
392     {\newtxtargsty{\csname txtsty#1\endcsname}}}}
```

$\text{\texttt{\textbackslash cmdtxtoarg}}$  ... to do!

- $\text{\texttt{\textbackslash cmdtxtoarg}}\{\text{NewCmd}\}; \text{\texttt{\textbackslash newcommand}}\{\text{txtstyNewCmd}\}\{\text{\texttt{\textbackslash scshape}}\text{\texttt{\textbackslash ttfamily}}\};$   
 $\text{\texttt{\textbackslash txtoargNewCmd}}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{NAME}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$   
 $\text{\texttt{\textbackslash txtoargNewCmd}}!\{\text{Name}\}[\text{sub}][\text{sup}][\text{Arg}] = \text{NAME}_{\text{SUB}}^{\text{SUP}}(\text{ARG})$

```

393 \DeclareRobustCommand{\cmdtxtoarg}[1]
394   {\csdef{txtoarg#1}%
395     {\protect\ifexclavar%
396       {\newtxtoargsty!\csname txtsty#1\endcsname}}}%
397     {\newtxtoargsty{\csname txtsty#1\endcsname}}}}

```

\cmdtxtpar ... to do!

```

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

398 \DeclareRobustCommand{\cmdtxtpar}[1]
399   {\csdef{txtpar#1}%
400     {\protect\ifexclavar%
401       {\newtxtparsty!\csname txtsty#1\endcsname}}}%
402     {\newtxtparsty{\csname txtsty#1\endcsname}}}}

```

\cmdtxtopar ... to do!

```

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

403 \DeclareRobustCommand{\cmdtxtopar}[1]
404   {\csdef{txtopar#1}%
405     {\protect\ifexclavar%
406       {\newtxtoparsty!\csname txtsty#1\endcsname}}}%
407     {\newtxtoparsty{\csname txtsty#1\endcsname}}}}

```

\cmdtxtall ... to do!

```

• \cmdtxtall{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtNewCmd{Name}[sub][sup][Ext] = NAMESUBEXT
  \xtargNewCmd{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]

408 \DeclareRobustCommand{\cmdtxtall}[1]
409   {\cmdtxt{#1}\cmdxtarg{#1}\cmdtxtoarg{#1}\cmdtxtpar{#1}\cmdtxtopar{#1}}

410 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

\usrtxt ... to do!

```

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

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

411 \DeclareRobustCommandx{\usrtxt}[4][4=]
412   {\csdef{#1#2}%
413     {\protect\ifexclavar%
414       {\csname txt#3\endcsname!\defval{#4}{#1}}}%
415     {\csname txt#3\endcsname{\defval{#4}{#1}}}}

```

```

416 %*****%
417 %*****%
418 %** Math Meta Commands *****%
419 %*****%

```

`\newmth ... to do!`

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

```

420 \DeclareRobustCommand{\newmth}
421   {\ifexclavar{\@snewmth}{\@newmth}}
422 \DeclareRobustCommandx{\@newmth}[5][1=, 3=, 4=, 5=]
423   {\ensuremath{\csname#1\endcsname{#2}\mthsubsup{#3}{#4}{#5}}}
424 \DeclareRobustCommandx{\@snewmth}[5][1=, 3=, 4=, 5=]
425   {\ensuremath{\csname#1\endcsname #2\mthsubsup{#3}{#4}{#5}}}

```

`\newmthsty ... to do!`

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

```

426 \DeclareRobustCommand{\newmthsty}
427   {\ifexclavar{\@snewmthsty}{\@newmthsty}}
428 \DeclareRobustCommandx{\@newmthsty}[2][2=]
429   {\newmth[\defval{#2}{#1}]}
430 \DeclareRobustCommandx{\@snewmthsty}[2][2=]
431   {\newmth![\defval{#2}{#1}]}

```

`\newmtharg ... to do!`

- `\newmtharg{mathrm}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmtharg[mathsf]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmtharg[mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmtharg!{mathrm}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmtharg!{mathsf}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmtharg!{mathtt}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`

```

432 \DeclareRobustCommand{\newmtharg}
433   {\ifexclavar{\@snewmtharg}{\@newmtharg}}
434 \DeclareRobustCommandx{\@newmtharg}[7][1=, 3=, 4=, 5=, 7=]
435   {\newmth{#1}{#2}{#3}{#4}[\argmid{#5}{\left}{#6}{\right)}\arglef{\!}{#7}]}
436 \DeclareRobustCommandx{\@snewmtharg}[7][1=, 3=, 4=, 5=, 7=]
437   {\newmth{#1}{#2}{#3}{#4}[\argmid{#5}{#6}{#7}]}

```

`\newmthargsty ... to do!`

- `\newmthargsty{mathrm}{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmthargsty{mathrm}[mathsf]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`
- `\newmthargsty{mathrm}[mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "NamesupsubExt1(ArgExEx)Ext2"`

- $\backslash\mathrm{newmthargsty}\{\mathrm{mathrm}\}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \text{“Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2\text{”}$
- $\backslash\mathrm{newmthargsty}\{\mathrm{mathrm}\}[\mathrm{mathsf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \text{“Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2\text{”}$
- $\backslash\mathrm{newmthargsty}\{\mathrm{mathrm}\}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \text{“Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2\text{”}$

```

438 \DeclareRobustCommand{\newmthargsty}
439   {\ifexclavar{\@snewmthargsty}{\@newmthargsty}}
440 \DeclareRobustCommandx{\@newmthargsty}[2][2=]
441   {\newmtharg[\defval{#2}{#1}]}
442 \DeclareRobustCommandx{\@snewmthargsty}[2][2=]
443   {\newmtharg![\defval{#2}{#1}]}

```

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

- $\backslash\mathrm{newmthoarg}[\mathrm{mathrm}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoarg}[\mathrm{mathsf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoarg}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoarg}!\{\mathrm{mathrm}\}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoarg}!\{\mathrm{mathsf}\}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoarg}!\{\mathrm{mathtt}\}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$

```

444 \DeclareRobustCommand{\newmthoarg}
445   {\ifexclavar{\@snewmthoarg}{\@newmthoarg}}
446 \DeclareRobustCommandx{\@newmthoarg}[5][1=, 3=, 4=, 5=]
447   {\newmtharg[#1]{#2}[#3][#4][#5]}
448 \DeclareRobustCommandx{\@snewmthoarg}[5][1=, 3=, 4=, 5=]
449   {\newmtharg![#1]{#2}[#3][#4][#5]}

```

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

- $\backslash\mathrm{newmthoargsty}\{\mathrm{mathrm}\}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoargsty}\{\mathrm{mathrm}\}[\mathrm{mathsf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoargsty}\{\mathrm{mathrm}\}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoargsty}!\{\mathrm{mathrm}\}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoargsty}!\{\mathrm{mathrm}\}[\mathrm{mathsf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$
- $\backslash\mathrm{newmthoargsty}!\{\mathrm{mathrm}\}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}] = \text{“Name}_{sub}^{sup}(Arg^{Ex^{Ex}})\text{”}$

```

450 \DeclareRobustCommand{\newmthoargsty}
451   {\ifexclavar{\@snewmthoargsty}{\@newmthoargsty}}
452 \DeclareRobustCommandx{\@newmthoargsty}[2][2=]
453   {\newmthoarg[\defval{#2}{#1}]}
454 \DeclareRobustCommandx{\@snewmthoargsty}[2][2=]
455   {\newmthoarg![\defval{#2}{#1}]}

```

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

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

```

456 \DeclareRobustCommand{\newmthpar}
457   {\ifexclavar{\@snewmthpar}{\@newmthpar}}
458 \DeclareRobustCommandx{\@newmthpar}[7][1=, 3=, 4=, 5=, 7=]
459   {\newmth[#1]{#2}{#3}{#4}[\argmid{#5}\!\left[\!-\!{\right]}\!\arglef{\!-\!}{#7}]]}
460 \DeclareRobustCommandx{\@snewmthpar}[7][1=, 3=, 4=, 5=, 7=]
461   {\newmth[#1]{#2}{#3}{#4}[\argmid{#5}{#6}{#7}]]}

```

\newmthparsty ... to do!

- \newmthparsty{\mathrm}{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = “Name<sup>sup</sup><sub>sub</sub>Ext1[Par<sup>Ex<sup>Ex</sup></sup>]Ext2”
- \newmthparsty{\mathrm}{\mathsf}{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = “Name<sup>sup</sup><sub>sub</sub>Ext1[Par<sup>Ex<sup>Ex</sup></sup>]Ext2”
- \newmthparsty{\mathrm}{\mathtt}{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = “Name<sup>sup</sup><sub>sub</sub>Ext1[Par<sup>Ex<sup>Ex</sup></sup>]Ext2”
- \newmthparsty!\mathrm}{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = “Name<sup>sup</sup><sub>sub</sub>Ext1[Par<sup>Ex<sup>Ex</sup></sup>]Ext2”
- \newmthparsty!\mathrm}{\mathsf}{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = “Name<sup>sup</sup><sub>sub</sub>Ext1[Par<sup>Ex<sup>Ex</sup></sup>]Ext2”
- \newmthparsty!\mathrm}{\mathtt}{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = “Name<sup>sup</sup><sub>sub</sub>Ext1[Par<sup>Ex<sup>Ex</sup></sup>]Ext2”

```

462 \DeclareRobustCommand{\newmthparsty}
463   {\ifexclavar{\@snewmthparsty}{\@newmthparsty}}
464 \DeclareRobustCommandx{\@newmthparsty}[2][2=]
465   {\newmthpar[\defval{#2}{#1}]}
466 \DeclareRobustCommandx{\@snewmthparsty}[2][2=]
467   {\newmthpar![\defval{#2}{#1}]}

```

\newmthopar ... to do!

- \newmthopar{\mathrm}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthopar{\mathrm}{\mathsf}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthopar{\mathrm}{\mathtt}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthopar!\mathrm}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthopar!\mathrm}{\mathsf}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthopar!\mathrm}{\mathtt}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”

```

468 \DeclareRobustCommand{\newmthopar}
469   {\ifexclavar{\@snewmthopar}{\@newmthopar}}
470 \DeclareRobustCommandx{\@newmthopar}[5][1=, 3=, 4=, 5=]
471   {\newmthpar[#1]{#2}{#3}{#4}[\!-\!]{#5}[\!-\!]}
472 \DeclareRobustCommandx{\@snewmthopar}[5][1=, 3=, 4=, 5=]
473   {\newmthpar![#1]{#2}{#3}{#4}[\!-\!]{#5}[\!-\!]}

```

\newmthoparsty ... to do!

- \newmthoparsty{\mathrm}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthoparsty{\mathrm}{\mathsf}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthoparsty{\mathrm}{\mathtt}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthoparsty!\mathrm}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthoparsty!\mathrm}{\mathsf}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”
- \newmthoparsty!\mathrm}{\mathtt}{Name}[sub][sup][Par^{Ex^{Ex}}] = “Name<sup>sup</sup><sub>sub</sub>[Par<sup>Ex<sup>Ex</sup></sup>]”

```

474 \DeclareRobustCommand{\newmthoparsty}
475   {\ifexclavar{\@snewmthoparsty}{\@newmthoparsty}}
476 \DeclareRobustCommandx{\@newmthoparsty}[2][2=]
477   {\newmthopar[\defval{#2}{#1}]}
478 \DeclareRobustCommandx{\@snewmthoparsty}[2][2=]
479   {\newmthopar![\defval{#2}{#1}]}

```

`\mthsubsup ... to do!`

```
480 \DeclareRobustCommand{\mthsubsup}[2]
481   {\empchk{#1}_{#1}}\empchk{#2}{^{#2}}}

482 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

`\mth ... to do!`

```
• \mth{Name}[sub][sup][Ext] = "Name_{sub}^{sup}Ext"
• \mth[\mathbf]{Name}[sub][sup][Ext] = "\mathbf{Name}_{sub}^{sup}Ext"
• \mth[\mathtt]{Name}[sub][sup][Ext] = "\mathtt{Name}_{sub}^{sup}Ext"
• \mth!\{Name}[sub][sup][Ext] = "Name_{sub}^{sup}Ext"
• \mth!\[\mathbf]{Name}[sub][sup][Ext] = "\mathbf{Name}_{sub}^{sup}Ext"
• \mth!\[\mathtt]{Name}[sub][sup][Ext] = "\mathtt{Name}_{sub}^{sup}Ext"

483 \DeclareRobustCommand{\mth}
484   {\ifexclavar{\newmthsty!{\mthsty}}{\newmthsty{\mthsty}}}
```

`\mtharg ... to do!`

```
• \mtharg{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"
• \mtharg[\mathbf]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "\mathbf{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"
• \mtharg[\mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "\mathtt{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"
• \mtharg!\{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"
• \mtharg!\[\mathbf]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "\mathbf{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"
• \mtharg!\[\mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = "\mathtt{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"

485 \DeclareRobustCommand{\mtharg}
486   {\ifexclavar{\newmthargsty!{\mthsty}}{\newmthargsty{\mthsty}}}
```

`\mthoarg ... to do!`

```
• \mthoarg{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup}(Arg^{Ex^{Ex}})"
• \mthoarg[\mathbf]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "\mathbf{Name}_{sub}^{sup}(Arg^{Ex^{Ex}})"
• \mthoarg[\mathtt]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "\mathtt{Name}_{sub}^{sup}(Arg^{Ex^{Ex}})"
• \mthoarg!\{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup}(Arg^{Ex^{Ex}})"
• \mthoarg!\[\mathbf]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "\mathbf{Name}_{sub}^{sup}(Arg^{Ex^{Ex}})"
• \mthoarg!\[\mathtt]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "\mathtt{Name}_{sub}^{sup}(Arg^{Ex^{Ex}})"

487 \DeclareRobustCommand{\mthoarg}
488   {\ifexclavar{\newmthoargsty!{\mthsty}}{\newmthoargsty{\mthsty}}}
```

`\mthpar ... to do!`

```
• \mthpar{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
• \mthpar[\mathbf]{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "\mathbf{Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
• \mthpar[\mathtt]{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "\mathtt{Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
• \mthpar!\{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
• \mthpar!\[\mathbf]{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "\mathbf{Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
• \mthpar!\[\mathtt]{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "\mathtt{Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"

489 \DeclareRobustCommand{\mthpar}
490   {\ifexclavar{\newmthparsty!{\mthsty}}{\newmthparsty{\mthsty}}}
```

`\mthopar ... to do!`



- $\text{\mthopar}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}^{\text{Ex}\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$
- $\text{\mthopar}\{\text{bf}\text{Name}\}[\text{sub}][\text{sup}][\text{Par}^{\text{Ex}\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$
- $\text{\mthopar}\{\text{ttt}\text{Name}\}[\text{sub}][\text{sup}][\text{Par}^{\text{Ex}\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$
- $\text{\mthopar}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}^{\text{Ex}\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$
- $\text{\mthopar}\{\text{bf}\text{Name}\}[\text{sub}][\text{sup}][\text{Par}^{\text{Ex}\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$
- $\text{\mthopar}\{\text{ttt}\text{Name}\}[\text{sub}][\text{sup}][\text{Par}^{\text{Ex}\text{Ex}}] = \text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$

491 \DeclareRobustCommand{\mthopar}

492 {\ifexclavar{\newmthoparsty!\mthsty}}{\newmthoparsty{\mthsty}}

\mthsty ... to do!

493 \def\mthsty

494 {}

495 %\*\*\*\*\*%

\cmdmth ... to do!

• \cmdmth{NewCmd}; \newcommand{\mthstyNewCmd}{\mathtt};

\mthNewCmd{Name}[sub][sup][Ext] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext}$

\mthNewCmd!\{Name}[sub][sup][Ext] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext}$

496 \DeclareRobustCommand{\cmdmth}[1]

497 {\csdef{mth#1}%

498 {\protect\ifexclavar{\newmthsty!\mthsty#1}}{\newmthsty{\mthsty#1}}}

\cmdmtharg ... to do!

• \cmdmtharg{NewCmd}; \newcommand{\mthstyNewCmd}{\mathtt};

\mthargNewCmd{Name}[sub][sup][Ext1]{Arg<sup>ExEx</sup>}[Ext2] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg}^{\text{Ex}\text{Ex}})\text{Ext2}$

\mthargNewCmd!\{Name}[sub][sup][Ext1]{Arg<sup>ExEx</sup>}[Ext2] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg}^{\text{Ex}\text{Ex}})\text{Ext2}$

499 \DeclareRobustCommand{\cmdmtharg}[1]

500 {\csdef{mtharg#1}%

501 {\protect\ifexclavar{\newmthargsty!\mthsty#1}}{\newmthargsty{\mthsty#1}}}

\cmdmthoarg ... to do!

• \cmdmthoarg{NewCmd}; \newcommand{\mthstyNewCmd}{\mathtt};

\mthoargNewCmd{Name}[sub][sup][Arg<sup>ExEx</sup>] =  $\text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg}^{\text{Ex}\text{Ex}})$

\mthoargNewCmd!\{Name}[sub][sup][Arg<sup>ExEx</sup>] =  $\text{Name}_{\text{sub}}^{\text{sup}}(\text{Arg}^{\text{Ex}\text{Ex}})$

502 \DeclareRobustCommand{\cmdmthoarg}[1]

503 {\csdef{mthoarg#1}%

504 {\protect\ifexclavar{\newmthoargsty!\mthsty#1}}{\newmthoargsty{\mthsty#1}}}

\cmdmthpar ... to do!

• \cmdmthpar{NewCmd}; \newcommand{\mthstyNewCmd}{\mathtt};

\mthparNewCmd{Name}[sub][sup][Ext1]{Par<sup>ExEx</sup>}[Ext2] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}^{\text{Ex}\text{Ex}}]\text{Ext2}$

\mthparNewCmd!\{Name}[sub][sup][Ext1]{Par<sup>ExEx</sup>}[Ext2] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}^{\text{Ex}\text{Ex}}]\text{Ext2}$

505 \DeclareRobustCommand{\cmdmthpar}[1]

506 {\csdef{mthpar#1}%

507 {\protect\ifexclavar{\newmthparsty!\mthsty#1}}{\newmthparsty{\mthsty#1}}}

\cmdmthopar ... to do!

• \cmdmthopar{NewCmd}; \newcommand{\mthstyNewCmd}{\mathtt};

\mthoparNewCmd{Name}[sub][sup][Par<sup>ExEx</sup>] =  $\text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$

\mthoparNewCmd!\{Name}[sub][sup][Par<sup>ExEx</sup>] =  $\text{Name}_{\text{sub}}^{\text{sup}}[\text{Par}^{\text{Ex}\text{Ex}}]$

508 \DeclareRobustCommand{\cmdmthopar}[1]

509 {\csdef{mthopar#1}%

510 {\protect\ifexclavar{\newmthoparsty!\mthsty#1}}{\newmthoparsty{\mthsty#1}}}

\cmdmthall ... to do!

- \cmdmthall{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};  
\mthNewCmd{Name}[sub][sup][Ext] = Name<sup>sub</sup><sub>sup</sub>Ext  
\mthargNewCmd{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name<sup>sub</sup><sub>sup</sub>Ext1(Arg<sup>Ex^{Ex}</sup>)Ext2  
\mthargNewCmd!{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name<sup>sub</sup><sub>sup</sub>Ext1(Arg<sup>Ex^{Ex}</sup>)Ext2  
\mthoargNewCmd{Name}[sub][sup][Arg^{Ex^{Ex}}] = Name<sup>sub</sup><sub>sup</sub>(Arg<sup>Ex^{Ex}</sup>)  
\mthoargNewCmd!{Name}[sub][sup][Arg^{Ex^{Ex}}] = Name<sup>sub</sup><sub>sup</sub>(Arg<sup>Ex^{Ex}</sup>)  
\mthparNewCmd{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name<sup>sub</sup><sub>sup</sub>Ext1[Par<sup>Ex^{Ex}</sup>]Ext2  
\mthparNewCmd!{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name<sup>sub</sup><sub>sup</sub>Ext1[Par<sup>Ex^{Ex}</sup>]Ext2  
\mthoparNewCmd{Name}[sub][sup][Par^{Ex^{Ex}}] = Name<sup>sub</sup><sub>sup</sub>[Par<sup>Ex^{Ex}</sup>]  
\mthoparNewCmd!{Name}[sub][sup][Par^{Ex^{Ex}}] = Name<sup>sub</sup><sub>sup</sub>[Par<sup>Ex^{Ex}</sup>]

```

511 \DeclareRobustCommand{\cmdmthall}[1]
512   {\cmdmth{#1}\cmdmtharg{#1}\cmdmthoarg{#1}\cmdmthpar{#1}\cmdmthopar{#1}}

513 %%*****
```

\usrmth ... to do!

- \usrmth{cmdName}{Suf}{};  
\cmdNameSuf = cmdName  
\cmdNameSuf\* = cmdName\*  
\usrmth{cmdName}{Suf}{arg};  
\cmdNameSuf{Arg^{Ex^{Ex}}} = cmdName(Arg<sup>Ex^{Ex}</sup>)  
\cmdNameSuf!{Arg^{Ex^{Ex}}} = cmdName(Arg<sup>Ex^{Ex}</sup>)  
\usrmth{cmdName}{Suf}{par};  
\cmdNameSuf{Par^{Ex^{Ex}}} = cmdName[Par<sup>Ex^{Ex}</sup>]  
\cmdNameSuf!{Par^{Ex^{Ex}}} = cmdName[Par<sup>Ex^{Ex}</sup>]
- \usrmth{cmdName}{Suf}{}[newName];  
\cmdNameSuf = newName  
\cmdNameSuf\* = newName\*  
\usrmth{cmdName}{Suf}{arg}[newName];  
\cmdNameSuf{Arg^{Ex^{Ex}}} = newName(Arg<sup>Ex^{Ex}</sup>)  
\cmdNameSuf!{Arg^{Ex^{Ex}}} = newName(Arg<sup>Ex^{Ex}</sup>)  
\usrmth{cmdName}{Suf}{par}[newName];  
\cmdNameSuf{Par^{Ex^{Ex}}} = newName[Par<sup>Ex^{Ex}</sup>]  
\cmdNameSuf!{Par^{Ex^{Ex}}} = newName[Par<sup>Ex^{Ex}</sup>]

```

514 \DeclareRobustCommandx{\usrmth}[4][4=]
515   {\csdef{#1#2}%
516     {\protect\ifexclavar%
517       {\csname mth#3\endcsname!\defval{#4}{#1}}}%
518     {\csname mth#3\endcsname{\defval{#4}{#1}}}}

519 %%*****
```

\usrmthlatlow ... to do!

```

520 \DeclareRobustCommandx{\usrmthlatlow}[4][4=]
521   {\usrmth{#1}{#2}{#3}[#4]\seqoflatlow{#1#2}{mth#3}}
```

\usrmthlatupp ... to do!

```

522 \DeclareRobustCommandx{\usrmthlatupp}[4][4=]
523   {\usrmth{#1}{#2}{#3}[#4]\seqoflatupp{#1#2}{mth#3}}
```

\usrmthlatlet ... to do!

```

524 \DeclareRobustCommandx{\usrmthlatlet}[4][4=]
525   {\usrmth{#1}{#2}{#3}[#4]\seqoflatlet{#1#2}{mth#3}}
```

```

\usrmthgrklow ... to do!
526 \DeclareRobustCommandx{\usrmthgrklow}[4][4=]
527   {\usrmth{#1}{#2}{#3}[#4]\seqofgrklow{#1#2}{mth#3}}

\usrmthgrkupp ... to do!
528 \DeclareRobustCommandx{\usrmthgrkupp}[4][4=]
529   {\usrmth{#1}{#2}{#3}[#4]\seqofgrkupp{#1#2}{mth#3}}

\usrmthgrklet ... to do!
530 \DeclareRobustCommandx{\usrmthgrklet}[4][4=]
531   {\usrmth{#1}{#2}{#3}[#4]\seqofgrklet{#1#2}{mth#3}}

\usrmthlow ... to do!
532 \DeclareRobustCommandx{\usrmthlow}[4][4=]
533   {\usrmth{#1}{#2}{#3}[#4]\seqoflow{#1#2}{mth#3}}

\usrmthupp ... to do!
534 \DeclareRobustCommandx{\usrmthupp}[4][4=]
535   {\usrmth{#1}{#2}{#3}[#4]\seqofupp{#1#2}{mth#3}}

\usrmthlet ... to do!
536 \DeclareRobustCommandx{\usrmthlet}[4][4=]
537   {\usrmth{#1}{#2}{#3}[#4]\seqoflet{#1#2}{mth#3}}

538 %%*****%
539 %%*****%
540 %%** Text Macro Generators *****%
541 %%*****%
542 \iftxtgen@

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

543 %% Style for Definitions
544 \cmdtxtall{def}
545 \DeclareRobustCommand{\txtstydef}{\normalfont\bfseries\em}

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

546 \DeclareRobustCommandx{\cmdtxtdef}[2][2=]
547   {\usrtxt{#1}{def}[#2]}

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

548 \DeclareRobustCommandx{\cmdtxttargetdef}[2][2=]
549   {\usrtxt{#1}{argdef}[#2]}

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

```

```

550 \DeclareRobustCommandx{\cmdtxttoargdef}[2][2=]
551   {\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] =  $newName_{sub}^{sub}ext1[par]ext2$ 
552 \DeclareRobustCommandx{\cmdtxtpardef}[2][2=]
553   {\usrtxt{#1}{\pardef}[#2]}

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

\txtabr ... to do!
\txtgabr
\txtparabr
  • \txtabr{Name}[sub][sup][Ext] =  $Name_{sub}^{sup}Ext$ 
  • \txtgabr{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg)Ext2$ 
  • \txtparabr{Name}[sub][sup][Ext1]{Par}[Ext2] =  $Name_{sub}^{sup}Ext1[Par]Ext2$ 
556 %% Style for Abbreviations
557 \cmdtxtall{abr}
558 \DeclareRobustCommand{\txtstyabr}{\em}

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

\cmdtxtgabr ... to do!
  • \cmdtxtgabr{cmdName};
    \cmdName[sub][sub][ext1]{arg}[ext2] =  $cmdName_{sub}^{sub}ext1(arg)ext2$ 
  • \cmdtxtgabr{cmdName}[newName];
    \cmdName[sub][sub][ext1]{arg}[ext2] =  $newName_{sub}^{sub}ext1(arg)ext2$ 
561 \DeclareRobustCommandx{\cmdtxtgabr}[2][2=]
562   {\usrtxt{#1}{\argabr}[#2]}

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

\cmdtxtparabr ... to do!
  • \cmdtxtparabr{cmdName};
    \cmdName[sub][sub][ext1]{par}[ext2] =  $cmdName_{sub}^{sub}ext1[par]ext2$ 
  • \cmdtxtparabr{cmdName}[newName];
    \cmdName[sub][sub][ext1]{par}[ext2] =  $newName_{sub}^{sub}ext1[par]ext2$ 

```

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565 \DeclareRobustCommandx{\cmdtxtparabr}[2][2=]
566   {\usrtxt{#1}{-}{parabr}[#2]}

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

569 %%*****%

\txtname ... to do!
\txxtargname  • \txtname{Name}[sub][sup][Ext] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}$ 
\txxtparname  • \txxtargname{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}$ 
               • \txxtparname{Name}[sub][sup][Ext1]{Par}[Ext2] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}[\text{PAR}]\text{EXT2}$ 
570 %% Style for Names
571 \cmdtxtall{name}
572 \DeclareRobustCommand{\txtstynome}{\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] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT}$ 
573 \DeclareRobustCommandx{\cmdtxtname}[2][2=]
574   {\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] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT1}(\text{ARG})\text{EXT2}$ 
575 \DeclareRobustCommandx{\cmdtxtargname}[2][2=]
576   {\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] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}(\text{ARG})$ 
577 \DeclareRobustCommandx{\cmdtxtoargname}[2][2=]
578   {\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] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}\text{EXT1}[\text{PAR}]\text{EXT2}$ 
579 \DeclareRobustCommandx{\cmdtxtparname}[2][2=]
580   {\usrtxt{#1}{-}{parname}[#2]}

\cmdtxtoparname ... to do!
  • \cmdtxtoparname{cmdName};
    \cmdName[sub][sub][par] =  $\text{CMDNAME}_{\text{SUB}}^{\text{SUB}}[\text{PAR}]$ 
  • \cmdtxtoparname{cmdName}[newName];
    \cmdName[sub][sub][par] =  $\text{NEWNAME}_{\text{SUB}}^{\text{SUB}}[\text{PAR}]$ 

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581 \DeclareRobustCommandx{\cmdtxtoparname}[2][2=]
582   {\usrtxt{#1}{\{oparname}[#2]}

\txtcom ... to do!
\txtargetcom      • \txtcom{Name}[sub][sup][Ext] = NAMESUBEXT
\txtparcom        • \txtargetcom{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUBEXT1(ARG)EXT2
                  • \txtparcom{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUBEXT1[PAR]EXT2

583 %% Style for Complexities
584 \cmdtxtall{com}
585 \DeclareRobustCommand{\txtstycom}{\normalfont\mdseries\scshape\rmfamily}

\cmdtxtcom ... to do!
      • \cmdtxtcom{cmdName};
        \cmdName[sub][sub][ext] = CMDNAMESUBEXT
      • \cmdtxtcom{cmdName}[newName];
        \cmdName[sub][sub][ext] = NEWNAMESUBEXT
586 \DeclareRobustCommandx{\cmdtxtcom}[2][2=]
587   {\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
588 \DeclareRobustCommandx{\cmdtxtargcom}[2][2=]
589   {\usrtxt{#1}{\{argcom}[#2]}

\cmdtxtoargcom ... to do!
      • \cmdtxtoargcom{cmdName};
        \cmdName[sub][sub][arg] = CMDNAMESUB(ARG)
      • \cmdtxtoargcom{cmdName}[newName];
        \cmdName[sub][sub][arg] = NEWNAMESUB(ARG)
590 \DeclareRobustCommandx{\cmdtxtoargcom}[2][2=]
591   {\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
592 \DeclareRobustCommandx{\cmdtxtparcom}[2][2=]
593   {\usrtxt{#1}{\{parcom}[#2]}

\cmdtxttoparcom ... to do!
      • \cmdtxttoparcom{cmdName};
        \cmdName[sub][sub][par] = CMDNAMESUB[PAR]
      • \cmdtxttoparcom{cmdName}[newName];
        \cmdName[sub][sub][par] = NEWNAMESUB[PAR]
594 \DeclareRobustCommandx{\cmdtxttoparcom}[2][2=]
595   {\usrtxt{#1}{\{oparcom}[#2]}

596 \fi
597 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
598 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
599 %** Math Macro Generators %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
600 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
601 \ifmthgen@

```

```

\mthname ... to do!
\mthargname • \mthname{NAME}[sub][sup][Ext] =  $\mathcal{NAME}_{sub}^{sup}Ext$ 
\mthparname • \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] =  $\mathcal{NAME}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$ 
• \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] =  $\mathcal{NAME}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$ 
602 %% Style for Names
603 \cmdmthall{name}
604 \DeclareRobustCommand{\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
605 \seqoflatupp{Name}{mthname}

\cmdmthname ... to do!
• \cmdmthname{CMDNAME};
\CMDNAMEName[sub][sub][ext] =  $\mathcal{CMDNAME}_{sub}^{sub}ext$ 
• \cmdmthname{cmdName}[NEWNAME];
\cmdNameName[sub][sub][ext] =  $\mathcal{NEWNAME}_{sub}^{sub}ext$ 
606 \DeclareRobustCommandx{\cmdmthname}[2][2=]
607 {\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] =  $\mathcal{NEWNAME}_{sub}^{sub}ext1(arg)ext2$ 
608 \DeclareRobustCommandx{\cmdmthargname}[2][2=]
609 {\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] =  $\mathcal{NEWNAME}_{sub}^{sub}(arg)$ 
610 \DeclareRobustCommandx{\cmdmthoargname}[2][2=]
611 {\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] =  $\mathcal{NEWNAME}_{sub}^{sub}ext1[par]ext2$ 
612 \DeclareRobustCommandx{\cmdmthparname}[2][2=]
613 {\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] =  $\mathcal{NEWNAME}_{sub}^{sub}[par]$ 
614 \DeclareRobustCommandx{\cmdmthoparname}[2][2=]
615 {\usrmth{#1}{Name}{oparname}[#2]}

\mthfam ... to do!
\mthargfam
\mthparfam

```

- $\backslash\mathrm{mthfam}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$
- $\backslash\mathrm{mthargfam}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}}\right)\mathrm{Ext2}$
- $\backslash\mathrm{mthargfam}!\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}})\mathrm{Ext2}$
- $\backslash\mathrm{mthparfam}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left[\mathrm{Par}^{\mathrm{Ex}}\right]\mathrm{Ext2}$
- $\backslash\mathrm{mthparfam}!\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}}\{\mathrm{Ex}\}\}[\mathrm{Ext2}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}[\mathrm{Par}^{\mathrm{Ex}}]\mathrm{Ext2}$

616 %% Style for Families

617  $\backslash\mathrm{cmdmthall}\{\mathrm{fam}\}$

618  $\backslash\mathrm{DeclareRobustCommand}\{\mathrm{mthstyfam}\}\{\mathrm{mathscr}\}$

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

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

619  $\backslash\mathrm{seqoflatupp}\{\mathrm{Fam}\}\{\mathrm{mthfam}\}$

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

- $\backslash\mathrm{cmdmthfam}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMEFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathcal{CMDN}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$
- $\backslash\mathrm{cmdmthfam}\{\mathrm{cmdName}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdNameFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathcal{NEWN}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

620  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthfam}\}[2][2=]$

621  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Fam}\}\{\mathrm{fam}\}[\#2]\}$

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

- $\backslash\mathrm{cmdmthargfam}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMEFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathcal{CMDN}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$
- $\backslash\mathrm{cmdmthargfam}\{\mathrm{cmdName}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdNameFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathcal{NEWN}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

622  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthargfam}\}[2][2=]$

623  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Fam}\}\{\mathrm{argfam}\}[\#2]\}$

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

- $\backslash\mathrm{cmdmthoargfam}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMEFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathcal{CMDN}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$
- $\backslash\mathrm{cmdmthoargfam}\{\mathrm{cmdFam}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdFamFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathcal{NEWN}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

624  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthoargfam}\}[2][2=]$

625  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Fam}\}\{\mathrm{oargfam}\}[\#2]\}$

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

- $\backslash\mathrm{cmdmthparfam}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMEFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathcal{CMDN}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$
- $\backslash\mathrm{cmdmthparfam}\{\mathrm{cmdName}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdNameFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathcal{NEWN}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

626  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthparfam}\}[2][2=]$

627  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Fam}\}\{\mathrm{parfam}\}[\#2]\}$

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

- $\backslash\mathrm{cmdmthoparfam}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMEFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathcal{CMDN}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$
- $\backslash\mathrm{cmdmthoparfam}\{\mathrm{cmdFam}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdFamFam}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathcal{NEWN}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

628  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthoparfam}\}[2][2=]$

629  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Fam}\}\{\mathrm{oparfam}\}[\#2]\}$

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

- $\backslash\mathrm{mthargcls}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$
- $\backslash\mathrm{mthparcls}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathcal{NAM}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$



- $\backslash\mathrm{mthargcls}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{NAM}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\right)\mathrm{Ext2}$
- $\backslash\mathrm{mthargcls}!\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{NAM}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}$
- $\backslash\mathrm{mthparcls}\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{NAM}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}\left[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\right]\mathrm{Ext2}$
- $\backslash\mathrm{mthparcls}!\{\mathrm{NAME}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{NAM}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}]\mathrm{Ext2}$

630 %% Style for Classes

631  $\backslash\mathrm{cmdmthall}\{\mathrm{cls}\}$

632  $\backslash\mathrm{DeclareRobustCommand}\{\backslash\mathrm{mthstyccls}\}\{\backslash\mathrm{matheus}\}$

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

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

633  $\backslash\mathrm{seqoflatupp}\{\mathrm{Cls}\}\{\mathrm{mthcls}\}$

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

- $\backslash\mathrm{cmdmthcls}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMECls}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathcal{CMDNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$
- $\backslash\mathrm{cmdmthcls}\{\mathrm{cmdName}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdNameCls}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathcal{NEWNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

634  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthcls}\}[2][2=]$

635  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Cls}\}\{\mathrm{cls}\}\{\#2\}\}$

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

- $\backslash\mathrm{cmdmthargcls}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMECls}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathcal{CMDNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$
- $\backslash\mathrm{cmdmthargcls}\{\mathrm{cmdName}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdNameCls}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathcal{NEWNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

636  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthargcls}\}[2][2=]$

637  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Cls}\}\{\mathrm{argcls}\}\{\#2\}\}$

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

- $\backslash\mathrm{cmdmthoargcls}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMECls}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathcal{CMDNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$
- $\backslash\mathrm{cmdmthoargcls}\{\mathrm{cmdCls}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdClsCls}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathcal{NEWNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

638  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthoargcls}\}[2][2=]$

639  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Cls}\}\{\mathrm{oargcls}\}\{\#2\}\}$

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

- $\backslash\mathrm{cmdmthparcls}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMECls}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathcal{CMDNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$
- $\backslash\mathrm{cmdmthparcls}\{\mathrm{cmdName}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdNameCls}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathcal{NEWNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

640  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthparcls}\}[2][2=]$

641  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Cls}\}\{\mathrm{parcls}\}\{\#2\}\}$

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

- $\backslash\mathrm{cmdmthoparcls}\{\mathrm{CMDNAME}\};$   
 $\backslash\mathrm{CMDNAMECls}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathcal{CMDNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$
- $\backslash\mathrm{cmdmthoparcls}\{\mathrm{cmdCls}\}[\mathrm{NEWNAME}];$   
 $\backslash\mathrm{cmdClsCls}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathcal{NEWNAME}\mathcal{E}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

642  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthoparcls}\}[2][2=]$

643  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Cls}\}\{\mathrm{oparcls}\}\{\#2\}\}$

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

$\backslash\mathrm{mthargsig}$  •  $\backslash\mathrm{mthsig}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathcal{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$

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

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

644 %% Style for Signatures

645  $\backslash\mathrm{cmdmthall}\{\mathrm{sig}\}$

646  $\backslash\mathrm{DeclareRobustCommand}\{\backslash\mathrm{mthstysig}\}\{\backslash\mathrm{mathpzc}\}$

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

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

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

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

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

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

648  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthsig}\}[2][2=]$

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

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

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

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

650  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthargsig}\}[2][2=]$

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

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

•  $\backslash\mathrm{cmdmthoargsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

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

652  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthoargsig}\}[2][2=]$

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

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

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

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

654  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthparsig}\}[2][2=]$

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

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

•  $\backslash\mathrm{cmdmthoparsig}\{\mathrm{cmdName}\};$   
 $\backslash\mathrm{cmdNameSig}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{cmd}\mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

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

656  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthoparsig}\}[2][2=]$

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

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

$\backslash\mathrm{mthargstr}$  •  $\backslash\mathrm{mthstr}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$

$\backslash\mathrm{mthparstr}$  •  $\backslash\mathrm{mthargstr}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathcal{N}\mathrm{ame}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}$

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

658 %% Style for Structures

659  $\backslash\mathrm{cmdmthall}\{\mathrm{str}\}$

660  $\backslash\mathrm{DeclareRobustCommand}\{\backslash\mathrm{mthstyststr}\}\{\backslash\mathrm{mathfrak}\}$

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

...  $\mathfrak{a}, \mathfrak{b}, \mathfrak{c}, \mathfrak{d}, \mathfrak{e}, \mathfrak{f}, \mathfrak{g}, \mathfrak{h}, \mathfrak{i}, \mathfrak{j}, \mathfrak{k}, \mathfrak{l}, \mathfrak{m}, \mathfrak{n}, \mathfrak{o}, \mathfrak{p}, \mathfrak{q}, \mathfrak{r}, \mathfrak{s}, \mathfrak{t}, \mathfrak{u}, \mathfrak{v}, \mathfrak{w}, \mathfrak{x}, \mathfrak{y}, \mathfrak{z}$

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

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

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

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

•  $\backslash\mathrm{cmdmthstr}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmd}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

•  $\backslash\mathrm{cmdmthstr}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{New}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

662  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthstr}\}[2][2=]$

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

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

•  $\backslash\mathrm{cmdmthargstr}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{cmd}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

•  $\backslash\mathrm{cmdmthargstr}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{New}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

664  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthargstr}\}[2][2=]$

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

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

•  $\backslash\mathrm{cmdmthoargstr}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{cmd}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

•  $\backslash\mathrm{cmdmthoargstr}\{\mathrm{cmdStr}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdStrStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{New}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

666  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthoargstr}\}[2][2=]$

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

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

•  $\backslash\mathrm{cmdmthparstr}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{cmd}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

•  $\backslash\mathrm{cmdmthparstr}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{New}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

668  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthparstr}\}[2][2=]$

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

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

•  $\backslash\mathrm{cmdmthoparstr}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{cmd}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

•  $\backslash\mathrm{cmdmthoparstr}\{\mathrm{cmdStr}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdStrStr}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{New}\mathrm{Name}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

670  $\backslash\mathrm{DeclareRobustCommandx}\{\backslash\mathrm{cmdmthoparstr}\}[2][2=]$

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

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

$\backslash\mathrm{mthargset}$  •  $\backslash\mathrm{mthset}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext}$

$\backslash\mathrm{mthparset}$  •  $\backslash\mathrm{mthargset}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg}^{\mathrm{Ex}^{\mathrm{Ex}}})\mathrm{Ext2}$

- $\backslash\mathrm{mthargset}\{Name\}[sub][sup][Ext1]\{Arg^{\{Ex\}}\}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$
- $\backslash\mathrm{mthparset}\{Name\}[sub][sup][Ext1]\{Par^{\{Ex\}}\}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$
- $\backslash\mathrm{mthparset}\{Name\}[sub][sup][Ext1]\{Par^{\{Ex\}}\}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$

672 %% Style for Sets

673  $\backslash\mathrm{cmdmthall}\{\mathrm{set}\}$

674  $\backslash\mathrm{DeclareRobustCommand}\{\mathrm{mthstyset}\}\{\mathrm{mathrm}\}$

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

$\backslash\mathrm{mthargset}$  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

$\backslash\mathrm{mthparset}$  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,  $\Psi$ ,  $\Omega$

675  $\backslash\mathrm{seqoflet}\{\mathrm{Set}\}\{\mathrm{mthset}\}$

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

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

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

676  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthset}\}[2][2=]$

677  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{set}\}\{\#2\}\}$

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

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

678  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthargset}\}[2][2=]$

679  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{argset}\}\{\#2\}\}$

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

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

680  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthoargset}\}[2][2=]$

681  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{oargset}\}\{\#2\}\}$

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

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

682  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthparset}\}[2][2=]$

683  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{parset}\}\{\#2\}\}$

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

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

684  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthoparset}\}[2][2=]$

685  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Set}\}\{\mathrm{oparset}\}\{\#2\}\}$

```

\cmdmthsetext ... to do!
686 \DeclareRobustCommandx{\cmdmthsetext}[3][2=, 3=]
687   {\cmdmthset{#1}[#2]\caselower[q]{#1}%
688    \usrmthlet{\thestring}{Sym}{sym}
689    [\defval{#3}{\defval{\empchk{#2}{\lowercase{#2}}}{\thestring}}]%
690    \usrmthlet{\thestring}{Elm}{elm}
691    [\defval{#3}{\defval{\empchk{#2}{\lowercase{#2}}}{\thestring}}]}

\mthrel ... to do!
\mthargrel
\mthparrel
• \mthrel{Name}[sub][sup][Ext] =  $Name_{sub}^{sup}Ext$ 
• \mthargrel{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$ 
• \mthargrel!{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$ 
• \mthparrel{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$ 
• \mthparrel!{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$ 
692 %% Style for Relations
693 \cmdmthall{rel}
694 \DeclareRobustCommand{\mthstyrel}{\mathit}

\rel ... 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
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$ 
A, B,  $\Gamma, \Delta, E, Z, H, \Theta, \Theta, I, K, K, A, M, N, \Xi, O, \Pi, \Pi, P, P, \Sigma, \Sigma, T, \Upsilon, \Phi, \Phi, X, \Psi, \Omega$ 
695 \seqoflet{Rel}{mthrel}

\cmdmthrel ... to do!
• \cmdmthrel{cmdName};
  \cmdNameRel[sub][sub][ext] =  $cmdName_{sub}^{sub}ext$ 
• \cmdmthrel{cmdName}[NewName];
  \cmdNameRel[sub][sub][ext] =  $NewName_{sub}^{sub}ext$ 
696 \DeclareRobustCommandx{\cmdmthrel}[2][2=]
697   {\usrmth{#1}{Rel}{rel}[#2]}

\cmdmthargrel ... to do!
• \cmdmthargrel{cmdName};
  \cmdNameRel[sub][sub][ext1]{arg}[ext2] =  $cmdName_{sub}^{sub}ext1(arg)ext2$ 
• \cmdmthargrel{cmdName}[NewName];
  \cmdNameRel[sub][sub][ext1]{arg}[ext2] =  $NewName_{sub}^{sub}ext1(arg)ext2$ 
698 \DeclareRobustCommandx{\cmdmthargrel}[2][2=]
699   {\usrmth{#1}{Rel}{argrel}[#2]}

\cmdmthoargrel ... to do!
• \cmdmthoargrel{cmdName};
  \cmdNameRel[sub][sub][arg] =  $cmdName_{sub}^{sub}(arg)$ 
• \cmdmthoargrel{cmdRel}[NewName];
  \cmdRelRel[sub][sub][arg] =  $NewName_{sub}^{sub}(arg)$ 
700 \DeclareRobustCommandx{\cmdmthoargrel}[2][2=]
701   {\usrmth{#1}{Rel}{oargrel}[#2]}

\cmdmthparrel ... to do!
• \cmdmthparrel{cmdName};
  \cmdNameRel[sub][sub][ext1]{par}[ext2] =  $cmdName_{sub}^{sub}ext1[par]ext2$ 
• \cmdmthparrel{cmdName}[NewName];
  \cmdNameRel[sub][sub][ext1]{par}[ext2] =  $NewName_{sub}^{sub}ext1[par]ext2$ 
702 \DeclareRobustCommandx{\cmdmthparrel}[2][2=]
703   {\usrmth{#1}{Rel}{parrel}[#2]}

```

```

\cmdmthoparrel ... to do!
    • \cmdmthoparrel{cmdName};
      \cmdNameRel[sub][sub][par] = cmdNamesub[par]
    • \cmdmthoparrel{cmdRel}[NewName];
      \cmdRelRel[sub][sub][par] = NewNamesub[par]
704 \DeclareRobustCommand{\cmdmthoparrel}[2][2=]
705   {\usrmth{#1}{Rel}{oparrel}[#2]}

\mthfun ... to do!
\mthargfun
\mthparfun
    • \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
706 %% Style for Functions
707 \cmdmthall{fun}
708 \DeclareRobustCommand{\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, 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, II, P, P, Σ, Σ, T, Υ, Φ, Φ, X, Ψ, Ω
709 \seqoflet{Fun}{mthfun}

\cmdmthfun ... to do!
    • \cmdmthfun{cmdName};
      \cmdNameFun[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthfun{cmdName}[NewName];
      \cmdNameFun[sub][sub][ext] = NewNamesubsubext
710 \DeclareRobustCommand{\cmdmthfun}[2][2=]
711   {\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
712 \DeclareRobustCommand{\cmdmthargfun}[2][2=]
713   {\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)
714 \DeclareRobustCommand{\cmdmthoargfun}[2][2=]
715   {\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
716 \DeclareRobustCommand{\cmdmthparfun}[2][2=]
717   {\usrmth{#1}{Fun}{parfun}[#2]}

```

```

\cmdmthoparfun ... to do!
    • \cmdmthoparfun{cmdName};
      \cmdNameFun[sub][sub][par] = cmdNamesub[par]
    • \cmdmthoparfun{cmdFun}[NewName];
      \cmdFunFun[sub][sub][par] = NewNamesub[par]
718 \DeclareRobustCommandx{\cmdmthoparfun}[2][2=]
719   {\usrmth{#1}{Fun}{oparfun}{#2}}

\mthsym ... to do!
\mthargsym    • \mthsym{Name}[sub][sup][Ext] = NamesupsubExt
\mthparsym    • \mthargsym{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesupsubExt1(ArgExEx)Ext2
               • \mthargsym!{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesupsubExt1(ArgExEx)Ext2
               • \mthparsym{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesupsubExt1[ParExEx]Ext2
               • \mthparsym!{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesupsubExt1[ParExEx]Ext2
720 %% Style for Symbols
721 \cmdmthall{sym}
722 \DeclareRobustCommand{\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, 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, Θ, Ι, Κ, Κ, Λ, Μ, Ν, Ξ, Ο, Π, Π, Ρ, Ρ, Σ, Σ, Τ, Τ, Φ, Φ, Χ, Ψ, Ω
723 \seqoflet{Sym}{mthsym}

\cmdmthsym ... to do!
    • \cmdmthsym{cmdName};
      \cmdNameSym[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthsym{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext] = NewNamesubsubext
724 \DeclareRobustCommandx{\cmdmthsym}[2][2=]
725   {\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
726 \DeclareRobustCommandx{\cmdmthargsym}[2][2=]
727   {\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)
728 \DeclareRobustCommandx{\cmdmthoargsym}[2][2=]
729   {\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
730 \DeclareRobustCommandx{\cmdmthparsym}[2][2=]
731   {\usrmth{#1}{Sym}{parsym}{#2}}

```

```

\cmdmthoparsym ... to do!
    • \cmdmthoparsym{cmdName};
      \cmdNameSym[sub] [sub] [par] = cmdNamesub[par]
    • \cmdmthoparsym{cmdSym}[NewName];
      \cmdSymSym[sub] [sub] [par] = NewNamesub[par]
732 \DeclareRobustCommandx{\cmdmthoparsym}[2][2=]
733   {\usrmth{#1}{Sym}{oparsym}[#2]}

\mthelm ... to do!
\mthargelm    • \mthelm{Name}[sub] [sup] [Ext] = NamesupExt
\mthparelm    • \mthargelm{Name}[sub] [sup] [Ext1]{ArgEx{Ex}}[Ext2] = NamesupExt1(ArgExExt2)Ext2
               • \mthargelm!{Name}[sub] [sup] [Ext1]{ArgEx{Ex}}[Ext2] = NamesupExt1(ArgExExt2)Ext2
               • \mthparelm{Name}[sub] [sup] [Ext1]{ParEx{Ex}}[Ext2] = NamesupExt1[ParExExt2]Ext2
               • \mthparelm!{Name}[sub] [sup] [Ext1]{ParEx{Ex}}[Ext2] = NamesupExt1[ParExExt2]Ext2
734 %% Style for Elements
735 \cmdmthall{elm}
736 \DeclareRobustCommand{\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
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
737 \seqoflet{Elm}{mthelm}

\cmdmthelm ... to do!
    • \cmdmthelm{cmdName};
      \cmdNameElm[sub] [sub] [ext] = cmdNamesubext
    • \cmdmthelm{cmdName}[NewName];
      \cmdNameElm[sub] [sub] [ext] = NewNamesubext
738 \DeclareRobustCommandx{\cmdmthelm}[2][2=]
739   {\usrmth{#1}{Elm}{elm}[#2]}

\cmdmthargelm ... to do!
    • \cmdmthargelm{cmdName};
      \cmdNameElm[sub] [sub] [ext1]{arg}[ext2] = cmdNamesubext1(arg)ext2
    • \cmdmthargelm{cmdName}[NewName];
      \cmdNameElm[sub] [sub] [ext1]{arg}[ext2] = NewNamesubext1(arg)ext2
740 \DeclareRobustCommandx{\cmdmthargelm}[2][2=]
741   {\usrmth{#1}{Elm}{argelm}[#2]}

\cmdmthoargelm ... to do!
    • \cmdmthoargelm{cmdName};
      \cmdNameElm[sub] [sub] [arg] = cmdNamesub(arg)
    • \cmdmthoargelm{cmdElm}[NewName];
      \cmdElmElm[sub] [sub] [arg] = NewNamesub(arg)
742 \DeclareRobustCommandx{\cmdmthoargelm}[2][2=]
743   {\usrmth{#1}{Elm}{oargelm}[#2]}

\cmdmthparelm ... to do!
    • \cmdmthparelm{cmdName};
      \cmdNameElm[sub] [sub] [ext1]{par}[ext2] = cmdNamesubext1[par]ext2
    • \cmdmthparelm{cmdName}[NewName];
      \cmdNameElm[sub] [sub] [ext1]{par}[ext2] = NewNamesubext1[par]ext2
744 \DeclareRobustCommandx{\cmdmthparelm}[2][2=]
745   {\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]

746 \DeclareRobustCommandx{\cmdmthoparelm}[2][2=]
747   {\usrmth{#1}{Elm}{oparelm}[#2]}

748 %%*****%

```

```

\cmdmthsymelm ... to do!

    • \cmdmthsymelm{cmdName};
      \cmdNameSym[sub][sub][ext] = cmdNamesubsubext
      \cmdNameElm[sub][sub][ext] = cmdNamesubsubext

    • \cmdmthsymelm{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext] = NewNamesubsubext
      \cmdNameElm[sub][sub][ext] = NewNamesubsubext

749 \DeclareRobustCommandx{\cmdmthsymelm}[2][2=]
750   {\cmdmthsym{#1}[#2]}
751   \cmdmthelm{#1}[#2]}

```

```

\cmdmthargsymelm ... to do!

    • \cmdmthargsymelm{cmdName};
      \cmdNameSym[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
      \cmdNameElm[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2

    • \cmdmthargsymelm{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
      \cmdNameElm[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2

752 \DeclareRobustCommandx{\cmdmthargsymelm}[2][2=]
753   {\cmdmthargsym{#1}[#2]}
754   \cmdmthargelm{#1}[#2]}

```

```

\cmdmthoargsymelm ... to do!

    • \cmdmthoargsymelm{cmdName};
      \cmdNameSym[sub][sub][arg] = cmdNamesubsub(arg)
      \cmdNameElm[sub][sub][arg] = cmdNamesubsub(arg)

    • \cmdmthoargsymelm{cmdName}[NewName];
      \cmdNameSym[sub][sub][arg] = NewNamesubsub(arg)
      \cmdNameElm[sub][sub][arg] = NewNamesubsub(arg)

755 \DeclareRobustCommandx{\cmdmthoargsymelm}[2][2=]
756   {\cmdmthoargsym{#1}[#2]}
757   \cmdmthoargelm{#1}[#2]}

```

```

\cmdmthparsymelm ... to do!

    • \cmdmthparsymelm{cmdName};
      \cmdNameSym[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
      \cmdNameElm[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2

    • \cmdmthparsymelm{cmdName}[NewName];
      \cmdNameSym[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
      \cmdNameElm[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2

758 \DeclareRobustCommandx{\cmdmthparsymelm}[2][2=]
759   {\cmdmthparsym{#1}[#2]}
760   \cmdmthparelm{#1}[#2]}

```

```

\cmdmthoparsymelm ... to do!

    • \cmdmthoparsymelm{cmdName};
      \cmdNameSym[sub][sub][par] = cmdNamesubsub[par]
      \cmdNameElm[sub][sub][par] = cmdNamesubsub[par]

```

```

    • \cmdmthoparsymelm{cmdName}[NewName];
    \cmdNameSym[sub][sub][par] = NewNamesub[par]
    \cmdNameElm[sub][sub][par] = NewNamesub[par]

761 \DeclareRobustCommandx{\cmdmthoparsymelm}[2][2=]
762   {\cmdmthoparsym{#1}[#2]%
763    \cmdmthoparelm{#1}[#2]}

764 %%*****%

\mthluop ... to do!
\mthlbop
    • \mthluop{\oplus}[sub][sup][Ext] =  $\oplus_{sub}^{sup} Ext$ 
    • \mthlbop{\oplus}[sub][sup][Ext] =  $\oplus_{sub}^{sup} Ext$ 

765 %% Style for \LaTeX Operators
766 \cmdmth{luop}
767 \DeclareRobustCommand{\mthstyluop}[1]{\textstyle\mathop{#1}}
768 \cmdmth{lbop}
769 \DeclareRobustCommand{\mthstylbop}[1]{\textstyle\mathbin{#1}}

\cmdmthluop ... to do!
\cmdmthlbop
    • \cmdmthluop{cmdName};
    \cmdNameUOp[sub][sub][ext] =  $cmdName_{sub}^{sub} ext$ 
    • \cmdmthluop{cmdName}[\oplus];
    \cmdNameUOp[sub][sub][ext] =  $\oplus_{sub}^{sub} ext$ 
    • \cmdmthlbop{cmdName};
    \cmdNameBOp[sub][sub][ext] =  $cmdName_{sub}^{sub} ext$ 
    • \cmdmthlbop{cmdName}[\oplus];
    \cmdNameBOp[sub][sub][ext] =  $\oplus_{sub}^{sub} ext$ 

770 \DeclareRobustCommandx{\cmdmthluop}[2][2=]
771   {\usrmth{#1}{UOp}{luop}[#2]}
772 \DeclareRobustCommandx{\cmdmthlbop}[2][2=]
773   {\usrmth{#1}{BOp}{lbop}[#2]}

\mthlrel ... to do!
    • \mthlrel{\preceq}[sub][sup][Ext] =  $\preceq_{sub}^{sup} Ext$ 

774 %% Style for \LaTeX Relations
775 \cmdmth{lrel}
776 \DeclareRobustCommand{\mthstylrel}{\mathrel}

\cmdmthlrel ... to do!
    • \cmdmthlrel{cmdName};
    \cmdNameRel[sub][sub][ext] =  $cmdName_{sub}^{sub} ext$ 
    • \cmdmthlrel{cmdName}[\preceq];
    \cmdNameRel[sub][sub][ext] =  $\preceq_{sub}^{sub} ext$ 

777 \DeclareRobustCommandx{\cmdmthlrel}[2][2=]
778   {\usrmth{#1}{Rel}{lrel}[#2]}

779 %%*****%

\mthsnt ... to do!
\mthargsnt
\mthparsnt
    • \mthsnt{Name}[sub][sup][Ext] =  $Name_{sub}^{sup} Ext$ 
    • \mthargsnt{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup} Ext1 (Arg^{Ex^{Ex}}) Ext2$ 
    • \mthargsnt!{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup} Ext1 (Arg^{Ex^{Ex}}) Ext2$ 
    • \mthparsnt{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup} Ext1 [Par^{Ex^{Ex}}] Ext2$ 
    • \mthparsnt!{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $Name_{sub}^{sup} Ext1 [Par^{Ex^{Ex}}] Ext2$ 

780 %% Style for Sentences
781 \cmdmthall{snt}
782 \DeclareRobustCommand{\mthstysnt}{\mathsf}

```

```

\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
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$ 
A, B,  $\Gamma, \Delta, E, Z, H, \Theta, \varnothing, I, K, \Lambda, M, N, \Xi, O, \Pi, \textit{II}, P, \Sigma, \varSigma, T, \Upsilon, \Phi, \varPhi, X, \Psi, \Omega$ 
783 \seqoflet{Snt}{mthsnt}

```

```

\cmdmthsnt ... to do!
• \cmdmthsnt{cmdName};
  \cmdNameSnt[sub][sub][ext] = cmdNamesubext
• \cmdmthsnt{cmdName}[NewName];
  \cmdNameSnt[sub][sub][ext] = NewNamesubext
784 \DeclareRobustCommandx{\cmdmthsnt}[2][2=]
785   {\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
786 \DeclareRobustCommandx{\cmdmthargsnt}[2][2=]
787   {\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)
788 \DeclareRobustCommandx{\cmdmthoargsnt}[2][2=]
789   {\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
790 \DeclareRobustCommandx{\cmdmthparsnt}[2][2=]
791   {\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]
792 \DeclareRobustCommandx{\cmdmthoparsnt}[2][2=]
793   {\usrmth{#1}{Snt}{oparsnt}{#2}}

```

```

\mthfrm ... to do!
\mthargfrm • \mthfrm{Name}[sub][sup][Ext] = NamesubsupExt
\mthparfrm • \mthargfrm{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsupExt1(ParExEx)Ext2
• \mthargfrm!{Name}[sub][sup][Ext1]{ArgEx{Ex}}}[Ext2] = NamesubsupExt1(ArgExEx)Ext2
• \mthparfrm{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsupExt1[ParExEx]Ext2
• \mthparfrm!{Name}[sub][sup][Ext1]{ParEx{Ex}}}[Ext2] = NamesubsupExt1[ParExEx]Ext2
794 %% Style for Formulae
795 \cmdmthall{frm}
796 \DeclareRobustCommand{\mthstyfrm}{\mathit}

```

```

\afm ... 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,  $\Gamma, \Delta, E, \Xi, Z, H, \Theta, \varTheta, I, K, \Lambda, M, N, \Xi, O, \Pi, \varPi, P, \Sigma, \varSigma, T, \Upsilon, \Phi, \varPhi, X, \Psi, \Omega$ 
797 \seqoflet{Frm}{mthfrm}

```

```

\cmdmthfrm ... to do!
• \cmdmthfrm{cmdName};
  \cmdNameFrm[sub][sub][ext] =  $cmdName_{sub}^{sub}ext$ 
• \cmdmthfrm{cmdName}[NewName];
  \cmdNameFrm[sub][sub][ext] =  $NewName_{sub}^{sub}ext$ 
798 \DeclareRobustCommandx{\cmdmthfrm}[2][2=]
799   {\usrmth{#1}{Frm}{frm}[#2]}

```

```

\cmdmthargfrm ... to do!
• \cmdmthargfrm{cmdName};
  \cmdNameFrm[sub][sub][ext1]{arg}[ext2] =  $cmdName_{sub}^{sub}ext1(arg)ext2$ 
• \cmdmthargfrm{cmdName}[NewName];
  \cmdNameFrm[sub][sub][ext1]{arg}[ext2] =  $NewName_{sub}^{sub}ext1(arg)ext2$ 
800 \DeclareRobustCommandx{\cmdmthargfrm}[2][2=]
801   {\usrmth{#1}{Frm}{argfrm}[#2]}

```

```

\cmdmthoargfrm ... to do!
• \cmdmthoargfrm{cmdName};
  \cmdNameFrm[sub][sub][arg] =  $cmdName_{sub}^{sub}(arg)$ 
• \cmdmthoargfrm{cmdName}[NewName];
  \cmdNameFrm[sub][sub][arg] =  $NewName_{sub}^{sub}(arg)$ 
802 \DeclareRobustCommandx{\cmdmthoargfrm}[2][2=]
803   {\usrmth{#1}{Frm}{oargfrm}[#2]}

```

```

\cmdmthparfrm ... to do!
• \cmdmthparfrm{cmdName};
  \cmdNameFrm[sub][sub][ext1]{par}[ext2] =  $cmdName_{sub}^{sub}ext1[par]ext2$ 
• \cmdmthparfrm{cmdName}[NewName];
  \cmdNameFrm[sub][sub][ext1]{par}[ext2] =  $NewName_{sub}^{sub}ext1[par]ext2$ 
804 \DeclareRobustCommandx{\cmdmthparfrm}[2][2=]
805   {\usrmth{#1}{Frm}{parfrm}[#2]}

```

```

\cmdmthoparfrm ... to do!
• \cmdmthoparfrm{cmdName};
  \cmdNameFrm[sub][sub][par] =  $cmdName_{sub}^{sub}[par]$ 
• \cmdmthoparfrm{cmdName}[NewName];
  \cmdNameFrm[sub][sub][par] =  $NewName_{sub}^{sub}[par]$ 
806 \DeclareRobustCommandx{\cmdmthoparfrm}[2][2=]
807   {\usrmth{#1}{Frm}{oparfrm}[#2]}

808 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

\mthmat ... to do!
\mthargmat
\mthparmat
• \mthmat{Name}[sub][sup][Ext] =  $\mathbf{Name}_{sub}^{sup}Ext$ 
• \mthargmat{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathbf{Name}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2$ 
• \mthargmat!{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] =  $\mathbf{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2$ 
• \mthparmat{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathbf{Name}_{sub}^{sup}Ext1\left[Par^{Ex^{Ex}}\right]Ext2$ 
• \mthparmat!{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] =  $\mathbf{Name}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2$ 

```

```

809 %% Style for Matrices
810 \cmdmthall{mat}
811 \DeclareRobustCommand{\mthstymat}[1]{\boldsymbol{\mathsf{#1}}}

```

\aMat ... 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,  $\Gamma, \Delta, E, Z, H, \Theta, \vartheta, I, K, \Lambda, M, N, \Xi, O, \Pi, \textit{II}, P, \Sigma, \textit{\Sigma}, T, \Upsilon, \Phi, \varPhi, X, \Psi, \Omega$ 
812 \seqoflet{Mat}{mthmat}

```

\cmdmthmat ... to do!

```

• \cmdmthmat{cmdName};
  \cmdNameMat[sub][sub][ext] = cmdNamesubsubext
• \cmdmthmat{cmdName}[NewName];
  \cmdNameMat[sub][sub][ext] = NewNamesubsubext
813 \DeclareRobustCommandx{\cmdmthmat}[2][2=]
814 {\usrmth{#1}{Mat}{mat}[#2]}

```

\cmdmthargmat ... to do!

```

• \cmdmthargmat{cmdName};
  \cmdNameMat[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
• \cmdmthargmat{cmdName}[NewName];
  \cmdNameMat[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
815 \DeclareRobustCommandx{\cmdmthargmat}[2][2=]
816 {\usrmth{#1}{Mat}{argmat}[#2]}

```

\cmdmthoargmat ... to do!

```

• \cmdmthoargmat{cmdName};
  \cmdNameMat[sub][sub][arg] = cmdNamesubsub(arg)
• \cmdmthoargmat{cmdName}[NewName];
  \cmdNameMat[sub][sub][arg] = NewNamesubsub(arg)
817 \DeclareRobustCommandx{\cmdmthoargmat}[2][2=]
818 {\usrmth{#1}{Mat}{oargmat}[#2]}

```

\cmdmthparmat ... to do!

```

• \cmdmthparmat{cmdName};
  \cmdNameMat[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
• \cmdmthparmat{cmdName}[NewName];
  \cmdNameMat[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
819 \DeclareRobustCommandx{\cmdmthparmat}[2][2=]
820 {\usrmth{#1}{Mat}{parmat}[#2]}

```

\cmdmthoparmat ... to do!

```

• \cmdmthoparmat{cmdName};
  \cmdNameMat[sub][sub][par] = cmdNamesubsub[par]
• \cmdmthoparmat{cmdName}[NewName];
  \cmdNameMat[sub][sub][par] = NewNamesubsub[par]
821 \DeclareRobustCommandx{\cmdmthoparmat}[2][2=]
822 {\usrmth{#1}{Mat}{oparmat}[#2]}

```

\mthvec ... to do!

```

\mthargvec • \mthvec{Name}[sub][sup][Ext] = NamesubsupExt
\mthparvec • \mthargvec{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = NamesubsupExt1(Arg^{Ex^{Ex}})Ext2
• \mthargvec!{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = NamesubsupExt1(Arg^{Ex^{Ex}})Ext2
• \mthparvec{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = NamesubsupExt1[Par^{Ex^{Ex}}]Ext2

```

•  $\backslash\mathrm{mthparvec}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}\}[\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}[\mathrm{Par}^{\mathrm{Ex}^{\mathrm{Ex}}}] \mathrm{Ext2}$

823 %% Style for Vectors

824  $\backslash\mathrm{cmdmthall}\{\mathrm{vec}\}$

825  $\backslash\mathrm{DeclareRobustCommand}\{\mathrm{mthstyvec}\}[1]\{\backslash\mathrm{boldsymbol}\{\backslash\mathrm{mathit}\{\#1\}\}\}$

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

...  $a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$

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

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

$A, B, \Gamma, \Delta, E, \mathcal{E}, Z, H, \Theta, \mathcal{O}, I, K, \mathcal{A}, M, N, \Xi, \mathcal{O}, \Pi, \mathcal{I}, P, P, \Sigma, \mathcal{S}, T, \Upsilon, \Phi, \mathcal{P}, X, \Psi, \Omega$

826  $\backslash\mathrm{seqoflet}\{\mathrm{Vec}\}\{\mathrm{mthvec}\}$

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

•  $\backslash\mathrm{cmdmthvec}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

•  $\backslash\mathrm{cmdmthvec}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext}$

827  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthvec}\}[2][2=]$

828  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Vec}\}\{\mathrm{vec}\}\{\#2\}\}$

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

•  $\backslash\mathrm{cmdmthargvec}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

•  $\backslash\mathrm{cmdmthargvec}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{arg}\}[\mathrm{ext2}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}(\mathrm{arg})\mathrm{ext2}$

829  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthargvec}\}[2][2=]$

830  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Vec}\}\{\mathrm{argvec}\}\{\#2\}\}$

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

•  $\backslash\mathrm{cmdmthoargvec}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

•  $\backslash\mathrm{cmdmthoargvec}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{arg}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}(\mathrm{arg})$

831  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthoargvec}\}[2][2=]$

832  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Vec}\}\{\mathrm{oargvec}\}\{\#2\}\}$

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

•  $\backslash\mathrm{cmdmthparvec}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

•  $\backslash\mathrm{cmdmthparvec}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{ext1}]\{\mathrm{par}\}[\mathrm{ext2}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}\mathrm{ext1}[\mathrm{par}]\mathrm{ext2}$

833  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthparvec}\}[2][2=]$

834  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Vec}\}\{\mathrm{parvec}\}\{\#2\}\}$

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

•  $\backslash\mathrm{cmdmthoparvec}\{\mathrm{cmdName}\};$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{cmdName}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

•  $\backslash\mathrm{cmdmthoparvec}\{\mathrm{cmdName}\}[\mathrm{NewName}];$

$\backslash\mathrm{cmdNameVec}[\mathrm{sub}][\mathrm{sub}][\mathrm{par}] = \mathrm{NewName}_{\mathrm{sub}}^{\mathrm{sub}}[\mathrm{par}]$

835  $\backslash\mathrm{DeclareRobustCommandx}\{\mathrm{cmdmthoparvec}\}[2][2=]$

836  $\{\backslash\mathrm{usrmth}\{\#1\}\{\mathrm{Vec}\}\{\mathrm{oparvec}\}\{\#2\}\}$

837  $\backslash\mathrm{fi}$

838 %\*\*\*\*\*

839 %\*\*\*\*\*

840 %\*\* Elementary Macros for Text \*\*\*\*\*

841 %\*\*\*\*\*

842  $\backslash\mathrm{iftxt@}$

```

\dotcheck      • A\dotcheck A\dotcheck.A = A.A. A
843 \newrobustcmd{\dotcheck}
844   {\@ifnextchar.{}{.\@}}

845 %** Latin Abbreviations *****%%

\ad hoc      • \ad hoc = ad hoc
846 \cmdtxtabr{ad hoc}[ad hoc]

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

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

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

\cf          • \cf = cf.
850 \cmdtxtabr{cf}[cf.\@]

\dedicto     • \dedicto = de dicto
851 \cmdtxtabr{dedicto}[de dicto]

\defacto     • \defacto = de facto
852 \cmdtxtabr{defacto}[de facto]

\dere        • \dere = de re
853 \cmdtxtabr{dere}[de re]

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

\eg          • \eg = e.g.
855 \cmdtxtabr{eg}[e.g.\@]

\ergo        • \ergo = ergo
856 \cmdtxtabr{ergo}

\errata      • \errata = errata
857 \cmdtxtabr{errata}

\erratum     • \erratum = erratum
858 \cmdtxtabr{erratum}

\etal        • \etal = et al.
859 \cmdtxtabr{etal}[et al.\@]

\etc         • \etc = etc.
860 \cmdtxtabr{etc}[etc.\@]

\ie          • \ie = i.e.
861 \cmdtxtabr{ie}[i.e.\@]

\mutatismutandis • \mutatismutandis = mutatis mutandis
862 \cmdtxtabr{mutatismutandis}[mutatis mutandis]

\percontra   • \percontra = per contra
863 \cmdtxtabr{percontra}[per contra]

```

```

\primafacie      • \primafacie = prima facie
864 \cmdtxtabr{primafacie}[prima facie]

\viceversa      • \viceversa = vice versa
865 \cmdtxtabr{viceversa}[vice versa]

\vs              • \vs = vs.
866 \cmdtxtabr{vs}[vs.\@]

\viz            • \viz = viz.
867 \cmdtxtabr{viz}[viz.\@]

868 %%*****

\Afortiori      • \Afortiori = A fortiori
869 \cmdtxtabr{Afortiori}[A fortiori]

\Apriori        • \Apriori = A priori
870 \cmdtxtabr{Apriori}[A priori]

\Aposteriori    • \Aposteriori = A posteriori
871 \cmdtxtabr{Aposteriori}[A posteriori]

\Dedicto        • \Dedicto = De dicto
872 \cmdtxtabr{Dedicto}[De dicto]

\Defacto        • \Defacto = De facto
873 \cmdtxtabr{Defacto}[De facto]

\Dere           • \Dere = De re
874 \cmdtxtabr{Dere}[De re]

\Divideetimpera • \Divideetimpera = Divide et impera
875 \cmdtxtabr{Divideetimpera}[Divide et impera]

\Eg             • \Eg = E.g.
876 \cmdtxtabr{Eg}[E.g.\@]

\Errata         • \Errata = Errata
877 \cmdtxtabr{Errata}

\Erratum        • \Erratum = Erratum
878 \cmdtxtabr{Erratum}

\Mutatismutandis • \Mutatismutandis = Mutatis mutandis
879 \cmdtxtabr{Mutatismutandis}[Mutatis mutandis]

\Percontra      • \Percontra = Per contra
880 \cmdtxtabr{Percontra}[Per contra]

\Primafacie     • \Primafacie = Prima facie
881 \cmdtxtabr{Primafacie}[Prima facie]

\Viceversa      • \Viceversa = Vice versa
882 \cmdtxtabr{Viceversa}[Vice versa]

883 %%** Italian Abbreviations *****
...
884 %%*****

```



```

...
885 %** French Abbreviations *****%

\ala      • \ala = à la
886 \cmdtxtabr{ala}[\`a la]

\naif     • \naif = naïf
887 \cmdtxtabr{naif}[na\`{i}f]

\naive    • \naive = naïve
888 \cmdtxtabr{naive}[na\`{i}ve]

\role     • \role = rôle
889 \cmdtxtabr{role}[r\`{o}le]

890 %*****%

\Role     • \Role = Rôle
891 \cmdtxtabr{Role}[R\`{o}le]

892 %** English Abbreviations *****%

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

\contd    • \contd = contd.
894 \cmdtxtabr{contd}[contd.\@]

\iff      • \iff = iff
895 \cmdtxtabr{iff}

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

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

\resp     • \resp = resp.
898 \cmdtxtabr{resp}[resp.\@]

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

\wlogx    • \wlogx = w.l.o.g.
900 \cmdtxtabr{wlogx}[w.l.o.g.\@]

901 %*****%

\Contd    • \Contd = Contd.
902 \cmdtxtabr{Contd}[Contd.\@]

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

904 \fi
905 %*****%
906 %*****%
907 %** Elementary Macros for Math *****%
908 %*****%
909 \ifmth@

```

```

910 %** General Notation *****/
\defeq ...
\seteq 911 \DeclareRobustCommand{\defeq}
912   {\ifstarvar%
913     {\mthlbop{\stackrel{\text{\textup{def}}}{=}}}%
914     {\mthlbop{\triangleq}}}
915 \DeclareRobustCommand{\seteq}
916   {\ifstarvar{\mthlbop{\Coloneqq}}{\mthlbop{\coloneqq}}}
917 %****/

\limp ...
\lcoimp 918 \DeclareRobustCommand{\limp}
919   {\mthlbop{\rightarrow}}
920 \DeclareRobustCommand{\lcoimp}
921   {\mthlbop{\leftrightharpoonup}}
922 %****/

\implies ...
\notimplies 923 \DeclareRobustCommand{\implies}
924   {\mthlrel{\rightarrow}}
925 \DeclareRobustCommand{\notimplies}
926   {\mthlrel{\not\rightarrow}}

\implied ...
\notimplied 927 \DeclareRobustCommand{\implied}
928   {\mthlrel{\Leftarrow}}
929 \DeclareRobustCommand{\notimplied}
930   {\mthlrel{\not\Leftarrow}}

\coimplies ...
\notcoimplies 931 \DeclareRobustCommand{\coimplies}
932   {\mthlrel{\Leftrightarrow}}
933 \DeclareRobustCommand{\notcoimplies}
934   {\mthlrel{\not\Leftrightarrow}}
935 %****/

\cmodels ...
\notcmodels 936 \DeclareRobustCommand{\cmodels}
937   {\mthlrel{\models}}
938 \DeclareRobustCommand{\notcmodels}
939   {\mthlrel{\not\models}}

\cequiv ...
\notcequiv 940 \DeclareRobustCommand{\cequiv}
941   {\mthlrel{\equiv}}
942 \DeclareRobustCommand{\notcequiv}
943   {\mthlrel{\not\equiv}}
944 %****/

\denot ...
945 \DeclareRobustCommand{\denot}
946   {\ifexclavar{\@edenot}{\@denot}}
947 \DeclareRobustCommand{\denot}[1]
948   {\mth{\argmid{\left\llbracket}{\#1}{\right\rrbracket}}}
949 \DeclareRobustCommand{\@edenot}[1]
950   {\mth{!\argmid{\llbracket}{\#1}{\rrbracket}}}
951 %****/

```

```

\comp ...
\dual 952 \DeclareRobustCommand{\comp}
\adj 953 {\ifstarvar{\@scompdual}{\@compdual}}
\der 954 \DeclareRobustCommand{\dual}
\trn 955 {\ifstarvar{\@scompdual}{\@compdual}}
956 \DeclareRobustCommand{\@compdual}[1]
957 {\mth{\overline{#1}}}
958 \DeclareRobustCommand{\@scompdual}[1]
959 {\mth{\widetilde{#1}}}
960 \DeclareRobustCommand{\adj}[1]
961 {\mth{\mathring{#1}}}
962 \DeclareRobustCommand{\der}[1]
963 {\mth{\widehat{#1}}}
964 \DeclareRobustCommand{\trn}[1]
965 {\mth{\widetilde{#1}}}

\vec ...
966 \DeclareRobustCommand{\vec}
967 {\ifstarvar{\@svec}{\@vec}}
968 \DeclareRobustCommand{\@vec}[1]
969 {\mth{\mathaccent"017E{#1}}}
970 \DeclareRobustCommand{\@svec}[1]
971 {\mth{\overline{#1}}}

972 %%*****%

\enumeration ...
973 \DeclareRobustCommand{\enumeration}
974 {\ifstarvar{\@senumeration}{\@enumeration}}
975 \varcmd{\@enumeration}{\mth!}{,}{,}{,}{,}{}
976 \varcmd{\@senumeration}{\mth!}{,}{,}{,}{,}{}

\sequence ...
\sequence1 977 \DeclareRobustCommand{\sequence}
\sequencer 978 {\ifstarvar{\@ssequence}{\@sequence}}
979 \DeclareRobustCommand{\@sequence}
980 {\ifexclavar{\@e@sequence}{\@@sequence}}
981 \DeclareRobustCommand{\@ssequence}
982 {\ifexclavar{\@e@ssequence}{\@@ssequence}}
983 \varcmd{\@sequence}{\mth}{\left[{}{,}{\right]}{}{}
984 \varcmd{\@e@sequence}{\mth!}{[{}{,}{}]}{}
985 \varcmd{\@ssequence}{\mth}{\left[{}{;}{\right]}{}{}
986 \varcmd{\@e@ssequence}{\mth!}{[{}{;}{}]}{}
987 \DeclareRobustCommand{\sequence1}
988 {\ifstarvar{\@ssequence1}{\@sequence1}}
989 \DeclareRobustCommand{\@sequence1}
990 {\ifexclavar{\@e@sequence1}{\@@sequence1}}
991 \DeclareRobustCommand{\@ssequence1}
992 {\ifexclavar{\@e@ssequence1}{\@@ssequence1}}
993 \varcmd{\@sequence1}{\mth}{\left[{}{,}{\right.}{}{}
994 \varcmd{\@e@sequence1}{\mth!}{[{}{,}{}]}{}
995 \varcmd{\@ssequence1}{\mth}{\left[{}{;}{\right.}{}{}
996 \varcmd{\@e@ssequence1}{\mth!}{[{}{;}{}]}{}
997 \DeclareRobustCommand{\sequencer}
998 {\ifstarvar{\@ssequencer}{\@sequencer}}
999 \DeclareRobustCommand{\@sequencer}
1000 {\ifexclavar{\@e@sequencer}{\@@sequencer}}
1001 \DeclareRobustCommand{\@ssequencer}
1002 {\ifexclavar{\@e@ssequencer}{\@@ssequencer}}
1003 \varcmd{\@sequencer}{\mth}{\left.{}{,}{\right]}{}{}
1004 \varcmd{\@e@sequencer}{\mth!}{[{}{,}{}]}{}
1005 \varcmd{\@ssequencer}{\mth}{\left.{}{;}{\right]}{}{}
1006 \varcmd{\@e@ssequencer}{\mth!}{[{}{;}{}]}{}

```

```

\tuple ...
\tuplel 1007 \DeclareRobustCommand{\tuple}
\tupler 1008 {\ifstarvar{\@stuple}{\@tuple}}
1009 \DeclareRobustCommand{\@tuple}
1010 {\ifexclavar{\@e@tuple}{\@@tuple}}
1011 \DeclareRobustCommand{\@stuple}
1012 {\ifexclavar{\@e@stuple}{\@@stuple}}
1013 \varcmd{\@tuple}{\mth}{\left\langle}{,}{\right\rangle}{}
1014 \varcmd{\@e@tuple}{\mth!}{\langle}{,}{\rangle}{}
1015 \varcmd{\@stuple}{\mth}{\left\langle}{;}{\right\rangle}{}
1016 \varcmd{\@e@stuple}{\mth!}{\langle}{;}{\rangle}{}
1017 \DeclareRobustCommand{\tuplel}
1018 {\ifstarvar{\@stuplel}{\@tuplel}}
1019 \DeclareRobustCommand{\@tuplel}
1020 {\ifexclavar{\@e@tuplel}{\@@tuplel}}
1021 \DeclareRobustCommand{\@stuplel}
1022 {\ifexclavar{\@e@stuplel}{\@@stuplel}}
1023 \varcmd{\@tuplel}{\mth}{\left\langle}{,}{\right.}{}
1024 \varcmd{\@e@tuplel}{\mth!}{\langle}{,}{\rangle}{}
1025 \varcmd{\@stuplel}{\mth}{\left\langle}{;}{\right.}{}
1026 \varcmd{\@e@stuplel}{\mth!}{\langle}{;}{\rangle}{}
1027 \DeclareRobustCommand{\tupler}
1028 {\ifstarvar{\@stupler}{\@tupler}}
1029 \DeclareRobustCommand{\@tupler}
1030 {\ifexclavar{\@e@tupler}{\@@tupler}}
1031 \DeclareRobustCommand{\@stupler}
1032 {\ifexclavar{\@e@stupler}{\@@stupler}}
1033 \varcmd{\@tupler}{\mth}{\left.}{,}{\right\rangle}{}
1034 \varcmd{\@e@tupler}{\mth!}{\rangle}{}
1035 \varcmd{\@stupler}{\mth}{\left.}{;}{\right\rangle}{}
1036 \varcmd{\@e@stupler}{\mth!}{\rangle}{}
1037 %** Sets *****%

\set ...{\mathbb{1}^2}{\mathbb{1}^2}{\mathbb{1}^2}{\mathbb{1}^2}
\setl ...{\mathbb{1}^2}{\mathbb{1}^2}
\setr ...{\mathbb{1}^2}{\mathbb{1}^2}
...{\mathbb{1}^2}{\mathbb{1}^2}
...{\mathbb{1}^2}{\mathbb{1}^2}

1038 \DeclareRobustCommand{\set}
1039 {\ifstarvar{\@sset}{\@set}}
1040 \DeclareRobustCommand{\@set}
1041 {\ifexclavar{\@e@xset}{\@@xset}}
1042 \DeclareRobustCommand{\@sset}
1043 {\ifexclavar{\@e@xset}{\@@xset}}
1044 \DeclareRobustCommand{\@@xset}[3]
1045 {\mth{\argmid{\left\lbrace}{\argsep{#2}{\,},\middle{#1},}{#3}}{\right\rbrace}}
1046 \DeclareRobustCommand{\@e@xset}[3]
1047 {\mth!{\argmid{\lbrace}{\argsep{#2}{\,},#1},}{#3}}{\rbrace}}
1048 \DeclareRobustCommand{\setl}
1049 {\ifstarvar{\@ssetl}{\@setl}}
1050 \DeclareRobustCommand{\@setl}
1051 {\ifexclavar{\@e@xsetl}{\@@xsetl}}
1052 \DeclareRobustCommand{\@ssetl}
1053 {\ifexclavar{\@e@xsetl}{\@@xsetl}}
1054 \DeclareRobustCommand{\@@xsetl}[2]
1055 {\mth{\argmid{\left\lbrace}{#2}{\,},\right{#1}}}
1056 \DeclareRobustCommand{\@e@xsetl}[2]
1057 {\mth!{\argmid{\lbrace}{#2}{\,},#1}}}
1058 \DeclareRobustCommand{\setr}
1059 {\ifstarvar{\@setr}{\@setr}}
1060 \DeclareRobustCommand{\@setr}
1061 {\ifexclavar{\@e@setr}{\@@setr}}

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```

1062 \DeclareRobustCommand{\@@setr}[1]
1063   {\mth{\argmid{\left.}{\right\}}{#1}{\right\}}}
1064 \DeclareRobustCommand{\@e@setr}[1]
1065   {\mth!\{\argmid\}{#1}{\right\}}}

\card ...
1066 \DeclareRobustCommand{\card}
1067   {\ifexclavar{\@ecard}{\@card}}
1068 \DeclareRobustCommand{\@card}[1]
1069   {\mth{\argmid{\left\lvert\right\lvert}{#1}{\right\lvert\right\lvert}}}
1070 \DeclareRobustCommand{\@ecard}[1]
1071   {\mth!\{\argmid{\left\lvert\right\lvert}{#1}{\right\lvert\right\lvert}}}

\pow ...
1072 \DeclareRobustCommand{\pow}
1073   {\ifstarvar{\@spow}{\@pow}}
1074 \DeclareRobustCommand{\@pow}[1]
1075   {\mth{2^{\defval{#1}{\cdot}}}}
1076 \DeclareRobustCommand{\@spow}
1077   {\ifexclavar{\@e@spow}{\@@spow}}
1078 \DeclareRobustCommand{\@e@spow}[1]
1079   {\mthargfun![mathscr]{P}{\defval{#1}{\cdot}}}
1080 \DeclareRobustCommand{\@@spow}[1]
1081   {\mthargfun[mathscr]{P}{\defval{#1}{\cdot}}}

1082 %** Relations *****%

\emptyrel ...
1083 \DeclareRobustCommand{\emptyrel}
1084   {\mth{\varnothing}}

1085 %*****%

\dom ...
\cod 1086 \usrmth{\dom}{\argfun}
\rng 1087 \usrmth{\cod}{\argfun}
\img 1088 \usrmth{\rng}{\argfun}
1089 \usrmth{\img}{\argfun}

\deg ...
1090 \usrmth{\deg}{\argfun}

1091 %*****%

\prj ...
1092 \DeclareRobustCommand{\prj}
1093   {\mthlbop{\downarrow}}

\rst ...
1094 \DeclareRobustCommand{\rst}
1095   {\mthlbop{\upharpoonright}}

\cmp ...
1096 \DeclareRobustCommand{\cmp}
1097   {\mthlbop{\circ}}

1098 %** Functions *****%

\emptyfun ...
1099 \DeclareRobustCommand{\emptyfun}
1100   {\mth{\varnothing}}

1101 %*****%

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```

\pto ...
\pmapsto 1102 \DeclareMathOperator{\pto}
1103   {\ensuremath{\rightharpoonup}}
1104 \DeclareMathOperator{\pmapsto}
1105   {\ensuremath{\mathrel{\raisebox{0.5ex}{\footnotesize$\llcorner$}}}%
1106     \kern-1.5ex\rightharpoonup}}
1107 %%*****%

\fix ...
\ifp 1108 \usrmth{fix}{-}{fun}
\lfp 1109 \usrmth{ifp}{-}{fun}
\gfp 1110 \usrmth{lfp}{-}{fun}
1111 \usrmth{gfp}{-}{fun}
1112 %%*****%

\Aomega ...
\AOmega 1113 \usrmth{Aomega}{-}{argset}[\omega]
1114 \usrmth{AOmega}{-}{argset}[\Omega]

\Atheta ...
\ATheta 1115 \usrmth{Atheta}{-}{argset}[\theta]
1116 \usrmth{ATheta}{-}{argset}[\Theta]

\Aomicron ...
\AOmicron 1117 \usrmth{Aomicron}{-}{argset}[\omicron]
1118 \usrmth{AOmicron}{-}{argset}[\Omicron]
1119 %%** Numbers *****%

\SetB ...
1120 \DeclareRobustCommand{\SetB}
1121   {\mthset[mathbb]{B}}

\SetF ...
1122 \DeclareRobustCommand{\SetF}
1123   {\mthset[mathbb]{F}}

\SetN ...
\SetNI 1124 \DeclareRobustCommand{\SetN}
1125   {\mthset[mathbb]{N}}
1126 \DeclareRobustCommand{\SetNI}[1] []
1127   {\SetN[\infty #1]}

\SetZ ...
\SetZI 1128 \DeclareRobustCommand{\SetZ}
\SetZPI 1129   {\mthset[mathbb]{Z}}
\SetZNI 1130 \DeclareRobustCommand{\SetZI}[1] []
1131   {\SetZ[\pm\infty #1]}
1132 \DeclareRobustCommand{\SetZPI}[1] []
1133   {\SetZ[+\infty #1]}
1134 \DeclareRobustCommand{\SetZNI}[1] []
1135   {\SetZ[-\infty #1]}

\SetQ ...
\SetQI 1136 \DeclareRobustCommand{\SetQ}
\SetQPI 1137   {\mthset[mathbb]{Q}}
\SetQNI 1138 \DeclareRobustCommand{\SetQI}[1] []
1139   {\SetQ[\pm\infty #1]}
1140 \DeclareRobustCommand{\SetQPI}[1] []
1141   {\SetQ[+\infty #1]}
1142 \DeclareRobustCommand{\SetQNI}[1] []
1143   {\SetQ[-\infty #1]}

```

```

\SetR ...
\SetRI 1144 \DeclareRobustCommand{\SetR}
\SetRPI 1145 {\mthset[mathbb]{R}}
\SetRNI 1146 \DeclareRobustCommand{\SetRI}[1] []
1147 {\SetR[\pm\infty #1]}
1148 \DeclareRobustCommand{\SetRPI}[1] []
1149 {\SetR[+\infty #1]}
1150 \DeclareRobustCommand{\SetRNI}[1] []
1151 {\SetR[-\infty #1]}

\SetC ...
\SetCI 1152 \DeclareRobustCommand{\SetC}
1153 {\mthset[mathbb]{C}}
1154 \DeclareRobustCommand{\SetCI}[1] []
1155 {\SetC[\infty #1]}
1156 %%*****%

\num ...
\numcc 1157 \DeclareRobustCommand{\num}[1]
\numco 1158 {\mth{[#1]}}
\numoc 1159 \DeclareRobustCommand{\numcc}[2]
\numoo 1160 {\mth{[\argsep{#1}{,}{#2}]}}
1161 \DeclareRobustCommand{\numco}[2]
1162 {\mth{[\argsep{#1}{,}{#2}]}}
1163 \DeclareRobustCommand{\numoc}[2]
1164 {\mth{(\argsep{#1}{,}{#2})}}
1165 \DeclareRobustCommand{\numoo}[2]
1166 {\mth{(\argsep{#1}{,}{#2})}}
1167 %%*****%

\abs ...
\norm 1168 \DeclareRobustCommand{\abs}
1169 {\ifexclavar{@eabs}{\@abs}}
1170 \DeclareRobustCommand{@abs}[1]
1171 {\mth{\argmid{\left\lvert}{#1}{\right\rvert}}}
1172 \DeclareRobustCommand{@eabs}[1]
1173 {\mth!\{\argmid{\lvert}{#1}{\rvert}}
1174 \DeclareRobustCommand{\norm}
1175 {\ifexclavar{@enorm}{\@enorm}}
1176 \DeclareRobustCommand{@enorm}[1]
1177 {\mth{\argmid{\left\lVert}{#1}{\right\rVert}}}
1178 \DeclareRobustCommand{@enorm}[1]
1179 {\mth!\{\argmid{\lVert}{#1}{\rVert}}}

\floor ...
\ceil 1180 \DeclareRobustCommand{\floor}
1181 {\ifexclavar{@efloor}{\@efloor}}
1182 \DeclareRobustCommand{@efloor}[1]
1183 {\mth{\argmid{\left\lfloor}{#1}{\right\rfloor}}}
1184 \DeclareRobustCommand{@efloor}[1]
1185 {\mth!\{\argmid{\lfloor}{#1}{\rfloor}}}
1186 \DeclareRobustCommand{\ceil}
1187 {\ifexclavar{@eceil}{\@eceil}}
1188 \DeclareRobustCommand{@eceil}[1]
1189 {\mth{\argmid{\left\lceil}{#1}{\right\rceil}}}
1190 \DeclareRobustCommand{@eceil}[1]
1191 {\mth!\{\argmid{\lceil}{#1}{\rceil}}}
1192 %%*****%

\arg ...
1193 \usrmth{arg}{\}{fun}

```

```

\evn ...
\odd 1194 \usrmth{evn}{-}{fun}
      1195 \usrmth{odd}{-}{fun}

\bst ...
\argbst 1196 \usrmth{bst}{-}{fun}
        1197 \usrmth{argbst}{-}{fun}[arg\,bst]

\min ...
\max 1198 \usrmth{min}{-}{fun}
\argmin 1199 \usrmth{max}{-}{fun}
\argmax 1200 \usrmth{argmin}{-}{fun}[arg\,min]
        1201 \usrmth{argmax}{-}{fun}[arg\,max]

\inf ...
\sup 1202 \usrmth{inf}{-}{fun}
      1203 \usrmth{sup}{-}{fun}

\gcd ...
\lcm 1204 \usrmth{gcd}{-}{fun}
      1205 \usrmth{lcm}{-}{fun}

      1206 %** Sequences *****%%

\emptyseq ...
      1207 \DeclareRobustCommand{\emptyseq}
      1208   {\mth{\varepsilon}}

\len ...
      1209 \DeclareRobustCommand{\len}
      1210   {\ifexclavar{\@elen}{\@len}}
      1211 \DeclareRobustCommand{\@len}[1]
      1212   {\mth{\argmid{\left\lvert}{\right\lvert}}{#1}}
      1213 \DeclareRobustCommand{\@elen}[1]
      1214   {\mth!\{\argmid{\left\lvert}{\right\lvert}}{#1}}

\fst ...
\lst 1215 \usrmth{fst}{-}{argfun}
      1216 \usrmth{lst}{-}{argfun}

      1217 \fi
      1218 %*****%%

      1219 %*****%%
      1220 %** Macros for Computational-Complexity Classes *****%%
      1221 %*****%%
      1222 \ifcom@

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

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

      • \defcomcls{CompClass}[NewClass];

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

      1223 \DeclareRobustCommandx{\defcomcls}[2][2=]
      1224   {\csdef{#1}{\txtoargcom{\defval{#2}{#1}}}}

\defcomclsgrp ... to do!

```





```

\CoDCompClassC[sub][sup][arg] = CoDNEWCLASS-COMPLETESUPSUB(ARG)

\NCompClass[sub][sup][arg] = NNEWCLASSSUPSUB(ARG)
\CoNCompClass[sub][sup][arg] = CoNNEWCLASSSUPSUB(ARG)
\NCompClassE[sub][sup][arg] = NNEWCLASS-EASYSUPSUB(ARG)
\CoNCompClassE[sub][sup][arg] = CoNNEWCLASS-EASYSUPSUB(ARG)
\NCompClassH[sub][sup][arg] = NNEWCLASS-HARDSUPSUB(ARG)
\CoNCompClassH[sub][sup][arg] = CoNNEWCLASS-HARDSUPSUB(ARG)
\NCompClassC[sub][sup][arg] = NNEWCLASS-COMPLETESUPSUB(ARG)
\CoNCompClassC[sub][sup][arg] = CoNNEWCLASS-COMPLETESUPSUB(ARG)

\UCompClass[sub][sup][arg] = UNEWCLASSSUPSUB(ARG)
\CoUCompClass[sub][sup][arg] = CoUNEWCLASSSUPSUB(ARG)
\UCompClassE[sub][sup][arg] = UNEWCLASS-EASYSUPSUB(ARG)
\CoUCompClassE[sub][sup][arg] = CoUNEWCLASS-EASYSUPSUB(ARG)
\UCompClassH[sub][sup][arg] = UNEWCLASS-HARDSUPSUB(ARG)
\CoUCompClassH[sub][sup][arg] = CoUNEWCLASS-HARDSUPSUB(ARG)
\UCompClassC[sub][sup][arg] = UNEWCLASS-COMPLETESUPSUB(ARG)
\CoUCompClassC[sub][sup][arg] = CoUNEWCLASS-COMPLETESUPSUB(ARG)

\ACompClass[sub][sup][arg] = ANEWCLASSSUPSUB(ARG)
\CoACompClass[sub][sup][arg] = CoANEWCLASSSUPSUB(ARG)
\ACompClassE[sub][sup][arg] = ANEWCLASS-EASYSUPSUB(ARG)
\CoACompClassE[sub][sup][arg] = CoANEWCLASS-EASYSUPSUB(ARG)
\ACompClassH[sub][sup][arg] = ANEWCLASS-HARDSUPSUB(ARG)
\CoACompClassH[sub][sup][arg] = CoANEWCLASS-HARDSUPSUB(ARG)
\ACompClassC[sub][sup][arg] = ANEWCLASS-COMPLETESUPSUB(ARG)
\CoACompClassC[sub][sup][arg] = CoANEWCLASS-COMPLETESUPSUB(ARG)

1225 \DeclareRobustCommandx{\defcomclsggrp}[2][2=]
1226   {\defcomclsgrpsem{#1}{\defval{#2}{#1}}}%
1227   \defcomclsgrpsem{#1}{\defval{#2}{#1}}[Co]}
1228 \DeclareRobustCommandx{\defcomclsgrpsem}[3][3=]
1229   {\defcomclsgrpred{#3#1}{#2}{#3}}%
1230   \defcomclsgrpred{#3D#1}{#2}{#3D}}%
1231   \defcomclsgrpred{#3N#1}{#2}{#3N}}%
1232   \defcomclsgrpred{#3U#1}{#2}{#3U}}%
1233   \defcomclsgrpred{#3A#1}{#2}{#3A}}%
1234 \DeclareRobustCommandx{\defcomclsgrpred}[3][3=]
1235   {\defcomclsgrpcmd{#1}{#2}{#3}}%
1236   \defcomclsgrpcmd{#1E}{#2}{#3}[-easy]}%
1237   \defcomclsgrpcmd{#1H}{#2}{#3}[-hard]}%
1238   \defcomclsgrpcmd{#1C}{#2}{#3}[-complete}}}%
1239 \DeclareRobustCommandx{\defcomclsgrpcmd}[4][3=, 4=]
1240   {\csdef{#1}{\txtoargcom{#3#2#4}}}%

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

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

• \defcomhrc{CompHierarchy}[NewHierarchy];

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

1241 \DeclareRobustCommandx{\defcomhrc}[2][2=]
1242   {\csdef{#1}{\txtoparcom{\defval{#2}{#1}}}}%

1243 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\Easy
\Hard 1244 \cmdtxtcom{Easy}
\Complete 1245 \cmdtxtcom{Hard}
1246 \cmdtxtcom{Complete}

```

```

1247 %%*****%
\ FPT      • \FPT[sub][sup][arg] = FPTSUB(ARG)
\FPLin     • \FPLin[sub][sup][arg] = FPLSUB(ARG)
\FPQdr     • \FPQdr[sub][sup][arg] = FPQSUB(ARG)
\FPCub     • \FPCub[sub][sup][arg] = FPCSUB(ARG)

1248 \defcomcls{FPT}
1249 \defcomcls{FPLin}[FPL]
1250 \defcomcls{FPQdr}[FPQ]
1251 \defcomcls{FPCub}[FPC]

1252 %%*****%

\Time(E/H/C) • \Time[sub][sup][arg] = TIMESUB(ARG)
\DTIME(E/H/C) • \TimeE[sub][sup][arg] = TIME-EASYSUB(ARG)
\NTIME(E/H/C) • \TimeH[sub][sup][arg] = TIME-HARDSUB(ARG)
\UTIME(E/H/C) • \TimeC[sub][sup][arg] = TIME-COMPLETESUB(ARG)
\ATIME(E/H/C) • \DTIME[sub][sup][arg] = DTIMESUB(ARG)
               • \DTIMEE[sub][sup][arg] = DTIME-EASYSUB(ARG)
               • \DTIMEH[sub][sup][arg] = DTIME-HARDSUB(ARG)
               • \DTIMEC[sub][sup][arg] = DTIME-COMPLETESUB(ARG)
               • \NTIME[sub][sup][arg] = NTIMESUB(ARG)
               • \NTIMEE[sub][sup][arg] = NTIME-EASYSUB(ARG)
               • \NTIMEH[sub][sup][arg] = NTIME-HARDSUB(ARG)
               • \NTIMEC[sub][sup][arg] = NTIME-COMPLETESUB(ARG)
               • \UTIME[sub][sup][arg] = UTIMESUB(ARG)
               • \UTIMEE[sub][sup][arg] = UTIME-EASYSUB(ARG)
               • \UTIMEH[sub][sup][arg] = UTIME-HARDSUB(ARG)
               • \UTIMEC[sub][sup][arg] = UTIME-COMPLETESUB(ARG)
               • \ATIME[sub][sup][arg] = ATIMESUB(ARG)
               • \ATIMEE[sub][sup][arg] = ATIME-EASYSUB(ARG)
               • \ATIMEH[sub][sup][arg] = ATIME-HARDSUB(ARG)
               • \ATIMEC[sub][sup][arg] = ATIME-COMPLETESUB(ARG)

1253 \defcomclsgrp{Time}

\Space(E/H/C) • \Space[sub][sup][arg] = SPACESUB(ARG)
\DSpace(E/H/C) • \SpaceE[sub][sup][arg] = SPACE-EASYSUB(ARG)
\NSpace(E/H/C) • \SpaceH[sub][sup][arg] = SPACE-HARDSUB(ARG)
\USpace(E/H/C) • \SpaceC[sub][sup][arg] = SPACE-COMPLETESUB(ARG)
\ASpace(E/H/C) • \DSpace[sub][sup][arg] = DSPACESUB(ARG)
               • \DSpaceE[sub][sup][arg] = DSPACE-EASYSUB(ARG)
               • \DSpaceH[sub][sup][arg] = DSPACE-HARDSUB(ARG)
               • \DSpaceC[sub][sup][arg] = DSPACE-COMPLETESUB(ARG)
               • \NSpace[sub][sup][arg] = NSPACESUB(ARG)
               • \NSpaceE[sub][sup][arg] = NSPACE-EASYSUB(ARG)
               • \NSpaceH[sub][sup][arg] = NSPACE-HARDSUB(ARG)
               • \NSpaceC[sub][sup][arg] = NSPACE-COMPLETESUB(ARG)
               • \USpace[sub][sup][arg] = USPACESUB(ARG)
               • \USpaceE[sub][sup][arg] = USPACE-EASYSUB(ARG)
               • \USpaceH[sub][sup][arg] = USPACE-HARDSUB(ARG)
               • \USpaceC[sub][sup][arg] = USPACE-COMPLETESUB(ARG)
               • \ASpace[sub][sup][arg] = ASPACESUB(ARG)
               • \ASpaceE[sub][sup][arg] = ASPACE-EASYSUB(ARG)
               • \ASpaceH[sub][sup][arg] = ASPACE-HARDSUB(ARG)
               • \ASpaceC[sub][sup][arg] = ASPACE-COMPLETESUB(ARG)

1254 \defcomclsgrp{Space}

\LogTime(E/H/C) • \LogTime[sub][sup][arg] = LOGTIMESUB(ARG)
\DLogTime(E/H/C) • \LogTimeE[sub][sup][arg] = LOGTIME-EASYSUB(ARG)
\NLogTime(E/H/C) • \LogTimeH[sub][sup][arg] = LOGTIME-HARDSUB(ARG)
\ULogTime(E/H/C) • \LogTimeC[sub][sup][arg] = LOGTIME-COMPLETESUB(ARG)
\ALogTime(E/H/C)

```







```

\DLH      • \DLH[sub][sup][par] =  $\Delta_{\text{SUB}}^{\text{SUP}}[\text{PAR}]$ 
\DBH      • \DBH[sub][sup][par] =  $\Delta_{\text{SUB}}^{\text{SUP}}[\text{PAR}]$ 

1267 \defcomhrc{DLH}{\mth{\Delta}}
1268 \defcomhrc{DBH}{\mth[\mathbf]{\Delta}}

\ELH      • \ELH[sub][sup][par] =  $\Sigma_{\text{SUB}}^{\text{SUP}}[\text{PAR}]$ 
\EBH      • \EBH[sub][sup][par] =  $\Sigma_{\text{SUB}}^{\text{SUP}}[\text{PAR}]$ 

1269 \defcomhrc{ELH}{\mth{\Sigma}}
1270 \defcomhrc{EBH}{\mth[\mathbf]{\Sigma}}

\ULH      • \ULH[sub][sup][par] =  $\Pi_{\text{SUB}}^{\text{SUP}}[\text{PAR}]$ 
\UBH      • \UBH[sub][sup][par] =  $\Pi_{\text{SUB}}^{\text{SUP}}[\text{PAR}]$ 

1271 \defcomhrc{ULH}{\mth{\Pi}}
1272 \defcomhrc{UBH}{\mth[\mathbf]{\Pi}}

1273 \fi
1274 %*****%

1275 %*****%
1276 %** Macros for Graphs *****%
1277 %*****%
1278 \ifgrp@
1279 %** Syntax *****%

\GrpName ...
... 1280 \newcommand{\grpname}{G}
1281 \usrmthlatupp{Grp}{Name}{name}[\grpname]

\VerSet ...
... 1282 \newcommand{\versym}{v}
1283 \newcommand{\verset}{V}
1284 \cmdmthsetext{Ver}[\verset][\versym]
1285 \cmdmthsymelm{iver}[\versym_{I}]
1286 \cmdmthsymelm{fver}[\versym_{F}]

\EdgRel ...
1287 \newcommand{\edgrel}{E}
1288 \cmdmthrel{Edg}[\edgrel]

1289 %** Semantics *****%

\PthSet ...
\pthFun 1290 \newcommand{\pthsym}{\pi}
1291 \newcommand{\pthset}{Pth}
1292 \cmdmthsetext{Pth}[\pthset][\pthsym]
1293 \usrmth{path}{-}{argfun}

\pre ...
\suc 1294 \usrmth{pre}{-}{oargfun}
1295 \usrmth{suc}{-}{oargfun}

1296 \fi
1297 %*****%

1298 %*****%
1299 %** Macros for Games *****%
1300 %*****%
1301 \ifgam@
1302 %** Logic Games *****%

```

```

\SATG ...
... 1303 %% Satisfiability Games
1304 \cmdtxttoparname{SATG}[Sat]
1305
1306 %% Validity Games
1307 \cmdtxttoparname{VALG}[Val]
1308
1309 %% Evaluation Games
1310 \cmdtxttoparname{EVLG}[Evl]
1311
1312 %% Synthesis Games
1313 \cmdtxttoparname{SYNG}[Syn]
1314
1315 %% Model-Checking Games
1316 \cmdtxttoparname{MCG}[MC]
1317
1318 %% Ehrenfeucht-Fraisse Games
1319 \cmdtxttoparname{EFG}[EF]
1320 %** Syntax *****%%

\PlrSym ...
\OppSym 1321 \newcommand{\plrsym}{E}
1322 \cmdmthsym{Plr}[\plrsym]
1323 \newcommand{\oppsym}{A}
1324 \cmdmthsym{Opp}[\oppsym]

\ArenaName ...
... 1325 \newcommand{\arenaname}{A}
1326 \usrmthlatupp{Arena}{Name}{name}[\arenaname]

\PosSet ...
... 1327 \newcommand{\possym}{v}
1328 \newcommand{\posset}{Ps}
1329 \cmdmthsetext{Pos}[\posset][\possym]
1330 \cmdmthsymelm{ipos}[\possym_{I}]
1331 \cmdmthsymelm{fpos}[\possym_{F}]
1332 \cmdmthset{PPos}[\posset_{\PlrSym}]
1333 \cmdmthsymelm{ppos}[\possym_{\PlrSym}]
1334 \cmdmthset{OPos}[\posset_{\OppSym}]
1335 \cmdmthsymelm{opos}[\possym_{\OppSym}]

\PlrFun ...
1336 \newcommand{\plrfun}{pl}
1337 \cmdmthfun{plr}[\plrfun]

\MovRel ...
1338 \newcommand{\movrel}{Mv}
1339 \cmdmthrel{Mov}[\movrel]

\GameName ...
... 1340 \newcommand{\gamename}{\Game}
1341 \usrmthlatupp{Game}{Name}{name}[\gamename]

\WinSet ...
1342 \newcommand{\winset}{Wn}
1343 \cmdmthset{Win}[\winset]

\ObsSet ...
\obsFun 1344 \newcommand{\obsset}{Ob}
1345 \cmdmthset{Obs}[\obsset]
1346 \cmdmthfun{obs}

```



```

1347 %%** Semantics *****%%

\HstSet ...
... 1348 \newcommand{\hstsym}{\varpi}
1349 \newcommand{\hstset}{Hst}
1350 \cmdmthsetext{Hst}[\hstset][\hstsym]
1351 \cmdmthset{PHst}[\hstset_{\PlrSym}]
1352 \cmdmthsymelm{phst}[\hstsym_{\PlrSym}]
1353 \cmdmthset{OHst}[\hstset_{\OppSym}]
1354 \cmdmthsymelm{ohst}[\hstsym_{\OppSym}]
1355 \usrmth{play}{-}{oargfun}

\PlaySet ...
\playFun 1356 \newcommand{\playsym}{\pi}
1357 \newcommand{\playset}{Play}
1358 \cmdmthsetext{Play}[\playset][\playsym]
1359 \usrmth{hst}{-}{oargfun}

\StrSet ...
... 1360 \newcommand{\strsym}{\sigma}
1361 \newcommand{\strset}{Str}
1362 \cmdmthsetext{Str}[\strset][\strsym]
1363 \cmdmthset{PStr}[\strset_{\PlrSym}]
1364 \cmdmthsymelm{pstr}[\strsym_{\PlrSym}]
1365 \cmdmthset{OStr}[\strset_{\OppSym}]
1366 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]

\PrfSet ...
\prfFun 1367 \newcommand{\prfsym}{\xi}
1368 \newcommand{\prfset}{Prf}
1369 \cmdmthsetext{Prf}[\prfset][\prfsym]

\ent ...
\esc 1370 \usrmth{ent}{-}{oargfun}
1371 \usrmth{esc}{-}{oargfun}

\int ...
\out 1372 \usrmth{int}{-}{oargfun}
1373 \usrmth{out}{-}{oargfun}

\atr ...
\rch 1374 \usrmth{atr}{-}{oargfun}
1375 \usrmth{rch}{-}{oargfun}

\lift ...
1376 \usrmth{lift}{-}{oargfun}

\sol ...
1377 \usrmth{sol}{-}{oargfun}

1378 %%** Qualitative Games on Graph *****%%

\BG ...
... 1379 %% Buchi Games
1380 \cmdtxttoparname{BG}
1381
1382 %% Co-Buchi Games
1383 \cmdtxttoparname{CG}
1384
1385 %% Parity Games
1386 \cmdtxttoparname{PG}
1387
1388 %% Rabin Games

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1389 \cmdtxttoparname{RG}
1390
1391 %% Streett Games
1392 \cmdtxttoparname{SG}
1393
1394 %% Muller Games
1395 \cmdtxttoparname{MG}
1396 %** Syntax *****%%

\EvnSym ...
\OddSym 1397 \newcommand{\evnsym}{0}
1398 \cmdmthsym{Evns}[\evnsym]
1399 \newcommand{\oddsym}{1}
1400 \cmdmthsym{Odds}[\oddsym]

\PrtSet ...
\prtFun 1401 \newcommand{\prtsym}{p}
1402 \newcommand{\prtset}{Pr}
1403 \cmdmthsetext{Prt}[\prtset][\prtsym]
1404 \cmdmthfun{prt}[pr]
1405 %** Semantics *****%%
...
1406 %** Quantitative Games on Graph *****%%

\EG ...
... 1407 %% Energy Games
1408 \cmdtxttoparname{EG}
1409
1410 %% Mean-Payoff Games
1411 \cmdtxttoparname{MPG}
1412
1413 %% Discounted-Payoff Games
1414 \cmdtxttoparname{DPG}
1415 %** Syntax *****%%

\MaxSym ...
\MinSym 1416 \newcommand{\maxsym}{\oplus}
1417 \cmdmthsym{Max}[\maxsym]
1418 \newcommand{\minsym}{\boxminus}
1419 \cmdmthsym{Min}[\minsym]

\WghSet ...
\wghFun 1420 \newcommand{\wghsym}{w}
1421 \newcommand{\wghset}{Wg}
1422 \cmdmthsetext{Wgh}[\wghset][\wghsym]
1423 \cmdmthfun{wgh}[wg]
1424 %** Semantics *****%%
...
1425 \fi
1426 %*****%%
1427 %*****%%
1428 %** Macros for Logics *****%%
1429 %*****%%
1430 \iflog@
1431 %** Propositional Logics *****%%

```

```

\BF ...
\QBF 1432 % Boolean Formulae
... 1433 \cmdtxttoparname{BF}
1434
1435 % Quantified Boolean Formulae
1436 \DeclareRobustCommand{\QBF}
1437   {\txtname{Q}\BF}
1438 \DeclareRobustCommand{\EBF}
1439   {\ensuremath{\exists}\BF}
1440 \DeclareRobustCommand{\UBF}
1441   {\ensuremath{\forall}\BF}
1442 %** Syntax ****%/

\LogSig ...
... 1443 \newcommand{\logsig}{L}
1444 \usrmthlatupp{Log}{Sig}{sig}[\logsig]

\Tt ...
\Ff 1445 \newcommand{\ttsym}{\top}
1446 \usrmth{Tt}{\}{sym}[\ttsym]
1447 \newcommand{\ffsym}{\bot}
1448 \usrmth{Ff}{\}{sym}[\ffsym]

\LNeg ...
\LNot 1449 \newcommand{\lnegsym}{\neg}
1450 \usrmth{LNeg}{\}{luop}[\lnegsym]
1451 \newcommand{\lnotsym}{\sim}
1452 \usrmth{LNot}{\}{luop}[\lnotsym]

\LCon ...
\LDis 1453 \newcommand{\lconsym}{\land}
1454 \usrmth{LCon}{\}{lbop}[\lconsym]
1455 \newcommand{\ldissym}{\lor}
1456 \usrmth{LDis}{\}{lbop}[\ldissym]

\LImp ...
\LCoI 1457 \newcommand{\limpsym}{\rightarrow}
1458 \usrmth{LImp}{\}{lbop}[\limpsym]
1459 \newcommand{\lcoisym}{\leftrightarrow}
1460 \usrmth{LCoI}{\}{lbop}[\lcoisym]

\LExs ...
\LA11 1461 \newcommand{\lexssym}{\exists}
1462 \usrmth{LExs}{\}{luop}[\lexssym]
1463 \newcommand{\lallsym}{\forall}
1464 \usrmth{LA11}{\}{luop}[\lallsym]

\APSet ...
... 1465 \newcommand{\apsym}{p}
1466 \newcommand{\apset}{AP}
1467 \cmdmthsetext{AP}[\apset][\apsym]
1468 \usrmth{ap}{\}{argfun}

\sub ...
1469 \usrmth{sub}{\}{argfun}

\Cnt ...
\Qnt 1470 \usrmth{Cnt}{\}{sym}[C]
\Sym 1471 \usrmth{Qnt}{\}{sym}[Q]
1472 \usrmth{Sym}{\}{sym}[\odot]

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\QAE ...
\QEA 1473 \usrmth{QAE}{-}{sym}[\forall\exists]
      1474 \usrmth{QEA}{-}{sym}[\exists\forall]

\QntSet ...
... 1475 \newcommand{\qntsym}{\wp}
      1476 \newcommand{\qntset}{\Qn}
      1477 \cmdmthsetext{Qnt}[\qntset][\qntsym]

\free ...
\bound 1478 \usrmth{free}{-}{argfun}
        1479 \usrmth{bound}{-}{argfun}

\dep ...
\alt 1480 \usrmth{dep}{-}{argfun}
      1481 \usrmth{alt}{-}{argfun}

\cnf ...
\dnf 1482 \cmdtxtabr{cnf}
... 1483 \cmdtxtabr{dnf}
      1484 \cmdtxtabr{pnf}
      1485 \cmdtxtabr{nnf}

      1486 %** Semantics *****%%

\LogStr ...
... 1487 \newcommand{\logstr}{L}
      1488 \usrmthlatupp{Log}{Str}{str}[\logstr]

\ValSet ...
... 1489 \newcommand{\valsym}{\xi}
      1490 \newcommand{\valset}{Val}
      1491 \cmdmthsetext{Val}[\valset][\valsym]

\AsgSet ...
... 1492 \newcommand{\asgsym}{\chi}
      1493 \newcommand{\asgset}{Asg}
      1494 \cmdmthsetext{Asg}[\asgset][\asgsym]

      1495 %** First-Order Logics I *****%%

\FOL ...
... 1496 % First-Order Logic
      1497 \cmdtxtoparname{FOL}[Fol]
      1498 \cmdtxtoparname{FO}[FO]
      1499
      1500 % Monadic First-Order Logic
      1501 \DeclareRobustCommand{\MFOL}
      1502   {\{\txtname{M}\}\FOL}
      1503 \DeclareRobustCommand{\MFO}
      1504   {\{\txtname{M}\}\FO}

      1505 %** Syntax *****%%

\VarSig ...
... 1506 \newcommand{\varsig}{V}
      1507 \usrmthlatupp{Var}{Sig}{sig}[\varsig]
      1508 \newcommand{\varsym}{x}
      1509 \newcommand{\varset}{Vr}
      1510 \cmdmthsetext{Var}[\varset][\varsym]
      1511 \usrmth{var}{-}{argfun}[vr]
      1512 \usrmth{dim}{-}{argfun}[dm]

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```

\ConSig ...
... 1513 \newcommand{\consig}{C}
1514 \usrmthlatupp{Con}{Sig}{sig}[\consig]
1515 \newcommand{\consym}{c}
1516 \newcommand{\conset}{Cn}
1517 \cmdmthsetext{Con}[\conset][\consym]
1518 \usrmth{con}{-}{argfun}[cn]

\FunSig ...
... 1519 \newcommand{\funsig}{F}
1520 \usrmthlatupp{Fun}{Sig}{sig}[\funsig]
1521 \newcommand{\funsym}{f}
1522 \newcommand{\funset}{Fn}
1523 \cmdmthsetext{Fun}[\funset][\funsym]
1524 \usrmth{fun}{-}{argfun}[fn]
1525 \usrmth{art}{-}{argfun}[ar]

\TerSig ...
... 1526 \newcommand{\tersig}{T}
1527 \usrmthlatupp{Ter}{Sig}{sig}[\tersig]
1528 \newcommand{\tersym}{t}
1529 \newcommand{\terset}{Tr}
1530 \cmdmthsetext{Ter}[\terset][\tersym]
1531 \usrmth{ter}{-}{argfun}

\RelSig ...
... 1532 \newcommand{\relsig}{R}
1533 \usrmthlatupp{Rel}{Sig}{sig}[\relsig]
1534 \newcommand{\relsym}{r}
1535 \newcommand{\relset}{Rl}
1536 \cmdmthsetext{Rel}[\relset][\relsym]
1537 \usrmth{rel}{-}{argfun}[rl]

\skm ...
1538 \usrmth{skm}{-}{argfun}

1539 %%** Semantics *****%%

\ConStr ...
... 1540 \newcommand{\constr}{C}
1541 \usrmthlatupp{Con}{Str}{str}[\constr]

\FunStr ...
... 1542 \newcommand{\funstr}{F}
1543 \usrmthlatupp{Fun}{Str}{str}[\funstr]

\TerStr ...
... 1544 \newcommand{\terstr}{T}
1545 \usrmthlatupp{Ter}{Str}{str}[\terstr]

\RelStr ...
... 1546 \newcommand{\relstr}{R}
1547 \usrmthlatupp{Rel}{Str}{str}[\relstr]

1548 %%** First-Order Logics II *****%%

\DF ...
\IF 1549 % Dependence-Friendly Logic
... 1550 \cmdtxtopname{DF}
1551
1552 % Independence-Friendly Logic
1553 \cmdtxtopname{IF}
1554

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```

1555 % Dependence/Independence-Friendly Logic
1556 \cmdtxtoparname{DIF}
1557
1558 % Dependence Logic
1559 \cmdtxtoparname{DL}
1560
1561 % Team Logic
1562 \cmdtxtoparname{TL}
1563
1564 % Alternating Dependence-Friendly Logic
1565 \cmdtxtoparname{ADF}
1566
1567 % Alternating Independence-Friendly Logic
1568 \cmdtxtoparname{AIF}
1569
1570 % Alternating Dependence/Independence-Friendly Logic
1571 \cmdtxtoparname{ADIF}
1572
...
1572 %** Syntax *****%

\LEExs ...
\LAAll 1573 \newcommand{\leexssym}{\Sigma}
1574 \usrmth{LEExs}{\luop}{\leexssym}
1575 \newcommand{\laallsym}{\Pi}
1576 \usrmth{LAAll}{\luop}{\laallsym}
1577 %** Semantics *****%

...
1578 %** Second-Order Logics I *****%

\SOL ...
... 1579 % Second-Order Logic
1580 \cmdtxtoparname{SOL}[Sol]
1581 \cmdtxtoparname{SO}
1582
1583 % Weak Second-Order Logic
1584 \DeclareRobustCommand{\WSOL}
1585   {\{\txtname{W}\}\SOL}
1586 \DeclareRobustCommand{\WSO}
1587   {\{\txtname{W}\}\SO}
1588
1589 % coWeak Second-Order Logic
1590 \DeclareRobustCommand{\coWSOL}
1591   {\{\txtname{coW}\}\SOL}
1592 \DeclareRobustCommand{\coWSO}
1593   {\{\txtname{coW}\}\SO}
1594
1595 % Monadic Second-Order Logic
1596 \DeclareRobustCommand{\MSOL}
1597   {\{\txtname{M}\}\SOL}
1598 \DeclareRobustCommand{\MSO}
1599   {\{\txtname{M}\}\SO}
1600
1601 % Weak Monadic Second-Order Logic
1602 \DeclareRobustCommand{\WMSOL}
1603   {\{\txtname{W}\}\MSOL}
1604 \DeclareRobustCommand{\WMSO}
1605   {\{\txtname{W}\}\MSO}
1606
1607 % coWeak Monadic Second-Order Logic
1608 \DeclareRobustCommand{\coWMSOL}
1609   {\{\txtname{coW}\}\MSOL}

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1610 \DeclareRobustCommand{\coWMSO}
1611   {\txtname{coW}}\MSO}

1612 %** Syntax *****%

\FVarSet ...
... 1613 \newcommand{\fvarsym}{x}
1614 \newcommand{\fvarset}{FVr}
1615 \cmdmthsettext{FVar}[\fvarset][\fvarsym]

\SVarSet ...
... 1616 \newcommand{\svarsym}{X}
1617 \newcommand{\svarset}{SVr}
1618 \cmdmthsettext{SVar}[\svarset][\svarsym]

1619 %** Semantics *****%

...

1620 %** Second-Order Logics II *****%

\TL ...
\CL 1621 % Tree Logic
\PL 1622 \cmdtxttoparname{TL}
... 1623
1624 % Weak Tree Logic
1625 \DeclareRobustCommand{\WTL}
1626   {\txtname{W}}\TL}
1627
1628 % coWeak Tree Logic
1629 \DeclareRobustCommand{\coWTL}
1630   {\txtname{coW}}\TL}
1631
1632 % Monadic Tree Logic
1633 \DeclareRobustCommand{\MTL}
1634   {\txtname{M}}\TL}
1635
1636 % Weak Monadic Tree Logic
1637 \DeclareRobustCommand{\WMTL}
1638   {\txtname{W}}\MTL}
1639
1640 % coWeak Monadic Tree Logic
1641 \DeclareRobustCommand{\coWMTL}
1642   {\txtname{coW}}\MTL}
1643
1644 % Chain Logic
1645 \cmdtxttoparname{CL}
1646
1647 % Weak Chain Logic
1648 \DeclareRobustCommand{\WCL}
1649   {\txtname{W}}\CL}
1650
1651 % coWeak Chain Logic
1652 \DeclareRobustCommand{\coWCL}
1653   {\txtname{coW}}\CL}
1654
1655 % Monadic Chain Logic
1656 \DeclareRobustCommand{\MCL}
1657   {\txtname{M}}\CL}
1658
1659 % Weak Monadic Chain Logic
1660 \DeclareRobustCommand{\WMCL}
1661   {\txtname{W}}\MCL}
1662
1663 % coWeak Monadic Chain Logic

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1664 \DeclareRobustCommand{\coWMCL}
1665   {\txtname{coW}\MCL}
1666
1667 % Path Logic
1668 \cmdtxttoparname{PL}
1669
1670 % Weak Path Logic
1671 \DeclareRobustCommand{\WPL}
1672   {\txtname{W}\PL}
1673
1674 % coWeak Path Logic
1675 \DeclareRobustCommand{\coWPL}
1676   {\txtname{coW}\PL}
1677
1678 % Monadic Path Logic
1679 \DeclareRobustCommand{\MPL}
1680   {\txtname{M}\PL}
1681
1682 % Weak Monadic Path Logic
1683 \DeclareRobustCommand{\WMPL}
1684   {\txtname{W}\MPL}
1685
1686 % coWeak Monadic Path Logic
1687 \DeclareRobustCommand{\coWMPL}
1688   {\txtname{coW}\MPL}
1689 %** Syntax *****%
...
1690 %** Semantics *****%
...
1691 %** Modal Logics I *****%

\ML ...
\GML 1692 % Modal Logic
... 1693 \cmdtxttoparname{ML}
1694
1695 % Graded Modal Logic
1696 \DeclareRobustCommand{\GML}
1697   {\txtname{G}\ML}
1698
1699 % Quantified Modal Logic
1700 \DeclareRobustCommand{\QML}
1701   {\txtname{Q}\ML}
1702 \DeclareRobustCommand{\EML}
1703   {\ensuremath{\exists}\ML}
1704 \DeclareRobustCommand{\UML}
1705   {\ensuremath{\forall}\ML}
1706 %** Syntax *****%

\Opr ...
1707 \usrmth{Opr}{\sym}[Op]

\DMod ...
\BMod 1708 \usrmth{DMod}{\sym}[\Diamond]
1709 \usrmth{BMod}{\sym}[\Box]

\Exs ...
\All 1710 \DeclareRobustCommand{\Exs}
1711   {\ifstarvar{\@sexs}{\@exs}}
1712 \DeclareRobustCommand{\@sexs}[1]
1713   {\mth{DMod}[#1]}

```



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1714 \DeclareRobustCommand{\@exs}[1]
1715   {\mth{\defval{\argmid{\langle}{#1}{\rangle}}{\DMod}}}
1716 \DeclareRobustCommand{\All}
1717   {\ifstarvar{\@sall}{\@all}}
1718 \DeclareRobustCommand{\@sall}[1]
1719   {\mth{\BMod}[#1]}
1720 \DeclareRobustCommand{\@all}[1]
1721   {\mth{\defval{\argmid{\left[]{\#1}{\right]}}{\BMod}}}
1722 %** Semantics *****%

\KrpStr ...
... 1723 \newcommand{\krpstr}{K}
1724 \usrmthlatupp{Krp}{Str}{str}[\krpstr]

\WrlSet ...
... 1725 \newcommand{\wrlsym}{w}
1726 \newcommand{\wrlset}{W}
1727 \cmdmthsetext{Wrl}[\wrlset][\wrlsym]
1728 \cmdmthsymelm{iwrl}[\wrlsym_{I}]

\AccRel ...
\TrnRel 1729 \newcommand{\accsym}{R}
1730 \cmdmthrel{Acc}[\accsym]
1731 \cmdmthrel{Trn}[\accsym]

\labFun ...
1732 \newcommand{\labsym}{\lambda}
1733 \cmdmthfun{lab}[\labsym]

\PthSet ...
... 1734 \providecommand{\pthsym}{\pi}
1735 \providecommand{\pthset}{Pth}
1736 \cmdmthsetext{Pth}[\pthset][\pthsym]
1737 \usrmth{path}{\}{argfun}
1738 %** Modal Logics II *****%

\MC ...
\GMC 1739 % Mu Calculus
... 1740 \cmdtxttoparname{MC}[\ensuremath{\mu}-Calculus]
1741
1742 % Graded Mu Calculus
1743 \DeclareRobustCommand{\GMC}
1744   {\{\txtname{G}\}\MC}
1745
1746 % Quantified Mu Calculus
1747 \DeclareRobustCommand{\QMC}
1748   {\{\txtname{Q}\}\MC}
1749 \DeclareRobustCommand{\EMC}
1750   {\ensuremath{\exists}\MC}
1751 \DeclareRobustCommand{\UMC}
1752   {\ensuremath{\forall}\MC}
1753
1754 % Alternation-Free Mu Calculus
1755 \DeclareRobustCommand{\AFMC}
1756   {\{\txtname{AF}\}\MC}
1757
1758 % Alternation-Free Graded Mu Calculus
1759 \DeclareRobustCommand{\AFGMC}
1760   {\{\txtname{AF}\}\GMC}
1761
1762 % Quantified Alternation-Free Mu Calculus
1763 \DeclareRobustCommand{\QAFMC}

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1764   {\txtname{Q}}\AFMC}
1765 \DeclareRobustCommand{\EAFMC}
1766   {\ensuremath{\exists}\AFMC}
1767 \DeclareRobustCommand{\UAFMC}
1768   {\ensuremath{\forall}\AFMC}
1769
1770 %%** Syntax *****%%
...
1771 %%** Semantics *****%%
...
1772 %%** Temporal Logics I *****%%

\PTL ...
\LTL 1773 % Propositional Temporal Logic
... 1774 \cmdtxtopname{PTL}
1775
1776 % Quantified Propositional Temporal Logic
1777 \DeclareRobustCommand{\QPTL}
1778   {\txtname{Q}}\PTL}
1779 \DeclareRobustCommand{\EPTL}
1780   {\ensuremath{\exists}\PTL}
1781 \DeclareRobustCommand{\UPTL}
1782   {\ensuremath{\forall}\PTL}
1783
1784 % Linear Temporal Logic
1785 \cmdtxtopname{LTL}
1786
1787 % Quantified Linear Temporal Logic
1788 \DeclareRobustCommand{\QLTL}
1789   {\txtname{Q}}\LTL}
1790 \DeclareRobustCommand{\ELTL}
1791   {\ensuremath{\exists}\LTL}
1792 \DeclareRobustCommand{\ULTL}
1793   {\ensuremath{\forall}\LTL}
1794
1795 %%** Syntax *****%%

\X ...
... 1795 \usrmth{X}{-}{sym}[X\,,]
1796 \usrmth{F}{-}{sym}[F\,,]
1797 \usrmth{G}{-}{sym}[G\,,]
1798 \usrmth{U}{-}{sym}[\,,U\,,]
1799 \usrmth{R}{-}{sym}[\,,R\,,]

\Y ...
... 1800 \usrmth{Y}{-}{sym}[G\,,]
1801 \usrmth{P}{-}{sym}[P\,,]\let\SavePildcrow\P
1802 \usrmth{H}{-}{sym}[H\,,]\let\SaveDoubleAcute\H
1803 \usrmth{S}{-}{sym}[\,,S\,,]\let\SaveSectionSymbol\S
1804 \usrmth{B}{-}{sym}[\,,B\,,]
1805
1806 %%** Semantics *****%%
...
1806 %%** Temporal Logics II *****%%

\PDL ...
\CTL 1807 % Propositional Dynamic Logic
... 1808 \cmdtxtopname{PDL}
1809
1810 % Computation Tree Logic
1811 \cmdtxtopname{CTL}

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1812
1813 % Weak Computation Tree Logic
1814 \DeclareRobustCommand{\WCTL}
1815   {\textname{W}}\CTL}
1816
1817 % Quantified Computation Tree Logic
1818 \DeclareRobustCommand{\QCTL}
1819   {\textname{Q}}\CTL}
1820 \DeclareRobustCommand{\ECTL}
1821   {\ensuremath{\exists}\CTL}
1822 \DeclareRobustCommand{\UCTL}
1823   {\ensuremath{\forall}\CTL}
1824
1825 % Improved Computation Tree Logic
1826 \cmdtxtopname{CTLP}[CTL$^{+}$]
1827
1828 % Weak Improved Computation Tree Logic
1829 \DeclareRobustCommand{\WCTLP}
1830   {\textname{W}}\CTLP}
1831
1832 % Quantified Improved Computation Tree Logic
1833 \DeclareRobustCommand{\QCTLP}
1834   {\textname{Q}}\CTLP}
1835 \DeclareRobustCommand{\ECTLP}
1836   {\ensuremath{\exists}\CTLP}
1837 \DeclareRobustCommand{\UCTLP}
1838   {\ensuremath{\forall}\CTLP}
1839
1840 % Full Computation Tree Logic
1841 \cmdtxtopname{CTLS}[CTL*]
1842
1843 % Weak Full Computation Tree Logic
1844 \DeclareRobustCommand{\WCTLS}
1845   {\textname{W}}\CTLS}
1846
1847 % Quantified Full Computation Tree Logic
1848 \DeclareRobustCommand{\QCTLS}
1849   {\textname{Q}}\CTLS}
1850 \DeclareRobustCommand{\ECTLS}
1851   {\ensuremath{\exists}\CTLS}
1852 \DeclareRobustCommand{\UCTLS}
1853   {\ensuremath{\forall}\CTLS}
1854 %** Syntax *****%

\E ...
\A 1855 \usrnth{E}{\sym}
    1856 \usrnth{A}{\sym}
1857 %** Semantics *****%
...
1858 %** Game Logics I *****%

\ATL ...
... 1859 % Alternating Temporal Logic
    1860 \cmdtxtopname{ATL}
    1861
    1862 % Weak Alternating Tree Logic
    1863 \DeclareRobustCommand{\WATL}
    1864   {\textname{W}}\ATL}
    1865
    1866 % Quantified Alternating Temporal Logic
    1867 \DeclareRobustCommand{\QATL}
    1868   {\textname{Q}}\ATL}

```

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1869 \DeclareRobustCommand{\EATL}
1870   {\ensuremath{\exists}\ATL}
1871 \DeclareRobustCommand{\UATL}
1872   {\ensuremath{\forall}\ATL}
1873
1874 % Improved Alternating Temporal Logic
1875 \cmdtxtopname{ATLP}[ATL$^{+}$]
1876
1877 % Weak Improved Alternating Tree Logic
1878 \DeclareRobustCommand{\WATLP}
1879   {\txtname{W}\ATLP}
1880
1881 % Quantified Improved Alternating Temporal Logic
1882 \DeclareRobustCommand{\QATLP}
1883   {\txtname{Q}\ATLP}
1884 \DeclareRobustCommand{\EATLP}
1885   {\ensuremath{\exists}\ATLP}
1886 \DeclareRobustCommand{\UATLP}
1887   {\ensuremath{\forall}\ATLP}
1888
1889 % Full Alternating Temporal Logic
1890 \cmdtxtopname{ATLS}[ATL*]
1891
1892 % Weak Full Alternating Tree Logic
1893 \DeclareRobustCommand{\WATLS}
1894   {\txtname{W}\ATLS}
1895
1896 % Quantified Full Alternating Temporal Logic
1897 \DeclareRobustCommand{\QATLS}
1898   {\txtname{Q}\ATLS}
1899 \DeclareRobustCommand{\EATLS}
1900   {\ensuremath{\exists}\ATLS}
1901 \DeclareRobustCommand{\UATLS}
1902   {\ensuremath{\forall}\ATLS}
1903 %** Syntax *****%%

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\EExs ...

```

\AA11 1904 \DeclareRobustCommand{\EExs}[1]
1905   {\mth{\argmid{\langle!\rangle}{\defval{#1}{\emptyset}}{\rangle!\rangle}}
1906 \DeclareRobustCommand{\AA11}[1]
1907   {\mth{\argmid{\left[\left[}{\defval{#1}{\emptyset}}{\right]\right]}}}
1908 %** Semantics *****%%

```

\CGS ...

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1909 \cmdtxtname{CGS}

```

\CGSStr ...

```

... 1910 \newcommand{\cgsstr}{G}
1911 \usrmthlatupp{CGS}{Str}{str}[\cgsstr]

```

\AgnSet ...

```

... 1912 \newcommand{\agnsym}{a}
1913 \newcommand{\agnset}{Ag}
1914 \cmdmthsetext{Agn}[\agnset][\agnsym]

```

\ActSet ...

```

... 1915 \newcommand{\actsym}{c}
1916 \newcommand{\actset}{Ac}
1917 \cmdmthsetext{Act}[\actset][\actsym]

```

\PosSet ...

```

... 1918 \providecommand{\possym}{v}

```

```

1919 \providecommand{\posset}{Ps}
1920 \cmdmthsettext{Pos}[\posset][\possym]
1921 \cmdmthsymelm{ipos}[\possym_{I}]
1922 \cmdmthsymelm{fpos}[\possym_{F}]
1923 \cmdmthset{PPos}[\posset_{\PlrSym}]
1924 \cmdmthsymelm{ppos}[\possym_{\PlrSym}]
1925 \cmdmthset{OPos}[\posset_{\OppSym}]
1926 \cmdmthsymelm{opos}[\possym_{\OppSym}]

\SttSet ...
... 1927 \newcommand{\sttsym}{s}
1928 \newcommand{\sttset}{St}
1929 \cmdmthsettext{Stt}[\sttset][\sttsym]
1930 \cmdmthset{IStt}[\sttset_{I}]
1931 \cmdmthsymelm{istt}[\sttsym_{I}]
1932 \cmdmthset{FStt}[\sttset_{F}]
1933 \cmdmthsymelm{fstt}[\sttsym_{F}]

\DecSet ...
... 1934 \newcommand{\decsym}{d}
1935 \newcommand{\decset}{Dc}
1936 \cmdmthsettext{Dec}[\decset][\decsym]

\movFun ...
\movRel 1937 \newcommand{\movsym}{\tau}
1938 \cmdmthfun{mov}[\movsym]
1939 \cmdmthrel{mov}[\movsym]

\trnFun ...
\trnRel 1940 \newcommand{\trnsym}{\delta}
1941 \cmdmthfun{trn}[\trnsym]
1942 \cmdmthrel{trn}[\trnsym]

\PrfSet ...
1943 \providecommand{\prfsym}{\xi}
1944 \providecommand{\prfset}{Prf}
1945 \cmdmthsettext{Prf}[\prfset][\prfsym]

\HstSet ...
... 1946 \providecommand{\hstsym}{\varpi}
1947 \providecommand{\hstset}{Hst}
1948 \cmdmthsettext{Hst}[\hstset][\hstsym]
1949 \cmdmthset{PHst}[\hstset_{\PlrSym}]
1950 \cmdmthsymelm{phst}[\hstsym_{\PlrSym}]
1951 \cmdmthset{OHst}[\hstset_{\OppSym}]
1952 \cmdmthsymelm{ohst}[\hstsym_{\OppSym}]
1953 \usrmth{hst}{\argfun}

\PlaySet ...
... 1954 \providecommand{\playsym}{\pi}
1955 \providecommand{\playset}{Play}
1956 \cmdmthsettext{Play}[\playset][\playsym]
1957 \usrmth{play}{\argfun}

\PlnSet ...
... 1958 \providecommand{\plnsym}{\rho}
1959 \providecommand{\plnset}{Pln}
1960 \cmdmthsettext{Pln}[\plnset][\plnsym]
1961 \cmdmthset{PPln}[\plnset_{\PlrSym}]
1962 \cmdmthsymelm{pPln}[\plnsym_{\PlrSym}]
1963 \cmdmthset{OPln}[\plnset_{\OppSym}]
1964 \cmdmthsymelm{oPln}[\plnsym_{\OppSym}]

```

```

\StrSet ...
... 1965 \providecommand{\strsym}{\sigma}
    1966 \providecommand{\strset}{\Str}
    1967 \cmdmthsetext{\Str}[\strset][\strsym]
    1968 \cmdmthset{PStr}[\strset_{\PlrSym}]
    1969 \cmdmthsymelm{pstr}[\strsym_{\PlrSym}]
    1970 \cmdmthset{OStr}[\strset_{\OppSym}]
    1971 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]

    1972 %** Game Logics II *****%

\PL ...
... 1973 % Plan Logic
    1974 \cmdtxttoparname{\PL}
    1975
    1976 \DeclareRobustCommand{\EPL}
    1977   {\ensuremath{\exists}\PL}
    1978 \DeclareRobustCommand{\UPL}
    1979   {\ensuremath{\forall}\PL}
    1980
    1981 \DeclareRobustCommand{\FPL}
    1982   {\{\textname{F}\}\PL}
    1983
    1984 \DeclareRobustCommand{\EFPL}
    1985   {\ensuremath{\exists}\FPL}
    1986 \DeclareRobustCommand{\UFPL}
    1987   {\ensuremath{\forall}\FPL}
    1988
    1989 % One-Goal Plan Logic
    1990 \DeclareRobustCommandx{\OGPL}[3][1=, 2=, 3=]
    1991   {\PL[#1][#2][1g\arglef{,}{#3}]}
    1992
    1993 \DeclareRobustCommand{\EOGPL}
    1994   {\ensuremath{\exists}\OGPL}
    1995 \DeclareRobustCommand{\UOGPL}
    1996   {\ensuremath{\forall}\OGPL}
    1997
    1998 \DeclareRobustCommand{\FOGPL}
    1999   {\{\textname{F}\}\OGPL}
    2000
    2001 \DeclareRobustCommand{\EFOGPL}
    2002   {\ensuremath{\exists}\FOGPL}
    2003 \DeclareRobustCommand{\UFOGPL}
    2004   {\ensuremath{\forall}\FOGPL}
    2005
    2006 % Conjunctive-Goal Plan Logic
    2007 \DeclareRobustCommandx{\CGPL}[3][1=, 2=, 3=]
    2008   {\PL[#1][#2][cg\arglef{,}{#3}]}
    2009
    2010 \DeclareRobustCommand{\ECGPL}
    2011   {\ensuremath{\exists}\CGPL}
    2012 \DeclareRobustCommand{\UCGPL}
    2013   {\ensuremath{\forall}\CGPL}
    2014
    2015 \DeclareRobustCommand{\FCGPL}
    2016   {\{\textname{F}\}\CGPL}
    2017
    2018 \DeclareRobustCommand{\EFCGPL}
    2019   {\ensuremath{\exists}\FCGPL}
    2020 \DeclareRobustCommand{\UFCGPL}
    2021   {\ensuremath{\forall}\FCGPL}
    2022
    2023 % Disjunctive-Goal Plan Logic
    2024 \DeclareRobustCommandx{\DGPL}[3][1=, 2=, 3=]

```

```

2025   {\PL[#1][#2][dg\argleft{,}{#3}]}
2026
2027 \DeclareRobustCommand{\EDGPL}
2028   {\ensuremath{\exists}\DGPL}
2029 \DeclareRobustCommand{\UDGPL}
2030   {\ensuremath{\forall}\DGPL}
2031
2032 \DeclareRobustCommand{\FDGPL}
2033   {\{\textname{F}\}\DGPL}
2034
2035 \DeclareRobustCommand{\EFDGPL}
2036   {\ensuremath{\exists}\FDGPL}
2037 \DeclareRobustCommand{\UFDGPL}
2038   {\ensuremath{\forall}\FDGPL}
2039
2040 % Alternating-Goal Plan Logic
2041 \DeclareRobustCommandx{\AGPL}[3][1=, 2=, 3=]
2042   {\PL[#1][#2][ag\argleft{,}{#3}]}
2043
2044 \DeclareRobustCommand{\EAGPL}
2045   {\ensuremath{\exists}\AGPL}
2046 \DeclareRobustCommand{\UAGPL}
2047   {\ensuremath{\forall}\AGPL}
2048
2049 \DeclareRobustCommand{\FAGPL}
2050   {\{\textname{F}\}\AGPL}
2051
2052 \DeclareRobustCommand{\EFAGPL}
2053   {\ensuremath{\exists}\FAGPL}
2054 \DeclareRobustCommand{\UFAGPL}
2055   {\ensuremath{\forall}\FAGPL}
2056
2057 % Extended-Goal Plan Logic
2058 \DeclareRobustCommandx{\EGPL}[3][1=, 2=, 3=]
2059   {\PL[#1][#2][eg\argleft{,}{#3}]}
2060
2061 \DeclareRobustCommand{\EEGPL}
2062   {\ensuremath{\exists}\EGPL}
2063 \DeclareRobustCommand{\UEGPL}
2064   {\ensuremath{\forall}\EGPL}
2065
2066 \DeclareRobustCommand{\FEGPL}
2067   {\{\textname{F}\}\EGPL}
2068
2069 \DeclareRobustCommand{\EFEGPL}
2070   {\ensuremath{\exists}\FEGPL}
2071 \DeclareRobustCommand{\UFEGPL}
2072   {\ensuremath{\forall}\FEGPL}
2073
2074 % Boolean-Goal Plan Logic
2075 \DeclareRobustCommandx{\BGPL}[3][1=, 2=, 3=]
2076   {\PL[#1][#2][bg\argleft{,}{#3}]}
2077
2078 \DeclareRobustCommand{\EBGPL}
2079   {\ensuremath{\exists}\BGPL}
2080 \DeclareRobustCommand{\UBGPL}
2081   {\ensuremath{\forall}\BGPL}
2082
2083 \DeclareRobustCommand{\FBGPL}
2084   {\{\textname{F}\}\BGPL}
2085
2086 \DeclareRobustCommand{\EFBGPL}
2087   {\ensuremath{\exists}\FBGPL}

```

```

2088 \DeclareRobustCommand{\UFBGPL}
2089   {\ensuremath{\forall}\text{FBGPL}}
2090
2091 % Undefined-Goal Plan Logic
2092 \DeclareRobustCommandx{\XGPL}[3][1=, 2=, 3=]
2093   {\PL[#1][#2][xg\argleft{,}{#3}]}
2094
2095 \DeclareRobustCommand{\EXGPL}
2096   {\ensuremath{\exists}\text{XGPL}}
2097 \DeclareRobustCommand{\UXGPL}
2098   {\ensuremath{\forall}\text{XGPL}}
2099
2100 \DeclareRobustCommand{\FXGPL}
2101   {\{\textname{F}\}\text{XGPL}}
2102
2103 \DeclareRobustCommand{\EFXGPL}
2104   {\ensuremath{\exists}\text{FXGPL}}
2105 \DeclareRobustCommand{\UFXGPL}
2106   {\ensuremath{\forall}\text{FXGPL}}
2107
\SL ...
... 2107 % Strategy Logic
2108 \cmdtxttopname{\SL}
2109
2110 \DeclareRobustCommand{\ESL}
2111   {\ensuremath{\exists}\text{SL}}
2112 \DeclareRobustCommand{\USL}
2113   {\ensuremath{\forall}\text{SL}}
2114
2115 \DeclareRobustCommand{\FSL}
2116   {\{\textname{F}\}\text{SL}}
2117
2118 \DeclareRobustCommand{\EFSL}
2119   {\ensuremath{\exists}\text{FSL}}
2120 \DeclareRobustCommand{\UFSL}
2121   {\ensuremath{\forall}\text{FSL}}
2122
2123 % One-Goal Strategy Logic
2124 \DeclareRobustCommandx{\OGSL}[3][1=, 2=, 3=]
2125   {\SL[#1][#2][lg\argleft{,}{#3}]}
2126
2127 \DeclareRobustCommand{\EOGSL}
2128   {\ensuremath{\exists}\text{OGSL}}
2129 \DeclareRobustCommand{\UOGSL}
2130   {\ensuremath{\forall}\text{OGSL}}
2131
2132 \DeclareRobustCommand{\FOGSL}
2133   {\{\textname{F}\}\text{OGSL}}
2134
2135 \DeclareRobustCommand{\EFOGSL}
2136   {\ensuremath{\exists}\text{FOGSL}}
2137 \DeclareRobustCommand{\UFOGSL}
2138   {\ensuremath{\forall}\text{FOGSL}}
2139
2140 % Conjunctive-Goal Strategy Logic
2141 \DeclareRobustCommandx{\CGSL}[3][1=, 2=, 3=]
2142   {\SL[#1][#2][cg\argleft{,}{#3}]}
2143
2144 \DeclareRobustCommand{\ECGSL}
2145   {\ensuremath{\exists}\text{CGSL}}
2146 \DeclareRobustCommand{\UCGSL}
2147   {\ensuremath{\forall}\text{CGSL}}
2148
2149 \DeclareRobustCommand{\FCGSL}

```



```

2150  {{\txtname{F}}\CGSL}
2151
2152 \DeclareRobustCommand{\EFCGSL}
2153  {\ensuremath{\exists}\FCGSL}
2154 \DeclareRobustCommand{\UFCGSL}
2155  {\ensuremath{\forall}\FCGSL}
2156
2157 % Disjunctive-Goal Strategy Logic
2158 \DeclareRobustCommandx{\DGSL}[3][1=, 2=, 3=]
2159  {\SL[#1][#2][dg\arglef{,}{#3}]}
2160
2161 \DeclareRobustCommand{\EDGSL}
2162  {\ensuremath{\exists}\DGSL}
2163 \DeclareRobustCommand{\UDGSL}
2164  {\ensuremath{\forall}\DGSL}
2165
2166 \DeclareRobustCommand{\FDGSL}
2167  {{\txtname{F}}\DGSL}
2168
2169 \DeclareRobustCommand{\EFDGSL}
2170  {\ensuremath{\exists}\FDGSL}
2171 \DeclareRobustCommand{\UFDGSL}
2172  {\ensuremath{\forall}\FDGSL}
2173
2174 % Alternating-Goal Strategy Logic
2175 \DeclareRobustCommandx{\AGSL}[3][1=, 2=, 3=]
2176  {\SL[#1][#2][ag\arglef{,}{#3}]}
2177
2178 \DeclareRobustCommand{\EAGSL}
2179  {\ensuremath{\exists}\AGSL}
2180 \DeclareRobustCommand{\UAGSL}
2181  {\ensuremath{\forall}\AGSL}
2182
2183 \DeclareRobustCommand{\FAGSL}
2184  {{\txtname{F}}\AGSL}
2185
2186 \DeclareRobustCommand{\EFAGSL}
2187  {\ensuremath{\exists}\FAGSL}
2188 \DeclareRobustCommand{\UFAGSL}
2189  {\ensuremath{\forall}\FAGSL}
2190
2191 % Extended-Goal Strategy Logic
2192 \DeclareRobustCommandx{\EGSL}[3][1=, 2=, 3=]
2193  {\SL[#1][#2][eg\arglef{,}{#3}]}
2194
2195 \DeclareRobustCommand{\EEGSL}
2196  {\ensuremath{\exists}\EGSL}
2197 \DeclareRobustCommand{\UEGSL}
2198  {\ensuremath{\forall}\EGSL}
2199
2200 \DeclareRobustCommand{\FEGSL}
2201  {{\txtname{F}}\EGSL}
2202
2203 \DeclareRobustCommand{\EFEGSL}
2204  {\ensuremath{\exists}\FEGSL}
2205 \DeclareRobustCommand{\UFEGSL}
2206  {\ensuremath{\forall}\FEGSL}
2207
2208 % Boolean-Goal Strategy Logic
2209 \DeclareRobustCommandx{\BGSL}[3][1=, 2=, 3=]
2210  {\SL[#1][#2][bg\arglef{,}{#3}]}
2211
2212 \DeclareRobustCommand{\EBGSL}

```

```

2213 {\ensuremath{\exists}\BGS}
2214 \DeclareRobustCommand{\UBGS}
2215 {\ensuremath{\forall}\BGS}
2216
2217 \DeclareRobustCommand{\FBGS}
2218 {\{\textname{F}\}\BGS}
2219
2220 \DeclareRobustCommand{\EFBGS}
2221 {\ensuremath{\exists}\FBGS}
2222 \DeclareRobustCommand{\UFBGS}
2223 {\ensuremath{\forall}\FBGS}
2224
2225 % Nested-Goal Strategy Logic
2226 \DeclareRobustCommandx{\NGS}[3][1=, 2=, 3=]
2227 {\SL[#1][#2][ng\arglef{,}{#3}]}
2228
2229 \DeclareRobustCommand{\ENGSL}
2230 {\ensuremath{\exists}\NGSL}
2231 \DeclareRobustCommand{\UNGSL}
2232 {\ensuremath{\forall}\NGSL}
2233
2234 \DeclareRobustCommand{\FNGSL}
2235 {\{\textname{F}\}\NGSL}
2236
2237 \DeclareRobustCommand{\EFNGSL}
2238 {\ensuremath{\exists}\FNGSL}
2239 \DeclareRobustCommand{\UFNGSL}
2240 {\ensuremath{\forall}\FNGSL}
2241
2242 % Undefined-Goal Strategy Logic
2243 \DeclareRobustCommandx{\XGSL}[3][1=, 2=, 3=]
2244 {\SL[#1][#2][xg\arglef{,}{#3}]}
2245
2246 \DeclareRobustCommand{\EXGSL}
2247 {\ensuremath{\exists}\XGSL}
2248 \DeclareRobustCommand{\UXGSL}
2249 {\ensuremath{\forall}\XGSL}
2250
2251 \DeclareRobustCommand{\FXGSL}
2252 {\{\textname{F}\}\XGSL}
2253
2254 \DeclareRobustCommand{\EFXGSL}
2255 {\ensuremath{\exists}\FXGSL}
2256 \DeclareRobustCommand{\UFXGSL}
2257 {\ensuremath{\forall}\FXGSL}
2258 %** Syntax *****%

```

\BndSet ...

```

... 2259 \newcommand{\bndsym}{\flat}
2260 \newcommand{\bndset}{\Bn}
2261 \cmdmthsetext{Bnd}[\bndset][\bndsym]
2262 \cmdmthsymelm{idbnd}[\bndsym_{\text{id}}]
2263 \usrmth{bnd}{\}{argfun}

```

\psn ...

```

2264 \usrmth{psn}{\}{argfun}

2265 %** Semantics *****%

```

\nxt ...

```

2266 \usrmth{nxt}{\}{argfun}

2267 \fi
2268 %*****%

```

```

2269 %*****%
2270 %** Macros for Automata *****%
2271 %*****%
2272 \ifaut@
2273 %** Finite Word Automata *****%

\DFA ...
... 2274 \cmdtxtoparname{DFA}\cmdtxtoparname{NFA}\cmdtxtoparname{UFA}\cmdtxtoparname{AFA}
2275
2276 \cmdtxtoparname{DWA}\cmdtxtoparname{NWA}\cmdtxtoparname{UWA}\cmdtxtoparname{AWA}
2277
2278 \cmdtxtoparname{DFW}\cmdtxtoparname{NFW}\cmdtxtoparname{UFW}\cmdtxtoparname{AFW}
2279 \cmdtxtoparname{DWW}\cmdtxtoparname{NWW}\cmdtxtoparname{UWW}\cmdtxtoparname{AWW}
2280 \cmdtxtoparname{DBW}\cmdtxtoparname{NBW}\cmdtxtoparname{UBW}\cmdtxtoparname{ABW}
2281 \cmdtxtoparname{DCW}\cmdtxtoparname{NCW}\cmdtxtoparname{UCW}\cmdtxtoparname{ACW}
2282 \cmdtxtoparname{DPW}\cmdtxtoparname{NPW}\cmdtxtoparname{UPW}\cmdtxtoparname{APW}
2283 \cmdtxtoparname{DRW}\cmdtxtoparname{NRW}\cmdtxtoparname{URW}\cmdtxtoparname{ARW}
2284 \cmdtxtoparname{DSW}\cmdtxtoparname{NSW}\cmdtxtoparname{USW}\cmdtxtoparname{ASW}
2285 \cmdtxtoparname{DMW}\cmdtxtoparname{NMW}\cmdtxtoparname{UMW}\cmdtxtoparname{AMW}

\GFG ...
... 2286 \cmdtxtoparname{GFG}
2287
2288 \cmdtxtoparname{PD}
2289 \cmdtxtoparname{PN}
2290
2291 \cmdtxtoparname{LD}
2292 \cmdtxtoparname{LN}
2293 %** Syntax *****%

\AutName ...
... 2294 \newcommand{\autname}{A}
2295 \usrmthlatupp{Aut}{Name}{name}[\autname]
2296 \newcommand{\autset}{Aut}
2297 \cmdmthset{Aut}[\autset]

\WAutSet ...
2298 \newcommand{\wautset}{WAut}
2299 \cmdmthset{WAut}[\wautset]

\SymSet ...
... 2300 \newcommand{\symsym}{\sigma}
2301 \newcommand{\symset}{\Sigma}
2302 \cmdmthsetext{Sym}[\symset][\symsym]

\SttSet ...
... 2303 \providecommand{\sttsym}{q}
2304 \providecommand{\sttset}{Q}
2305 \cmdmthsetext{Stt}[\sttset][\sttsym]
2306 \cmdmthset{IStt}[\sttset_I]
2307 \cmdmthsymelm{istt}[\sttsym_I]
2308 \cmdmthset{FStt}[\sttset_F]
2309 \cmdmthsymelm{fstt}[\sttsym_F]

\trnFun ...
\trnRel 2310 \providecommand{\trnsym}{\delta}
2311 \cmdmthfun{trn}[\trnsym]
2312 \cmdmthrel{trn}[\trnsym]
2313 %** Semantics *****%

```

```

\WrdSet ...
... 2314 \newcommand{\wrdsym}{w}
2315 \newcommand{\wrdsym}{w}
2316 \cmdmthsetext{Wrd}{\wrdsym}

\Lang ...
2317 \usrmth{Lang}{-}{argfun}[L]

2318 %** Finite Tree Automata *****%

\DTA ...
... 2319 \cmdtxtoparname{DTA}\cmdtxtoparname{NTA}\cmdtxtoparname{UTA}\cmdtxtoparname{ATA}
2320
2321 \cmdtxtoparname{DFT}\cmdtxtoparname{NFT}\cmdtxtoparname{UFT}\cmdtxtoparname{AFT}
2322 \cmdtxtoparname{DWT}\cmdtxtoparname{NWT}\cmdtxtoparname{UWT}\cmdtxtoparname{AWT}
2323 \cmdtxtoparname{DBT}\cmdtxtoparname{NBT}\cmdtxtoparname{UBT}\cmdtxtoparname{ABT}
2324 \cmdtxtoparname{DCT}\cmdtxtoparname{NCT}\cmdtxtoparname{UCT}\cmdtxtoparname{ACT}
2325 \cmdtxtoparname{DPT}\cmdtxtoparname{NPT}\cmdtxtoparname{UPT}\cmdtxtoparname{APT}
2326 \cmdtxtoparname{DRT}\cmdtxtoparname{NRT}\cmdtxtoparname{URT}\cmdtxtoparname{ART}
2327 \cmdtxtoparname{DST}\cmdtxtoparname{NST}\cmdtxtoparname{UST}\cmdtxtoparname{AST}
2328 \cmdtxtoparname{DMT}\cmdtxtoparname{NMT}\cmdtxtoparname{UMT}\cmdtxtoparname{AMT}
2329 %** Syntax *****%

\TAutSet ...
2330 \newcommand{\tautset}{TAut}
2331 \cmdmthset{TAut}{\tautset}

\DirSet ...
... 2332 \newcommand{\dirsym}{d}
2333 \newcommand{\dirset}{\Lambda}
2334 \cmdmthsetext{Dir}{\dirset}{\dirsym}

2335 %** Semantics *****%

\TreeSet ...
... 2336 \newcommand{\treesym}{T}
2337 \newcommand{\treeset}{Tr}
2338 \cmdmthsetext{Tree}{\treeset}{\treesym}

\wot ...
2339 \usrmth{wot}{-}{argfun}

2340 \fi
2341 %*****%

2342 %*****%
2343 %** Format Tricks *****%
2344 %*****%
2345 \iffirm@

2346 \RequirePackage{multicol}

... ..
2347 %...

2348 \fi
2349 %*****%

2350 %*****%
2351 %** Figure Tricks *****%
2352 %*****%
2353 \iffig@

2354 \RequirePackage{tikz}
2355 \usetikzlibrary{calc,arrows,shapes,patterns,graphs,matrix}

```

```

2356 \tikzstyle{every node} =
2357   [draw = none, fill = none, black, thin]
2358 \tikzstyle{every edge} +=
2359   [black, thick]

2360 \tikzstyle{noall} =
2361   [draw = none, fill = none]
2362 \tikzstyle{nodraw} =
2363   [draw = none, fill = white]
2364 \tikzstyle{nofill} =
2365   [draw = black, fill = none]

2366 \ifwrpfig@
2367   % Wrapfig Package
2368   \RequirePackage{wrapfig}
2369 \fi

2370 \fi
2371 %%*****%
2372 %%*****%
2373 %%** Table Tricks *****%
2374 %%*****%
2375 \iftab@

... ..
2376 %%...

2377 \fi
2378 %%*****%
2379 %%*****%
2380 %%** Algorithm Tricks *****%
2381 %%*****%
2382 \ifalg@

2383 \RequirePackage[ruled,vlined]{algorithm2e}
2384 \DontPrintSemicolon
2385 \SetInd{0.25em}{0.5em}
2386 \setlength{\algomargin}{1.25em}

\Signature ...
2387 \SetKw{Signature}{signature}

\Macro ...
\Function 2388 \SetKwFor{Macro}{macro}{}{}
\Procedure 2389 \SetKwFor{Function}{function}{}{}
2390 \SetKwFor{Procedure}{procedure}{}{}

\Let ...
2391 \SetKwFor{Let}{let}{in}{}

\True ...
\False 2392 \SetKw{True}{true}
2393 \SetKw{False}{false}

\From ...
\To 2394 \SetKw{From}{from}
\DownTo 2395 \SetKw{To}{to}
2396 \SetKw{DownTo}{downto}

\GoTo ...
\Break 2397 \SetKw{GoTo}{goto}
\Continue 2398 \SetKw{Break}{break}
2399 \SetKw{Continue}{continue}

```

```

\Guess ...
\ExsGuess 2400 \SetKw{Guess}{guess}
\AllGuess 2401 \SetKw{ExsGuess}{$\exists$-guess}
          2402 \SetKw{AllGuess}{$\forall$-guess}

\MIf ...
\MElseIf 2403 \SetKwIF{MIf}{MElseIf}{MElse}{\#if}{\#then}{\#else \#if}{\#else}{\#endif}
\MElse
\nlr ...
          2404 \newrobustcmd{\nlr}[1]
          2405   {\addtocounter{AlgoLine}{1}%
          2406   \nlset{\arabic{AlgoLine}-\addtocounter{AlgoLine}{#1}\arabic{AlgoLine}}}

          2407 \fi
          2408 %%*****%
          2409 \endinput
          2410 \</package>

```

## 2 Change History

v0.0	General: First public release . . . . . 1	v0.24	General: Correction of fragile macros . . . . . 1
v0.1	General: Algorithm tricks . . . . . 1	v0.25	General: Few additions and corrections . . . . . 1
v0.10	General: Small refinements . . . . . 1	v0.26	General: Few additions . . . . . 1
v0.11	General: Few additions and corrections . . . . . 1	v0.27	General: Small addition to ‘Algorithm tricks’ 1
v0.12	General: New starred variants . . . . . 1	v0.28	General: Few additions . . . . . 1
v0.13	General: Further starred variants . . . . . 1	v0.29	General: Correction of fragile macros . . . . . 1
v0.14	General: Few additions and corrections . . . . . 1	v0.3	General: Few problems solved . . . . . 1
v0.15	General: Refactoring of dtx sources . . . . . 1	v0.30	General: Improvements and new command variants . . . . . 1
v0.16	General: Small refinements and few additions 1	v0.31	General: Small improvements . . . . . 1
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